

India Intergovernmental Transfers and Fiscal Equalization

Report for Sixteenth Finance Commission

August 2025

India Intergovernmental Transfers and Fiscal Equalization

Report for Sixteenth Finance Commission

August 2025

Some rights reserved

This work is a product of the staff of the World Bank. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of the Executive Directors of The World Bank or the governments they represent.

The World Bank does not guarantee the accuracy, completeness, or currency of the data included in this work and does not assume responsibility for any errors, omissions, or discrepancies in the information, or liability with respect to the use of or failure to use the information, methods, processes, or conclusions set forth. The boundaries, colors, denominations, links/footnotes and other information shown in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries. The citation of works authored by others does not mean the World Bank endorses the views expressed by those authors or the content of their works.

Nothing herein shall constitute or be construed or considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

Design and Layout: Clay Brains Designs LLP.

Contents

Acknowledgments	vii
Abbreviations	viii
Chapter 1: Introduction and Overview	01
1.1 Introduction	01
1.2. Principal Findings and Recommendations	02
Chapter 2: Vertical Fiscal Imbalances	05
2.1 Introduction	05
2.2 Vertical Fiscal Imbalances in India	06
2.3 The Genesis and Policy Approaches to VFIs: An Overview	08
2.4 Measuring Vertical Fiscal Imbalances	12
2.5 Conclusions and Considerations	20
Annex 2.1: Phases of Finance Commission and Implications for VFI	22
Chapter 3: Horizontal Fiscal Imbalances and Fiscal Equalization	26
3.1 Introduction	26
3.2 Evolution of the Criteria for Distribution to the States	26
3.3 Distribution of Transfers to the States—Have They Been Equalizing?	30
3.4 Relative Shares of Lower-Middle- and Higher-Income States in Devolution Transfers	30
3.5 Conclusions	43
Annex 3.1: Tax Effort and Revenue Mobilization	44
Chapter 4: International Experience in Equalization	49
4.1 Introduction	49
4.2 Country Experiences	51
Bibliography	72

Tables

Chapter 2

Table 2.1. Definition of VFI over the various Finance Commissions (Eighth Finance Commission to Fifteenth)	07
Table 2.2. Current Transfers as percentage of GDP	10
Table 2.3. Vertical Shares under the Finance Commissions (First to Fifteenth Finance Commission)	12
Table 2.4. Vertical Fiscal Imbalance Measurement Taxonomy	13
Table 2.5. Vertical Fiscal Imbalances in India, Sixth to Fifteenth Finance Commission	19

Annex 2.1

Table A2.1. Finance Commission and Non-Finance Commission Transfers as percentage of Total Current Transfers	24
--	----

Chapter 3

Table 3.1. State (Inter Se) Shares for Income Taxes Devolved: Eighth Finance Commission to Tenth Finance Commission	31
Table 3.2. State (Inter Se) Shares for Income Taxes Devolved: Eighth Finance Commission to Tenth Finance Commission	33
Table 3.3. State (Inter Se) Shares for Devolved Taxes: Eleventh Finance Commission to Fifteenth Finance Commission	34
Table 3.4. Ranking of States by Per Capita GSDP - changes over Finance Commission periods	35
Figure 3.5. Shares of Total and Devolution Transfers Per Capita by State Income Groups	36
Table 3.6. Criteria and Weights for Inter se Allocation of Tax Devolution Eleventh Finance Commission onwards	41

Annex 3.1

Table A3.1. Empirical Evidence of Impact of Central Transfers on States Revenue Effort	45
Table A3.2. Results of Linear Fixed Effects Model	47

Chapter 4

Table 4.1. Comparative Equalization Systems: Australia, Brazil, Canada, South Africa	50
Table 4.2. Australia: GST relativities and calculated GST distribution	52
Table 4.3. Commission Assessments	53
Table 4.4. Brazilian Intergovernmental Transfers, 2023 (percentage of GDP)	56
Table 4.5. Transfers to Municipalities and the FPM (2023)	59
Table 4.6. Comparative Experience Across European Countries	70

Figures

Chapter 2

Figure 2.1. Revenue Assignment: General, Center & States (1950-2017)	08
Figure 2.2. Decomposing General Government Tax Revenues into Center and States Tax Revenues (1950-2017)	08
Figure 2.3. States Share in Divisible Pool and Tax Devolution as % age of Center's Gross Tax Revenue (GTR)	09
Figure 2.4. Cess and Surcharge as % age of Center's Gross Tax Revenue (GTR)	09
Figure 2.5. States' revenue and expenditure as percentage of general government revenues and expenditure	09
Figure 2.6. Trends in Vertical Fiscal Imbalance in India (1990-24)	15
Figure 2.7. Trends in VFI State-wise, 1991-2025 (Eyraud and Lusinyan measure)	15
Figure 2.8. States VFI: Pre (P1) and Post (P2) Transfers Scenario	17
Figure 2.9. Center- Pre (C1) and Post (C2) Transfers	18

Chapter 3

Figure 3.1a. Balance Between Need, Efficiency and Equity in Inter se Formula: First to Tenth FCs (Distribution of Income Tax Proceeds)	27
Figure 3.1b. Balance Between Need, Efficiency and Equity in Inter se Formula: First to Tenth FCs (Distribution of Union Excise Duties)	28
Figure 3.2. Balance between Need, Efficiency, and Equity in inter se formula: Eleventh to Fifteenth Finance Commissions	29
Figure 3.3. Average ratios of inter se shares Eighth to Tenth Finance Commissions: Income tax Low-income states: High-income states Low-income states: Middle-income states	32
Figure 3.4. Ratios of inter se shares Eighth to Tenth Finance Commission: Union excise duty Low-income states: High-income states (L:H) Low-income states: Middle-income states (L:M)	33
Figure 3.5. Ratios of inter se shares Eleventh to Fifteenth Finance Commissions Low-income states: High income states Low-income states: Middle income states	35
Figure 3.6. Ratios of Shares of Devolution Transfers Per Capita-Lower Income to Higher income and Lower Income to Middle Income	36
Figure 3.7. Distribution of Transfers to General Category States (undivided) by Per Capita Income, By Finance Commission lowest (left) to highest (right), in rupees per capita	38
Figure 3.8a. Regressions of Tax Devolution Per Capita against Per Capita Income, Tenth to Fifteenth Finance Commission	40
Figure 3.8b. Regressions of Total Finance Commission Transfers Per Capita against Per Capita Income, Tenth to Fifteenth Finance Commission	42

Figures

Annex 3.1

Figure A3.1. States Tax Effort and Transfers as percentage of GSDP	48
--	----

Chapter 4

Figure 4.1. Socioeconomic disadvantage in Australia	51
Figure 4.2. Calculating GST Shares - Assessed budgets per capita	54
Figure 4.3. The Horizontal Fiscal Gap (2018), BRL billions	55
Figure 4.4. FPE per capita transfer, from poorest (left) to richest state (right), 2022	57
Figure 4.5. Equalization Transfer (FPE) and Remaining Fiscal Gaps, 2018	58
Figure 4.6. Distribution of Federal FUNDEB top-up across states	59
Figure 4.7. Provincial Share of Government Spending in Canada, 2018–19	60
Figure 4.8. Total Equalization Payments, With and Without the Fixed Pool	62
Figure 4.9. Canadian Equalization, 2024–2025	63
Figure 4.10. General Government Spending by Function and Revenue Collection by Level, South Africa,	65
Figure 4.11. National budget in South Africa, 2022/23, ZAR, billions	66
Figure 4.12. Components of the Provincial Equitable Share Formula in South Africa	67
Figure 4.13. Provincial Shares of GDP, population and Transfers and Transfers per Capita, South Africa	67

Acknowledgments

The World Bank extends its sincere gratitude to the Sixteenth Finance Commission for entrusting it with this important initiative. Special thanks are due to Dr. Arvind Panagariya, Chairman, Sixteenth Finance Commission, for his guidance and support. The report has also been enriched by the active engagement, discussions, and deliberations with Mr. Ritvik Pandey, Secretary, Sixteenth Finance Commission; Mr. K. K. Mishra, Joint Secretary, Sixteenth Finance Commission; Dr. Prasant Kumar Panda, Economic Adviser; Ms. Amrutha Varshini Palla, Joint Director; Ms. Priya Sarraf, Joint Director; Ms. Manshi Gupta, Deputy Director; and the Finance Division of the Sixteenth Finance Commission.

This technical report is presented as part of a series of studies prepared by the World Bank at the request of the Sixteenth Finance Commission, Government of India. The report provides a comprehensive and analytical examination of fiscal federalism in India, focusing on the pivotal role of Finance Commission transfers in advancing equalization among states and reducing fiscal disparities. Through a systematic assessment, it evaluates the effectiveness of these transfers over time, scrutinizes both vertical and horizontal fiscal imbalances, and provides a thorough review of the evolution of allocation formulas. Drawing on international best practices, the report outlines policy recommendations for strengthening equalization mechanisms within the Indian context.

The report was prepared by a World Bank team led by Farah Zahir, Senior Economist, Prosperity Vertical, Economic Policy-Public Sector, South Asia and Deborah L. Wetzel, Senior Consultant, Former Senior Director, Governance Global Practice, The World Bank with core team members as Ildrim Valley, Public Sector Specialist, Prosperity Vertical, Institutions Global Practice, East Asia and Pacific Region, and Neha Sharma, Consultant. Roy W. Bahl, Jr. Regents Professor and Founding Dean Emeritus, Andrew Young School of Policy Studies, Georgia State University (USA), served as an advisor to the team and meticulously reviewed the report. The report also benefited from the insightful papers presented at the November 2024 conference on intergovernmental transfers and fiscal equalization, organized by the Sixteenth Finance Commission and the World Bank.

The team wishes to express appreciation to Auguste Tano Kouame, Country Director, India, and Mathew A. Verghis, Regional Director for South Asia, Prosperity Vertical, for their leadership and support. Hoon Sahib Soh, Practice Manager of the Prosperity Vertical for South Asia in the Economic Policy-Public Sector Practice, provided valuable guidance. Comments were received from Aurelien Kruse, Lead Economist-India, Prosperity Vertical, Economic Policy and Vincent Belinga, Senior Economist, Prosperity Vertical, Economic Policy-Public Sector, South Asia. Binny Varma provided administrative support during the preparation of the report.

Abbreviations

AEA	Aggregate Equalization Amount	GTR	Gross Tax Revenue
AP	Andhra Pradesh	HFI	Horizontal Fiscal Imbalance
CHT	Canada Health Transfer	MoU	Memorandum of Understanding
CIT	Corporate Income tax	MP	Madhya Pradesh
CSS	Centrally Sponsored Schemes	NB	New Brunswick
CST	Canadian Social Transfer	NDC	National Development Council
DBT	Direct Benefit Transfer	NS	Nova Scotia
DISCOM	Distribution Company	OTS	One Time Settlement
FCE	Fiscal Capacity for Equalization	PEI	Prince Edward Island
FPE	Fund for State Participation	PIT	Personal Income Tax
FPM	Fund for Municipal Participation	RBI	Reserve Bank of India
FRBM	Fiscal Responsibility and Budget Management	SCS	Special Category States
FRBMA	Fiscal Responsibility and Budget Management Act	SGST	State Goods and Services Tax
FRP	Financial Restructuring Plan	SK	Saskatchewan
GDP	Gross Domestic Product	TOR	Terms of Reference
GoI	Government of India	UDAY	Ujwal Discom Yojana
GSDP	Gross State Domestic Product	UP	Uttar Pradesh
GST	Goods and Services Tax	VAT	Value Added Tax
		VFI	Vertical Fiscal Imbalance

Chapter 1

Introduction and Overview

1.1 Introduction

Over the last 78 years, India has emerged as a global economic power and the largest democratic federal polity, inhabited by almost 1.5 billion people—more people than in the entire continent of Africa and more than North, Central, and South America combined. The structure of government first set out in the Indian Constitution is a federal constitution with strong unitary features. It relies on states and union territories as administrative sub-entities and, in 1992, the 73rd and 74th Amendments to the Constitution recognized urban and rural bodies as a third tier of government.

As in most federal countries, the Constitution assigns functions to the different levels of government that entrust significant responsibilities to the states. The exclusive powers assigned to the union (or central) government in the ‘Union List’ are those required to maintain macroeconomic stability. They also include those assigned for reasons of economy of scale and cost-efficient services, such as defense and security, foreign affairs, currency and banking, communication (and postal), interstate relations, emergency powers, and state formation. Exclusive powers of the states are placed on the ‘State List, including public order, police, public health, agriculture, irrigation, land rights, industries, and minerals, other than those specified in the Union List. The ‘Concurrent List’ covers both union and state levels.¹ The lines of demarcation of these concurrent functions can sometimes be blurred, but

in any disagreement between union and state laws to carry out functions, union laws take precedence.

At the same time, the Constitution assigns many of the high yielding taxes to the union² government, including corporate and personal income taxes, customs duties, and certain excise taxes. The states are assigned a limited value added tax (VAT) as their primary revenue source—now transformed into the goods and services tax (GST) as well as an agricultural tax, sales tax (mainly on petroleum), excise tax (mainly on alcohol), property and land taxes, and vehicle taxes. GST is jointly administered by the central and state governments, with revenues shared equally between them. Local government taxes are largely confined to taxes on property.

Over the decades, overall tax collection in India has remained below 20 percent of gross domestic product (GDP), with about 35 percent of this raised by states and about 65 percent collected by the central government.³ These shares have not changed much over time. On the expenditure side, given the functions set out in the State List, the states incur about 60 percent of total public spending. The Constitution’s expenditure and tax assignments build in a vertical imbalance, with the center raising the bulk of the revenue but the states incurring the bulk of the expenditure. The core tasks of the Finance Commission are to address the

1 See Schedule 7 of the Indian Constitution (Article 246) for the full details on items in each of the three lists.

2 Union government and central government are used interchangeably in the report.

3 See Muralidharan (2024), Chapter 7, and Rao (2017), Table 4.1, among others.

vertical gap created by revenue and expenditure assignments and to consider gaps generated by the differing economic levels of the states. This is done through devolving a share of the central government revenue pool to states and by determining the share that each state should receive through fiscal transfers.

Given large inter-regional disparities among state-level economies, the system used to address vertical and horizontal fiscal imbalances plays a fundamental role in equalizing fiscal resources and/or service delivery across states.

On the surface, equalization seems straightforward: first measure the extent of imbalances; second, decide how much of the inter-regional gaps should be eliminated; and third, adopt a grant formula that will produce the desired degree of equalization. In practice, it can be difficult to measure the imbalances, and it is not always clear what is being equalized (options include per capita income, revenue capacity, meeting of a minimum standard of expenditures, or closing of a fiscal gap). The design issues are not simple, and few countries have successfully implemented an equalizing grant system.⁴

The objective of this report is to consider whether the transfers of the Finance Commission have supported equalization over time.

Chapter 2 explores the extent of vertical fiscal imbalances, devolution of resources to address the imbalance over time, different measurement approaches, and potential policies for further closing the gap. Chapter 3 examines horizontal imbalances, considers the variation of the Finance Commission formulas for allocating resources across states over time, examines the data on per capita Finance Commission transfers through different lenses, and suggests approaches to strengthen equalization further. Finally, Chapter 4 presents lessons from international experience based on countries that have pursued different approaches to equalization with some success. There is extensive literature on fiscal federalism in India, and the interconnections between macroeconomic policy and intergovernmental finance over the decades are critical.⁵ This report contributes by looking in detail—especially since the Tenth Finance Commission—at the evolution of vertical and horizontal gaps, allocation of Finance Commission per capita transfers across states, and the degree to which they supported equalization across the states.

1.2 Principal Findings and Recommendations

Overall, the analysis finds that the approach of the Finance Commissions has generally been equalizing, but the degree of equalization was highest during—and has diminished since—the Eleventh Finance Commission. The Eleventh Finance Commission placed a high weight on equity measured as income distance, but it also emphasized tax effort and fiscal discipline. These latter two factors did not outweigh the emphasis on equity relative to other Finance Commission periods. Regression analysis reinforces these results, with the relative strength of equalization during the Eleventh FC having the most significance.

Transfers to states have addressed a significant amount of vertical fiscal imbalances (VFIs); however, a gap of about 20 percent of expenditure remains. How much to close the vertical imbalance is a policy choice and is made harder by fiscal pressures at the

central level. The remaining VFI necessitates either borrowing or other mechanisms that may soften the budget constraint faced by states. The Eleventh and Twelfth Finance Commissions (from 2005–2010) saw significant progress in closing the vertical gaps. This was undertaken in context of Eleventh Finance Commission terms of reference (TOR) requesting emphasis on better financial discipline and inclusion of an index of fiscal discipline in the formula.

Ideally, measurement of VFIs would draw on a normative approach in which the vertical gap between levels of government is based on the difference between the degree to which state governments meet a minimum standard of expenditure and the revenue that they are able to raise based on a normal tax effort. The government is then able to determine how much of this gap it can afford to fill. This approach helps shape incentives to

⁴ See Bahl and Bird (2018), 285–6.

⁵ Among others, see Kelkar (2019), Rao (2017 and 2019), Reddy and Reddy (2018), and Singh (2020). Gupta and Mazumdar (2017), Rajaraman (2018), and Tillin (2019) offer perspectives on the evolution of fiscal federalism and its interactions with structural reforms undertaken over the years. Others highlight the importance of more attention to the third tier of local government in the discussion of fiscal federalism. See Muralidharan (2024) and Rao and Singh (2007).

reinforce analysis of the minimum standard expenditures to attain the desired outcomes as well as to incentivize more own revenue collection. Such an approach is possible and is used in several countries, but it requires consistent, high-quality data at the necessary intervals and agreement on the minimum standard of spending for key services and definition of a normal tax effort.

The determination of whether to fully eliminate the vertical fiscal gap constitutes a policy choice that must be made by the government, considering the current economic and fiscal conditions of the country, as well as the extent to which additional resources at the subnational level can be utilized effectively. A central consideration in this context is the decision of the Finance Commission regarding the proportion of the divisible tax pool to be devolved to the states. Notably, the share of the central government's gross tax revenue allocated to states has progressively increased and currently stands at 41 percent. One potential avenue for further addressing the VFI involves incrementally raising the states' share of the divisible pool over time. However, such measures must be carefully weighed against the imperative of maintaining macroeconomic stability and the fiscal constraints faced by both central and subnational governments.⁶ Other options that the government could consider for reducing the VFI are the following:

- **Including cesses and surcharges in the revenue pool shared with state governments could be a source of higher transfers to the states that would help close the remaining gap.** However, these are currently not part of the pool of revenues devolved to states through the Finance Commission. There has been a significant increase in the collection of cesses and surcharges since 2011.
- **Reassigning some taxes to the state level could also narrow the vertical gap.** Although it is understood that the Constitution calls for separation of tax bases, many countries around the world use a 'piggy-back tax' on the personal income tax (PIT) in which states may choose to add a surcharge within a band of rates set by the federal government, to

increase state revenues and therefore reduce the vertical imbalance. In addition to this, the government could consider increasing the general government tax take beyond the current level of about 20 percent of GDP through better compliance, enforcement, and simplification of tax laws, among others.

- **Clarifying expenditure assignments between the center and the states may also help reduce the vertical imbalance.** There are many areas of concurrent responsibility. Clarifying the responsibilities of each level of government can help identify overlapping functions or those better undertaken by the central government. Given that spending closer to the point of contact with citizens is usually considered more effective and the structural rigidities on the spending side, it may not make sense to reassign state-level spending to the center to further close the vertical gap. However, an assessment of the designated expenditure assignments could help in rationalizing expenditure and improving efficiency. An important issue that has not been addressed in this review is the effectiveness of transfers from the states to the local government bodies and whether they promote intra-state equalization.⁷
- **Other elements of addressing the vertical fiscal gap include more attention to measurement and data.** Developing minimum expenditure standards for the states and identifying tax capacity at a normal effort can help to improve the identification of the vertical gap that must be closed. Increasingly, countries around the world can realize measures that reflect the difference between the expenditure needed to provide a standard level of services and tax capacity using a normal effort. The fiscal roadmaps and memorandums of understanding (MoUs) developed with states under the Eleventh and Twelfth Finance Commissions seem to have been effective in closing vertical imbalance while at the same time not reducing equalization. These roadmaps also supported state fiscal reform and alignment with fiscal rules. The Thirteenth Finance Commission used measures of tax capacity similar to those applied internationally. Understanding

⁶ Note that not all transfers to the states are passed through the Finance Commission. There are multiple channels of transfer of resources between the Center and the states. These include current transfers (discretionary and non-discretionary transfers), capital grants, loans, and so on. Current transfers such as the centrally sponsored schemes (CSS), central sector schemes, and other specific-purpose transfers also contribute to addressing the VFI. However, these transfers are outside the control of the Finance Commission and are provided by the respective line ministries. Closing the VFI requires consideration of both Finance Commission and non-Finance Commission transfers. The present study focuses on Finance Commission transfers.

⁷ See Muralidaran (2024) for an extensive treatment of these issues at the state level.

their application and the reasons for discontinuation may provide useful insights. Strengthening the quality and timeliness of state-level fiscal data can also help.

- **Another, more radical, consideration for potential reform is for the government to separate the transfer system into separate pools to address vertical and horizontal imbalances separately.** To some degree, non-Finance Commission transfers (the centrally sponsored schemes and central schemes) are already providing conditional transfers to help state governments close some vertical imbalances. The advantage of this approach is having a specific instrument to address the various goals of the government, as opposed to including all the goals into the Finance Commission transfers. Options and simulations of such an approach could be developed.

Addressing the horizontal imbalances based on the sharing formula, the share of per capita Finance Commission transfers to lower-income states was around five times that to high-income states⁸ during the Eleventh Finance Commission.

This ratio declines to about four times through the period to the Fifteenth Finance Commission. The share of transfers of lower-income states to middle-income states increases from 1.5 to 2.0 over this period. Fiscal data on actual transfers showed similar patterns, although at a slightly lower level and with the ratio of low-income to high-income states, reducing slightly during the Fifteenth Finance Commission. During this time, middle-income states have experienced increased pressure.

Broadly speaking, most equalization systems aim at equalizing either revenue capacity, minimum standards of services, or the fiscal gap.

The equalization objective of the Finance Commission in India is not clear, given that it is trying to balance need, equity, and efficiency. Prioritizing what the system aims to equalize could make the system more effective. Consideration of removing factors that might be better addressed through a conditional grant, such as supporting maintenance of forest cover, might also strengthen equalization.

One option is to consider different measures of tax effort (or tax capacity) based on past experiences to incentivize greater mobilization of own revenues.

Are there lessons to be learned from the indicators that measured fiscal capacity under the Thirteenth Finance Commission and why they were discontinued? Has India evolved so that ten years later, such an approach may be reconsidered? Whether state governments will respond to a reward for increasing taxes is an open question. The major issues are whether only high-income states will respond, how much the incentive would need to be, and whether this element of reward for higher taxes may crowd out some equalization.

India may wish to consider transitioning to a fiscal gap approach over time, focusing on a horizontal grant distribution system to close the gap between the cost of a minimum standard of public services needs and the fiscal capacity required to meet those needs. This transition is likely necessary, but it will take time.

The experience of Australia, Brazil, Canada, South Africa, and several European countries highlights several key lessons that are relevant for India.

First, clarity in defining what is being equalized is crucial for the system's design. For instance, Canada and Germany focus on revenue capacity equalization, while South Africa emphasizes expenditure needs. Australia and the Scandinavian countries focus on measuring and filling the fiscal gap. **Second,** the effectiveness of equalization systems often hinges on the availability of current and accurate data, as evidenced by successful systems in countries like Canada, South Africa, and Australia. Conversely, countries like Brazil and Italy, which struggle with timely data management, face challenges in achieving equalization goals. **Lastly,** equalization should be considered within the broader context of other transfers. For example, in Canada, equalization transfers constitute about 28 percent of total transfers, whereas in South Africa, they account for over 80 percent of total transfers.

⁸ The analysis in the report refers to general category states (GCS) in India and does not include special category states (SCS) unless specified.

Chapter 2

Vertical Fiscal Imbalances

2.1 Introduction

In federal systems, fiscal imbalances frequently arise because of unequal distribution of revenue capacity and expenditure responsibilities. Typically, federal governments have more revenue than they need to provide minimum levels of assigned services, while subnational governments usually do not have enough. This mismatch between expenditures required to produce minimum levels of services at all levels of government and own-source revenue capacity⁹ at different tiers of government is referred to as vertical fiscal imbalance (VFI). Concurrently, within each subnational level of government, there are often significant imbalances among different jurisdictions, referred to as horizontal fiscal imbalances (HFIs). HFIs will be addressed in the next chapter.¹⁰ This chapter examines VFIs and how the Finance Commissions sought to address them. The core function of the Finance Commission is to determine the distribution of the net proceeds of taxes between the central and state governments, thus helping to bridge vertical imbalances.

Finding the 'right' vertical fiscal balance varies from country to country and is heavily 'path dependent'.¹¹ Vertical balance is a fiscal policy decision by the government that is embedded in historical contexts, institutional boundaries, economic and political choices, and the evolving social contracts of the different tiers of government with the citizens. As a result, the existing fiscal arrangements and potential solutions to address fiscal imbalances in countries depend on many factors.

There are a number of ways to measure VFIs and there is not always consensus.¹² In the literature on fiscal federalism, VFI is more broadly identified with 'transfer dependency' or the share of transfers from the center to subnational government as a percentage of a subnational government's revenues or of its expenditures, for example, how much subnational governments depend on resources from the central government to fund services.¹³ Definitionally, transfer dependency reflects the asymmetry in revenue and expenditure assignments for different levels of government.

The normative definition is closest to the notion of VFI. It measures VFI as the difference between the amount that subnational governments can raise from own-revenue sources if they exert a 'normal' revenue effort and the amount they must spend to provide a 'minimum' level of the government services assigned to them.¹⁴ Few countries attempt to formalize what they mean by 'normal' tax effort or 'minimum' service provision.¹⁵ The latter implies estimating 'expenditure needs' in a systematic manner and assessing the goal of providing comparable minimum (assigned) services in each jurisdiction. Many countries therefore try to assess 'expenditure needs' based on the underlying demographic, economic, and (sometimes) political factors. Chapter 4 has examples of countries that undertake detailed calculations of revenue capacity and expenditure as part of their approach to addressing VFI. Typically, the primary policy

9 'Own source' revenue typically refers to taxes over which a government has the ability to control the rate of taxation and, in some cases, the base to which the tax applies. In many federal countries, different levels of government may have the authority to tax the same tax base, choosing rates that are set within a range by the central government. For example, a tax may be applied to income by both the central and state-level government. In India, tax bases are separate, and each level of government has specific 'own taxes' or 'own revenue' sources.

10 The two concepts of the imbalances (VFI and HFI) are related. While VFI is associated with different tiers of the government, the HFI is associated with the same level of government. Even if the richer jurisdictions can afford a vertical fiscal balance measured in terms of the ability to raise resources on its own (excluding transfers), some gap would persist in the poorer jurisdictions and cannot be ignored.

11 Refers to the idea that the current state or outcome is heavily influenced by the historical path taken to reach it.

12 Aldasoro and Seiferling 2014.

13 See Boadway and Tremblay 2005; Oates 2006; and Ruggeri and Howard 2001.

14 Bahl and Bird 2018, 284.

15 Even though the construction of exhaustive datasets can support such calculations, it is a challenging task to include politically accepted expenditure norms and a fair assessment of the revenue capacity of the subnational government in estimating vertical imbalance (Alm and Martinez-Vazquez 2002).

consideration when addressing VFIs is not the presence of transfers per se but rather the appropriate magnitude and composition of such transfers.¹⁶

In the remainder of this chapter, we will consider how the Finance Commission approached VFIs by first examining the definitions of vertical imbalance used by the various Finance Commissions and then considering the drivers of these imbalances and Finance Commission responses. We will then consider the different measures of vertical imbalance and the trends of these imbalances over the years.

In summary, there is a mismatch of revenue and expenditure assignments among the levels of government in India that has generated a significant, but relatively stable, VFI over the years. Central government raises about 65 percent of revenue and states about 35 percent. However, expenditure responsibilities are the converse, with

states responsible for about 60 percent of expenditure. The Finance Commissions have increased the amount of taxes shared with subnational governments over time to help close about 80 percent of the VFI. The remaining 20 percent is filled by states resorting to other forms of finance such as borrowing or off-budget funds. During the Tenth through Thirteenth Finance Commissions, strengthening fiscal discipline and introducing fiscal rules helped reduce the VFI, and reinforcing such rules could help again. Other alternatives for closing this vertical imbalance include adjusting revenue and/or expenditure assignments of the different levels of government so that expenditure responsibilities are more in line with tax capacity, providing subnational governments with additional tax instruments, and strengthening the capacity and incentives of state governments to raise their own revenues.

2.2 Vertical Fiscal Imbalances in India

Definition over various Finance Commission periods

The Finance Commissions over the years have been consistent in how they have viewed VFI. As seen in Table 2.1, the Finance Commissions have highlighted the mismatch of revenue-raising

capacities and expenditure responsibilities at different levels of government and often underscored the need to enhance the proportion of share of states in the divisible pool of central taxes.

¹⁶ Transfers are not the only possible route for bridging the gaps. The central government can decide to assign more revenues to the subnational governments or reduce expenditure responsibilities. The literature on federalism shows that subnational governments prefer transfers and federal governments agree.

Table 2.1. Definition of VFI over the various Finance Commissions (Eighth Finance Commission to Fifteenth)

Finance Commission (Period)	Definition of VFI
8 th Finance Commission (1984–1989)	VFI refers to the mismatch between the revenue-raising capacities and expenditure responsibilities of different levels of government. The central government typically has more revenue-raising powers, while the states have greater expenditure responsibilities.
9 th Finance Commission (1989–1995)	VFI is the disparity between the revenue capacities and expenditure needs of the central and state governments. The Commission emphasized the need for a balanced approach to revenue sharing and grants to ensure that states have adequate resources to meet their expenditure obligations.
10 th Finance Commission (1995–2000)	VFI is the situation where the central government collects a larger share of total revenues, while the states are responsible for a significant portion of public expenditure. <i>The Commission recommended increasing the share of states in the divisible pool of central taxes to address this imbalance.</i>
11 th Finance Commission (2000–2005)	VFI is defined as the gap between the revenue-raising powers and expenditure responsibilities (assessed on a normative basis) of the central and state governments. <i>The Commission emphasized the importance of fiscal transfers and grants to ensure that states have sufficient resources to fulfill their expenditure responsibilities, particularly in areas such as health, education, and infrastructure.</i>
12 th Finance Commission (2005–2010)	VFI is identified as the mismatch between the revenue-raising capacities and expenditure responsibilities of different levels of government. The Commission highlighted that the central government typically possesses greater revenue-raising powers, whereas the states have greater expenditure responsibilities, leading to an imbalance that necessitates addressing through fiscal transfers.
13 th Finance Commission (2010–2015)	VFI is described as the disparity between the revenue capacities and (normatively assessed) expenditure needs of the central and state governments. <i>The Commission underscored the need for a balanced approach to revenue sharing and grants to ensure that states have adequate resources to meet their expenditure obligations.</i>
14 th Finance Commission (2015–2020)	VFI is characterized as the situation where the central government collects a larger share of total revenues, while the states are responsible for a significant portion of public expenditure. <i>The Commission recommended increasing the share of states in the divisible pool of central taxes to address this imbalance.</i>
15 th Finance Commission (2020–2025)	VFI is defined as the gap between the revenue-raising powers and expenditure responsibilities of the central and state governments. The Commission emphasized the importance of fiscal transfers and grants to ensure that states have sufficient resources to fulfill their expenditure responsibilities, particularly in areas such as health, education, and infrastructure.

Source: Various Finance Commission Reports: -Fifteenth Finance Commission Report, Vol. I, (pg. 150); Fourteenth, Chapter 2 (pgs. 16–17); Thirteenth, Chapter 8; Twelfth, Chapter 2 (pgs. 9, 11,18); Eleventh, Chapter 2 (pg. 15); First Report of Ninth Finance Commission (pg. 3, section 1.11).

Note: VFI definition refers to normatively assessed expenditure responsibilities.

2.3 The Genesis and Policy Approaches to VFIs: An Overview¹⁷

In India, long-term data trends indicate that the shares of revenue between the center and state governments have been relatively stable over time. The available data allow consideration of trends going back to 1950 (the period of the First Finance Commission) through 2016–17 (the Fourteenth Finance Commission). Over this period, on average the central government consistently

collected approximately 65 percent of the total combined (general government) tax revenues, while the states have collected on average 35 percent (excluding tax devolution) of general government tax revenues (Figure 2.1). This stability in the central and state shares of combined tax revenues suggests that there has been no basic change in the division of responsibilities between the center and states.¹⁸

Figure 2.1. Revenue Assignment: General, Center & States (1950-2017)

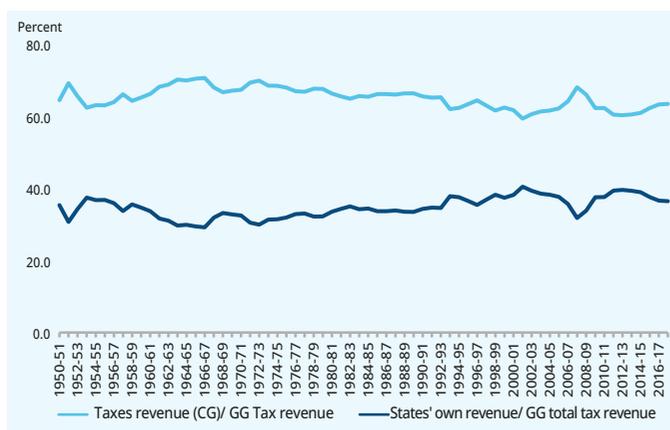
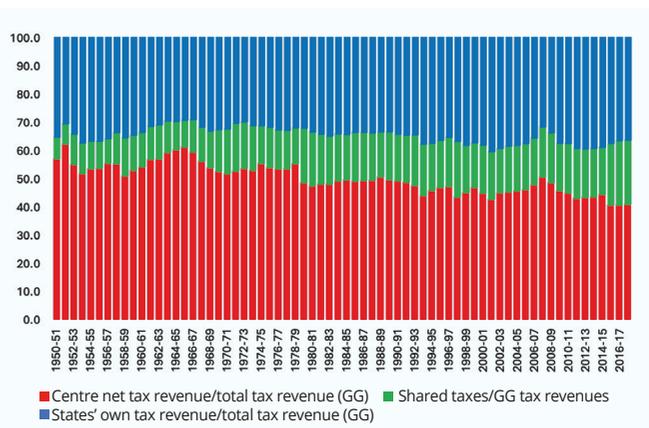


Figure 2.2. Decomposing General Government Tax Revenues into Center and States Tax Revenues (1950-2017)



Source: Indian Public Finance Statistics, Ministry of Finance (MoF), various issues.

Long-term trends also suggest that, over time, the composition of revenues among the center and states has remained relatively stable (Figure 2.2). Breaking down the general government tax revenues between the center and the states' tax revenue reveals that, on average, net central tax revenues (excluding shared taxes) make up about half the total general government tax revenues. Meanwhile, the states' own tax revenue has remained around 35 percent of the general government total tax revenue over the past six and a half decades, with the remaining 15 percent accounted for by shared taxes. Tax devolution (shared taxes) is therefore an important policy instrument of the intergovernmental transfer system in India.

Despite this stability, over the long term, the data indicate that the states' share as percentage of the center's gross tax revenues has increased. Tax revenue devolved to states as a percentage of the gross tax revenue of the center increased from 15.7 percent during the First Finance Commission to

27 percent during the Seventh Finance Commission (Figure 2.3). It remained 25–28 percent from the Seventh Finance Commission to Thirteenth Finance Commission and rose to almost 35 percent during the Fourteenth Finance Commission. It has since dipped slightly during the Fifteenth Finance Commission to 32 percent of the center's gross tax revenue.

However, while the percentage of revenue devolved to states has increased, there is also evidence that the collection of cesses and surcharges, which are not part of the pool of revenues shared with states, has doubled since the Thirteenth Finance Commission (2011). Historically, the role of cesses and surcharges in India's tax system has fluctuated. In 1980–81, cesses and surcharges constituted 2.3 percent of the central government's gross tax revenue (GTR). It increased to 5.8 percent in 1990–91 and then decreased to 3.0 percent in 2000–01. However, by 2011, the proportion of cesses and surcharges rose to 6.4 percent of GTR, peaked during COVID to 14.6

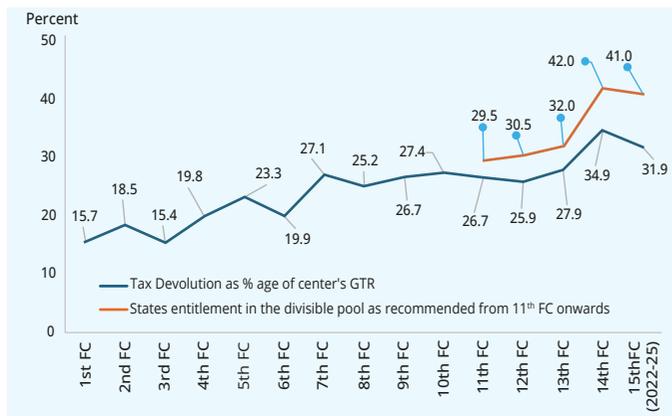
17 The results and findings of this section are based on the available fiscal data provided in the Reserve Bank of India (RBI) State Finance Bulletin, Indian Public Finance Statistics. It is based on outcome data that is consistent over time. The findings are based on operational definitions rather than on the normative definition. Ideally, on the revenue side, a Fiscal Commission would project the VFI as the amount that can be raised at a 'normal' tax effort and on the expenditure side, they would project the amount that needs to be spent to get subnational government expenditures up to the norms.

18 See details in Rangarajan and Srivastav (2011), Twelfth Finance Commission Report.

percent, increasing to 19.7 percent in 2020–21 and remained in double digits subsequently (Figure 2.4). The increasing reliance on cesses and surcharges has significant implications for the VFI in India. Since these levies are excluded from the divisible pool of central taxes, their growth exacerbates the imbalance between the revenue-raising capacity of the central and state governments. The Fifteenth

Finance Commission highlighted a growing concern over cesses and surcharges, emphasizing the need for a more equitable distribution of resources to enable states to meet their expenditure responsibilities effectively. The increasing reliance on these levies could undermine the equity and efficiency of the fiscal federalism framework in India.

Figure 2.3. States Share in Divisible Pool and Tax Devolution as % age of Center's Gross Tax Revenue (GTR)



Source: Various Finance Commission Reports, Government of India (GoI) Budget Documents.

Note: A marginal cut from 42 percent (Fourteenth FC) to 41 percent (Fifteenth FC) is because of the creation of new Union Territories, to ensure their needs were met without increasing the overall burden on the center. The year 2020-21 is excluded since it was a volatile year due to the COVID-19 pandemic.

Figure 2.4. Cess and Surcharge as % age of Center's Gross Tax Revenue (GTR)

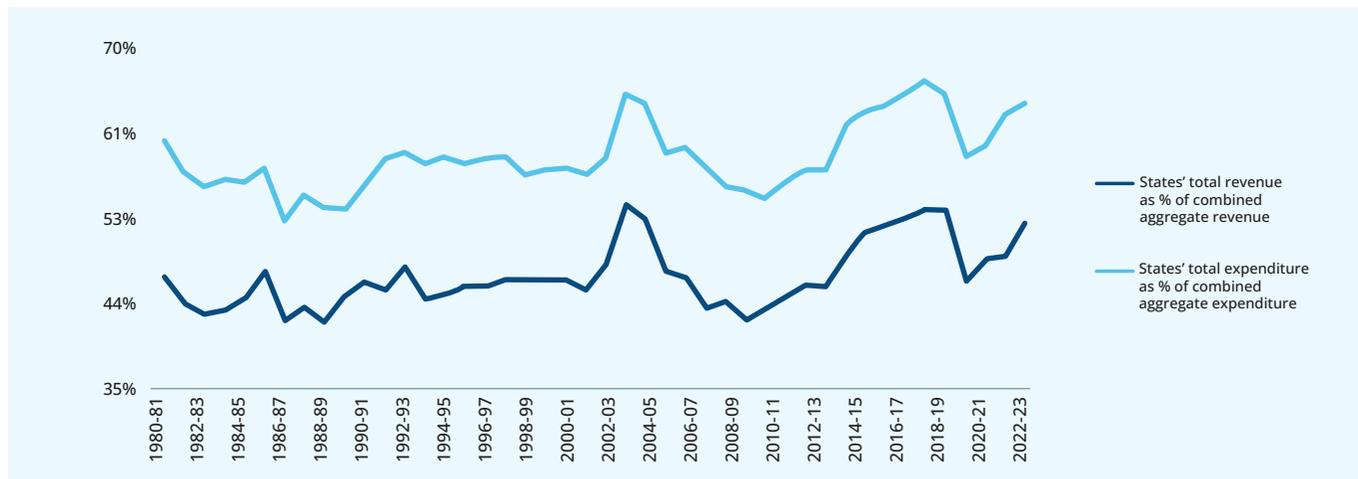


Source: Comptroller and Auditor General of India (CAG) Report, 2021-22

On the expenditure side, states account for more than half of the recurrent spending of the general government. Although the percentage fluctuates based on the overall fiscal circumstances, the gap

between state revenues as a share of aggregate general government revenue and state expenditure is persistent (Figure 2.5).

Figure 2.5. States' revenue and expenditure as percentage of general government revenues and expenditure



Source: RBI State Finance Bulletin, GoI, various issues.

Note: In 1990-91, India witnessed the worst macroeconomic shock; in 1998-99, the states were in crisis due to the award of the Fifth Pay Commission; in 2003-04, the states were in crisis due to rising fiscal imbalances and debt; 2008-09 was the global financial crisis; 2019-20 and 2020-21 are years of the global COVID-19 pandemic. All these episodes had an impact on the state finances in different ways.

The Government of India relies on a range of intergovernmental transfers to close some of the gap between state expenditures and revenues.

Intergovernmental transfers from the center to the states include (i) tax sharing—the share of central taxes devolved to states; (ii) statutory finance commission grants;¹⁹ (iii) discretionary or conditional transfers;²⁰ and (iv) gross loans from the center.²¹ Transfers under (i) and (ii) are together called the Finance Commission transfers. Discretionary or conditional transfers (iii) were allocated from 1952 to 2014 by the Planning Commission. Conditional transfers such as the centrally sponsored schemes, central sector schemes, and others are now provided to the states by the line ministries. The Finance Commission transfers, and the discretionary grants are called

current transfers whereas the loans from the center²² fall into the category of capital transfers.²³

Total current transfers increased from an average of almost 4 percent of GDP in 1995–2000 during the Tenth Finance Commission period to 6 percent of GDP during the Fourteenth Finance Commission period (2015–20). One reason for this jump was that the Fourteenth Finance Commission emphasized formula-driven unconditional transfers over the conditional transfers (discretionary). The discretionary non-Finance Commission grants have consistently been larger than the Finance Commission statutory grants though the difference has fallen under the Fifteenth Finance Commission (Table 2.2).

Table 2.2. Current Transfers as percentage of GDP

Series of Finance Commission	Finance Commission Transfers		Non-FC grants (CSS etc.)	Total Grants from center to states (excl. GST compensation)	Total Current Transfers
	Share in central Taxes	Statutory Grants			
Tenth FC	2.40	0.20	1.20	1.55	3.95
Eleventh FC	2.35	0.40	1.25	1.82	4.17
Twelfth FC	2.80	0.48	1.48	2.26	5.06
Thirteenth FC	2.86	0.41	1.55	2.13	4.99
Fourteenth FC	3.67	0.55	1.39	2.41	6.08
Fifteenth FC (2021-25)	3.45	0.62	1.19	2.03	5.48

Source: RBI State Finance Bulletin, various issues, Ministry of Statistics and Programme Implementation (MoSPI) and staff estimates.

Note: 2020–21 is excluded from the analysis since it was the year of extreme volatility due to the global COVID-19 pandemic. Total current transfers = Finance Commission share in central taxes plus total grants from the center to states.

19 These are sometimes called grants -in-aid or non-plan grants and include statutory grants, grants for natural calamity relief and non-plan non statutory grants. Statutory grants would include grants such as post-devolution revenue deficit grants, grants to rural and urban local bodies among others. With the discontinuation of the distinction between plan and non-plan expenditure in 2017, the statutory grants are a sum of Finance Commission grants and grants under the proviso of article 275 (1) in the RBI State Finance Bulletin from 2020–21.

20 Previously called plan grants (to states) and included: - (i) centrally sponsored schemes designed by the center but implemented at the state level; (ii) plan assistance in the form of block grants for state plans; (iii) additional central assistance for special and other programs to states. With the dissolution of the Planning Commission in 2014 part of plan assistance (ii and iii) were subsumed in the tax devolution while centrally sponsored schemes were restructured and entrusted to the line ministries.

21 Loans from the center included both plan and non-plan loans. Plan loans to states are meant for development projects in sectors like education, health, infrastructure, agriculture. Non-plan loans till 1998–99 were the states' share in net small savings collection passed on to states by the center at an interest rate prescribed by the center. They were costly loans with interest rates around 13–14 percent, meant to cover non-development expenditure.

22 Example is the 50-year interest free loan to states for capital expenditure which was provided in 2023–24. It is outside of the FC transfers. The back-to-back loan in lieu of GST compensation for the years 2020–21 and 2021–22 and introduction of the 'Scheme for Special Assistance to States for Capital Investment' in 2020–21, are some recent examples of loans which has resulted in increasing the share of loans in total transfers.

23 Various Finance Commissions have scrutinized the revenue (current) accounts of the Union and state governments for the purpose of generating surpluses for capital investment. They provided recommendations to restructure public finances to restore budgetary balance and maintain macroeconomic stability.

As a share of GDP, discretionary non-Finance Commission grants increased from 1.2 percent in the Tenth Finance Commission period to 1.6 percent in the Thirteenth Finance Commission, falling to 1.2 percent in the Fifteenth Finance Commission.

Until the discontinuation of the Planning Commission during the period of the Fourteenth Finance Commission, the discretionary grants, particularly the centrally sponsored schemes, proliferated under various Finance Commission periods. On several occasions, Finance Commissions recommended restructuring of the centrally sponsored schemes, although these schemes lie outside the scope of the Finance Commission transfers. One of the many reasons for restructuring of the centrally sponsored schemes was attributed to the loss of autonomy of states in delivering services given the centralized design requirements of the schemes (including provision of matching funds) and the resultant lack of flexibility of the states due to the large number of such schemes. The restructuring suggested by the Fourteenth Finance Commission has tried to address the issue of proliferation of the centrally sponsored schemes. As a result, the non-Finance Commission current transfers since the Thirteenth Finance Commission period have declined on average from 1.6 percent of

GDP to 1.2 percent of GDP during the Fifteenth Finance Commission period.²⁴

Among the Finance Commission transfers, tax devolution dominates, on average, accounting for 85 percent of the total transfers. This ratio has remained steady over time. The Finance Commission statutory grants are provided for various special needs, such as improvements of standards in states, local body grants and emergencies and disaster risk management. These grants also include revenue deficits grants that help fill the remaining fiscal gaps after devolution shares are allocated. Special category states have typically received more than 90 percent of the revenue deficit grants, while for general category states, grants are largely determined by tax revenue sharing.²⁵

The government has relied on tax devolution as a tool to address VFI. As seen in Figure 2.3 and Table 2.3, the states' shares have continued to increase over time as a response to vertical imbalances (see Annex 3.1 for a detailed discussion of the phases of the Finance Commissions over time and the influences on their decisions regarding devolution). The next section turns to approaches to measure this imbalance and whether it has helped close the vertical fiscal gap.

24 An important point to note that the Finance Commission periods before the Fourteenth Finance Commission may not be comparable because the discretionary grants which were previously called plan grants included normal plan assistance, special plan assistance, special central assistance, and sector-specific grants which were subsumed in the tax devolution formula recommended by the Fourteenth Finance Commission.

25 Srivastava and Rao 2009.

**Table 2.3. Vertical Shares under the Finance Commissions
(First to Fifteenth Finance Commission)**

Finance Commission	States' Share in the Net Proceeds of Income Tax (%)	States' Share in the Net Proceeds of Union Excise Duties (%)	States' Share in all Shareable Union Taxes (%)
First (1952–7)	55	40 (3 commodities)	
Second (1957–62)	60	25 (8 commodities)	
Third (1962–6)	66.66	20 ¹ (35 commodities)	
Fourth (1966–9)	75	20 (all commodities)	
Fifth (1969–74)	75	20 (all commodities)	
Sixth (1974–79)	80	20 (all commodities)	
Seventh (1979–84)	85	40 (all commodities)	
Eighth (1984–89)	85	45 ² (all commodities)	
Ninth 1 (1989–90)	85	45 (all commodities)	
Ninth 2 (1990–95)	77.5	45 (all commodities)	
Tenth (1995–2000)	77.5	47.5 ³ (all commodities)	
Eleventh (2000–05)			29.5 ⁴
Twelfth (2005–10)			30.5
Thirteenth (2010–15)			32.0
Fourteenth (2015–20)			42.0
Fifteenth I (2020–21)			41.0
Fifteenth II (2021–26)			41.0

Source: Reddy and Reddy (2019, 75), based on various Finance Commission reports.

Note:

¹ 20 percent of the net proceeds of excise duties on motor spirits are earmarked as a special-purpose grant for the maintenance and improvement of communications.

² Of this, 5 percent is earmarked for post-devolution deficit states.

³ 7.5 percent earmarked for deficit states.

⁴ Of this, 1.5 percent on account of the additional excise duties in lieu of sales tax on sugar, textiles and tobacco.

2.4 Measuring Vertical Fiscal Imbalances

There are a range of approaches to measuring VFI. The most basic measure used to gauge vertical imbalances is fiscal or transfer dependency, which is the ratio of gross transfers to states' total expenditure and net lending. The fiscal or transfer dependency ratio aggregate for all states in the last 18 years (2006–24) covering the period from the Twelfth to the Fifteenth Finance Commission has been on average 36 percent, implying transfers have been financing more than one-third of the total spending by the states.²⁶ For low-income states, transfers finance more than half of the total spending. Three additional approaches set out in

Table 2.4 are considered in what follows. The estimation of VFI can be based on a 'normative' approach which requires estimating state tax effort, and the expenditure levels required to meet minimum expenditure needs, or an approach anchored in the broader fiscal dependency ratios. The Finance Commissions in India do not estimate VFIs based on the normative approach. In India, the VFI definition used in various government reports and studies are based on the definitions provided by Eyraud and Lusinyan (2012) and Rangarajan and Srivastava (2011).

²⁶ Gross transfers include Finance Commission transfers, discretionary transfers, and gross loans from the center to states excluding the grants given in lieu of GST compensation from 2020–21 onward. The year 2023–24 is Revised Estimate as per RBI State Finance Bulletin.

Table 2.4. Vertical Fiscal Imbalance Measurement Taxonomy

Author(s)	Definition	Advantages	Limitations
Normative Definition of VFI			
Bahl and Bird (2018)	Vertical fiscal imbalance is the difference between the amount that a subnational government can raise from own revenue sources if they exert a “normal” revenue effort and the amount they must spend to provide a “minimum” level of government services assigned to them.	It offers a nuanced approach that captures the complexity of fiscal imbalances between different levels of government. This definition considers both the revenue-raising capacity and the expenditure needs of subnational governments, providing a more comprehensive view of fiscal imbalances.	<p>Data requirements accurate measurement requires detailed data on revenue capacity and expenditure needs, which may not always be available in countries</p> <p>Subjectivity Determining what constitutes a "normal" revenue effort and a "minimum" level of services can be subjective and vary across regions.</p> <p>Dynamic factors Economic conditions and policy changes can affect both revenue capacity and expenditure needs, making the gap a moving target.</p>
Operational VFI Definitions			
Eyraud and Lusinyan (2012) – traditional definition	Defined as the proportion of subnational government expenditure that is not financed through SNG own revenues.	<ul style="list-style-type: none"> • An easy and straightforward way to measure fiscal dependency, making it useful for policy analysis and comparison across different countries or regions. • It emphasizes the importance of borrowing and market flexibility, which can provide subnational governments with alternative financing mechanisms and enhance their financial autonomy and innovation in fiscal management. 	<ul style="list-style-type: none"> • The definition is useful; however, it may oversimplify the complex fiscal interactions between different levels of government. • It may not fully capture the qualitative aspects of fiscal needs or the efficiency of fiscal operations. • Additionally, the measure can be influenced by temporary fiscal policies or economic conditions and may impact final outcomes.
Rangarajan and Srivastava (2011) – based on a ratio analysis.	Vertical fiscal imbalance refers to the relationship of revenues relative to expenditure responsibilities. It is based on fiscal outcomes.	The ratios can provide valuable insights into the fiscal autonomy and dependency of subnational governments, helping policymakers design effective decentralization and fiscal equalization strategies.	The approach may not fully capture qualitative aspects of fiscal needs or the efficiency of fiscal operations. Additionally, these ratios can be influenced by temporary fiscal measures or one-time transfers, potentially skewing results.
Zahir (2020)	Extends the work of Rangarajan and Srivastava		

Source: Author's compilation.

The normative approach can be formulated as follows:

$$GAP = \sum_i (\tilde{E}_i - \tilde{R}_i)$$

where,

\tilde{R}_i = the revenue raised from own sources at normal effort by subnational government i.

\tilde{E}_i = the amount of expenditure needed to provide a minimum level of assigned services in subnational government i.

The targeted vertical share (VS)—the share of central taxes allocated to subnational transfers—will then be

$$VS = \frac{\alpha(GAP)}{CR}$$

where the affordability parameter²⁷ is the percentage of the financing gap that the federal or central government commits to cover with the transfer system, and CR is the total amount of revenue raised by the central government from current sources.

Because of the intensive data requirements and complexities in agreeing on what is 'normal' tax effort or what a minimum standard should be, many countries do not calculate the gap based on a normative approach. However, as seen in Chapter 4 on international experiences, an increasing number of countries have tried to determine expenditure standards by either drawing on top-down expenditure norms or by undertaking econometric estimation of spending categories to determine what a minimum level across the country should be. Likewise, efforts to determine normal tax capacity include options such as comparing a state's subnational revenue to that of the average across all states or by undertaking econometric estimations for each tax base to understand the drivers that promote tax effort and whether a state is doing as much as it can to tap its tax bases. Calculating the normative measure for prior Finance Commission periods is beyond the scope of this note. Looking forward, such a tool might be useful for improving incentives for state fiscal behavior.

A more operational definition of VFI is set out by Eyraud and Lusinyan (2012)—the proportion of subnational government expenditure that is not

financed through subnational government own revenues. This measure of VFI thus comprises of two components — transfers received from other levels of government and subnational net borrowing, both expressed as a percentage of subnational expenditure. This measure of VFI extends the concept of 'transfer dependency' to include subnational borrowing, which gives a more complete picture of how total expenditures are being funded (see details in Eyraud and Lusinyan 2012).

The estimated VFI ratio using this measure indicates that between 46 and 58 percent of the states' own expenditure at aggregate level is funded by states' own revenue in the past 30+ year. Over the last several decades, the VFI has been stable within a range of 0.5 to 0.6 except in the years 2011–14, where it fell below 0.5 percent (Figure 2.6). This shows a high degree of stability given the episodes of fiscal pressure since the 1990s. This stability has endured major policy shifts like the introduction of the GST in 2017. It also reflects Finance Commission efforts to balance the structural changes by either increasing the Finance Commission transfers or suggesting ways to restructure overall public finances within a rule-based fiscal framework. It also reflects that the central government has been stepping in to provide compensation to states for loss of revenue due to GST and back-to-back loans to states to meet the shortfall in GST compensation funds during COVID.

27 Closing the vertical gap will ultimately be a bargain over what subnational governments need and what the central government can afford (Bahl and Wallace 2007).

Figure 2.6. Trends in Vertical Fiscal Imbalance in India (1990-24)

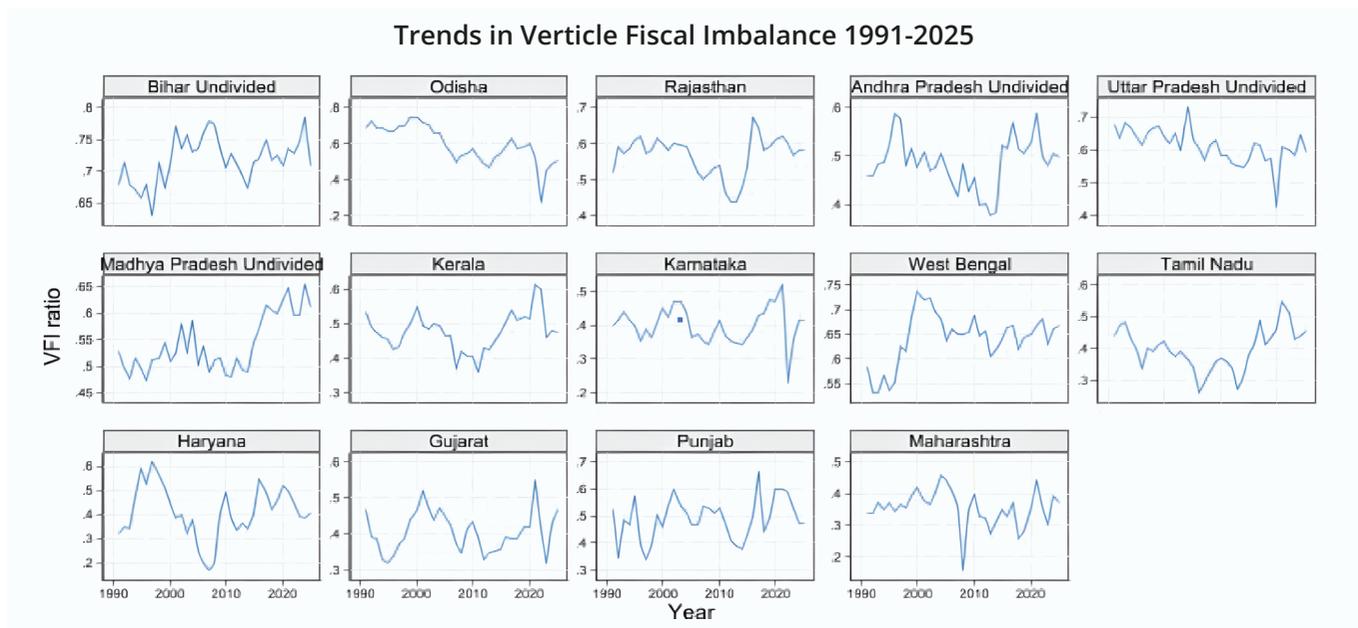


Source: Eyraud and Lusinyan (2012); RBI State Finance Bulletin, 2023-24; and staff estimates.

Extending the same definition to examine state-wise²⁸ trends in VFI reveals some interesting results (Figure 2.7). Indian states have experienced different episodes of high deficits and high debt and periods of fiscal consolidation since 1990-91. VFIs and their patterns in different states over time vary considerably. States that were fiscally dependent on central transfers indicated the presence of large VFIs like undivided Bihar (average VFI of 0.72 from 1990 to 2025), undivided Uttar Pradesh (average VFI of 0.61), Odisha (at over 0.7 before 2003-04), and Rajasthan (with a sharp fall in 2009-10 and a rapid

uptick thereafter). Some of the higher-income states like Haryana, Gujarat, Maharashtra, Tamil Nadu, and Karnataka had lower but highly variable VFIs. Middle-income states like West Bengal, Andhra Pradesh, and Kerala had an average VFI of 0.64, 0.48, and 0.49, respectively, over more than 40 years—also with considerable variability. Nevertheless, reform initiatives recommended by the Finance Commissions (Tenth to the Fifteenth in the period under consideration) and central government efforts have helped stabilize the VFI within a band in aggregate terms, as shown in Figure 2.7.

Figure 2.7. Trends in VFI State-wise, 1991-2025 (Eyraud and Lusinyan measure)



Source: RBI
 Note: All data actuals except 2024 (RE) and 2025 (BE)

28 The report considers only the 14 general category states, which are also the major states of India, and account for over 85-90 percent of the total expenditure. The analysis of the special category states is not part of the report.

In the mid-90s, Pinto and Zahir (2004a)²⁹ noted that during the Ninth Plan period, 1997–98 to 2001–02, growth slowed, and fiscal deficits went back to the pre-1991 crisis levels.³⁰ This raised concern about the slowing pace of fiscal and structural reforms that resulted in large and varying degrees of VFIs in states. In addition to the deterioration in ‘explicit’ public finances, quasi-fiscal activities had become a growing threat since the mid-1990s. These included (i) losses associated with off-budget activities, notably supply of irrigation and power; (ii) contingent liabilities, which may either be explicit, for example, guarantees of bonds issued by loss-making public enterprises, or implicit, for example, financial sector bailout costs resulting from implicit deposit insurance; (iii) and unfunded pension liabilities. Some economists have argued that the burden of the center’s fiscal adjustment of 1991 was responsible for the crisis at the state level since there was a massive cut in resource transfers to the states by the center after 1991.

A noteworthy development in Indian public finances was the adoption of the Fiscal Responsibility and Budget Management Act (FRBMA) in 2003 at the center and subsequently at the state level from 2004 onward, which stemmed the widening of the VFIs post 2004 at the state level. The adoption of FRBMA brought about considerable fiscal correction at the center and state levels. The FRBMA³¹ contained the fiscal deficit and revenue (recurrent) deficit within prescribed limits (fiscal deficit / gross state domestic product (GSDP) = 3 percent; zero revenue balance) while maintaining the debt stock at a reasonable level as indicated by the Twelfth Finance Commission. As time progressed, FRBMs, in addition, established indicative limits on

guarantees at the state level. The FRBMA was amended following the recommendations of the FRBM review committee (2017) through the Finance Act (2018).³²

From 2014 onward, the structural shift in the Indian economy was characterized by changes in the center-state relations and measures that addressed the underlying weaknesses embedded in the erstwhile planning process. Although the Fourteenth Finance Commission increased the vertical share from 32 percent to 42 percent, it did not do much to cap the committed expenditures of the states which were increasing at that time. In the absence of genuine expenditure ceilings (like that in the European Union [EU] and Brazil) on non-productive expenditures at the state level, the fiscal space provided by the Fourteenth Finance Commission was crowded out by spending on wages, salaries, interest, and pensions. As a result, post 2014 the VFIs at the state level did not contract much and a break from the past was not noticeable.

The last measure of VFI that is considered draws on work by Rangarajan and Srivastava (2011) and Zahir (2020). Like the dependency ratio, these measures consider ex-ante and ex-post measures of state finances with and without transfers as a percentage of state expenditures. P1 measures state expenditure minus states’ own revenues divided by state expenditure. P2 measures ratio of state expenditure minus own revenues plus central transfers, all divided by the state expenditure. From a central government perspective, C1 measures central government expenditure (inclusive of transfers) minus center’s gross revenues divided by center’s expenditure. C2 measures the center’s

29 Pinto, B., and F. Zahir. 2004. “India: Why Fiscal Adjustment Now?” World Bank Working Paper No. 3230.

30 The Indian states were in high and unsustainable fiscal deficits, primarily caused by an unbridled growth in salary bill (following the Fifth Central Pay Commission) and a squeeze in resources from the center for infrastructure financing.

31 The rule-based system adopted in India required that both the center and states present three statements before the parliament/legislature at the time of budget presentation: (i) macroeconomic framework statement - state of the economy highlighting growth prospects; (ii) medium-term fiscal policy statement (MTFP) - fiscal goals and 3-year rolling targets on revenue-expenditure balance, pension liabilities estimates for 10 years; and (iii) fiscal policy strategy statement - fiscal policies relating to taxation, expenditure, and borrowings. Most of the major states in India publish these statements on their website: Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand, West Bengal. Many of these states also have escape clauses for natural calamity, internal security, and exceptional circumstances.

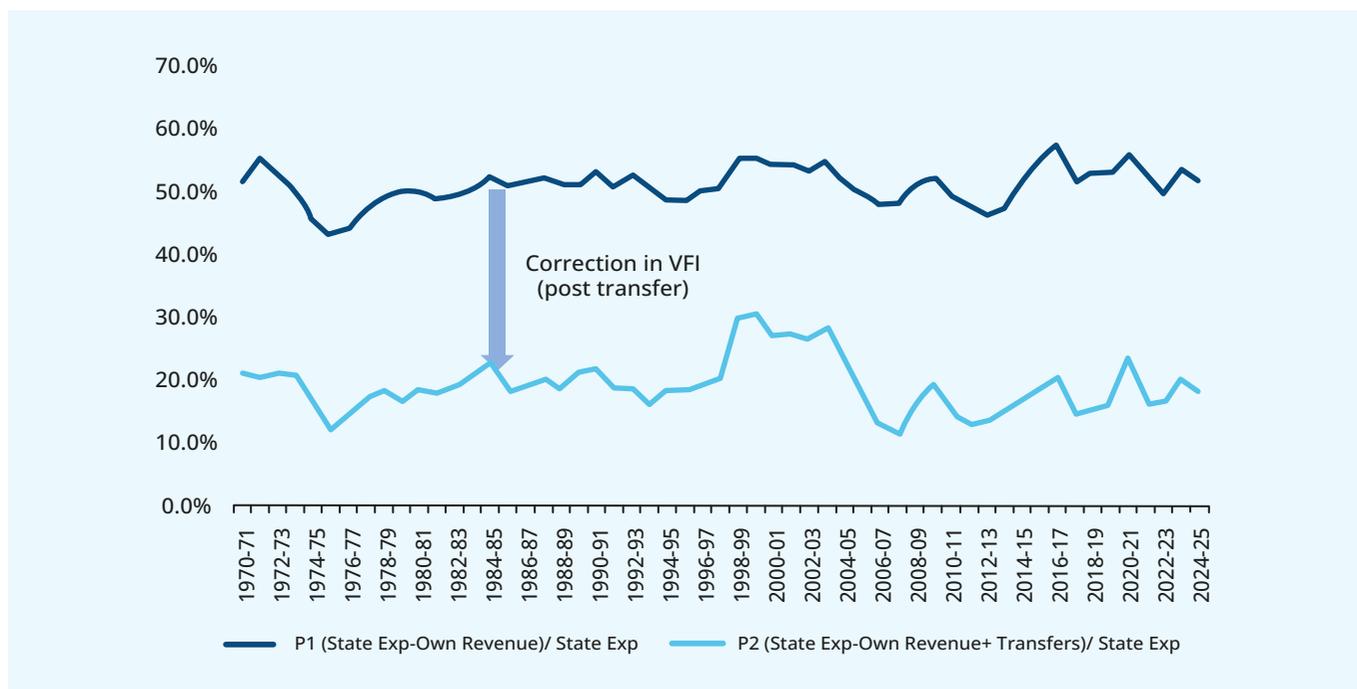
32 The amendment led to the inclusion of ‘escape clauses’ to provide the necessary flexibility at the time of exigencies, calamities, or global shocks like COVID or a decline in real output growth of at least 3 percentage points below the average of the previous four quarters. Post COVID most of the states used the ‘escape clauses’ to postpone the achievement of the mandated targets. The net borrowing ceiling was set at 4.5 percent of GSDP in the states in 2021–22 to compensate for the loss of tax revenues due to the pandemic as per the recommendations of the Fifteenth Finance Commission.

expenditure net of central government transfers to states minus the center's revenue net of transfers divided by the center's expenditure net of transfers.³³

As with other measures, the P1 indicator suggests that more than half of state expenditures are not covered by states' own revenues. P2 indicates that while a large portion of the gap is covered by transfers, a considerable portion of expenditure remains unfinanced, and state governments borrowed or found other methods to cover these expenditures (Figure 2.8). The bulge in P2 starting in the late 90s is indicative of the fiscal crisis at the state level and the drop in P2 from about 2000-01 until 2007-8 reflects the fiscal reforms and efforts meant to address this.

With respect to the central government, C1 suggests that the center is not in surplus even prior to transfers and the center's fiscal space shrinks even further after transfers (C2). The contraction (Figure 2.9) at the central government level is cause for concern because the center is tasked with expenditures pertaining to defense and security, trade, and maintenance of macroeconomic stability. The positive sign of the C2 ratio shows that for India, the center's 'fiscal space' for development (productive) spending contracts after transfers to the states, and the center tends to resort to borrowings and cesses and surcharges (since 2011) to finance its own expenditure commitments.³⁴

Figure 2.8. States VFI: Pre (P1) and Post (P2) Transfers Scenario



Source: RBI State Finance Bulletin (2024-25) and various issues, Staff Estimates

33 The difference between total expenditure and revenues at all states level as a percentage of GDP (VFI) is on average 8.9 and 9.1 percent during the Fourteenth and Fifteenth Finance Commissions. Of this, transfers to GDP in aggregate terms are 6.1 and 5.8 percent. The balance excluding transfers is the fiscal deficit to GDP at the state level.

34 Pinto and Zahir et.al (2006, 2007) point out that general government investment is consistently positively associated with growth and private investment. One channel to understand this relationship is through the 'fiscal space', where government capital expenditure cuts, especially in infrastructure would tend to reduce private investment given complementarity effects as well as its productivity, lowering growth and eventually raising fiscal deficits.

Figure 2.9. Center- Pre (C1) and Post (C2) Transfers



Note: Figures may not be comparable to Zahir, 2020 because of accounting adjustments and refinements in the methodology.
Source: Central government Budget Documents, RBI Handbook of Statistics, Staff Estimates.

Table 2.5 shows these indicators broken down by year for the different Finance Commission periods and phases since the Sixth Finance Commission.

The ratios help understand the degree of correction that occurs in the states through intergovernmental transfers and the resultant contraction in the central government finances post transfers. During the Sixth and Seventh Finance Commission periods' pre-transfers, the states had a vertical fiscal gap on average of 46.1 percent and 50.2 percent, respectively. After transfers this gap falls to about 16 percent during Sixth Finance Commission and approximately 19 percent in Seventh Finance Commission. The uncovered gap, as indicated by the positive sign, may be financed either through borrowings or an increase in revenues.

The period from the Eighth to Tenth FC was characterized by extreme volatility in the finances of both center and state. The twin balance sheet crisis of 1991 was followed by a fiscal crisis at the state level in 1997-98 due to the award of the Fifth Pay Commission. Although, post 1991, the Indian economy liberalized and transformed into a more open economy, improvement in overall public finances remained patchy. More time was required for the reforms to deepen. As a result, the VFIs between the center and states expanded to over 52 percent compared to the earlier period. After

transfers, the vertical gap declined on average to about 20 percent in the Eighth and Ninth Finance Commission periods, accompanied by a sharper correction of 24 percent (on average) during the Tenth Finance Commission period.

The awards of the Twelfth and Thirteenth Finance Commissions seem to have corrected the vertical fiscal gap between the center and states more sharply with the pre-transfer ratios (P1) of about 50 percent declining to P2 of 16 percent in the Twelfth Finance Commission and 15 percent on average during the Thirteenth Finance Commission period.³⁵ The restructuring of states' public finances recommended by the Twelfth Finance Commission included the debt swap scheme, fiscal rules, and a move toward a fiscal framework where states also supported the center in macroeconomic stabilization. The redefinition of fiscal architecture that was conducive for economic growth and encouraged economic efficiency assisted with stronger corrections in the VFI during this period.

In addition, fiscal empowerment of states and revenue augmentation had been the primary goals during this period. States' own tax revenue increased from 5.7 percent of GDP in 2003-04 to 6.9 percent of GDP in 2022-23.³⁵ Implementation of the state goods and services tax (SGST) significantly contributed to this increase. Before 2016-17, the

35 The uncovered gap declined significantly during the Twelfth and the Thirteenth Finance Commission periods (2005-15). The marked correction in addressing the vertical fiscal gap in India during this period can be attributed to a combination of factors like fiscal consolidation both at the center and states, revenue augmentation (buoyant taxes, better tax administration, and improved compliance), expenditure correction at the state level, in particular, controlling the wage bill, interest payments, and the increase in state's share in central taxes (divisible pool) and grants owing to the Twelfth and Thirteenth Finance Commission award.

36 RBI (Reserve Bank of India). 2024. "Revenue Dynamics and Fiscal Capacity of Indian States", Chapter 3, pp. 28-34.

predominant contributor to state tax revenue was sales tax/VAT. From 2017–18 onward, SGST emerged as the primary source, followed by sales tax/VAT, excise duty, stamp duty, registration fees, and vehicle taxes. However, during this phase, there were huge losses in the power sector,³⁷ which affected the fiscal position of the states and in the subsequent periods (Fourteenth and Fifteenth Finance Commissions). The correction in the vertical fiscal gap was less than some prior Finance Commissions, but it remained between 17 and 20 percent on average. The Fifteenth Finance Commission recommended performance-based incentives for

states to promote reforms in the power sector, the adoption of Direct Benefit Transfer (DBT), and others. These incentives aimed to enhance the efficiency and financial health of state-owned power distribution companies (DISCOMS). States were granted an additional borrowing capacity of 0.5 percent of their GSDP, contingent on their performance in implementing power sector reforms. This initiative was intended to provide states with the essential financial resources needed to undertake critical reforms and investments in the power sector.

Table 2.5. Vertical Fiscal Imbalances in India, Sixth to Fifteenth Finance Commission

Years	P1	P2	C1	C2	Years	P1	P2	C1	C2
Sixth Finance Commission: Macroeconomic shock, oil crisis					Seventh Finance Commission: Economic reforms and industrial growth				
1974-75	45.5%	16.2%	26.3%	53.5%	1979-80	50.7%	17.4%	36.5%	77.6%
1975-76	43.4%	12.2%	27.8%	53.9%	1980-81	50.6%	18.6%	40.1%	80.1%
1976-77	44.5%	14.4%	30.7%	58.8%	1981-82	49.1%	18.0%	36.6%	72.6%
1977-78	47.5%	17.0%	27.8%	58.2%	1982-83	49.8%	19.1%	37.9%	74.2%
1978-79	49.5%	18.5%	34.2%	67.9%	1983-84	50.9%	20.9%	39.8%	75.5%
Eighth Finance Commission: Focus on Fiscal Discipline & Resource allocation					Ninth Finance Commission: Twin Balance Sheet Crisis; Economic Reforms				
1984-85	52.8%	23.0%	42.6%	75.5%	1989-90	51.5%	21.4%	40.5%	71.7%
1985-86	51.5%	18.4%	43.8%	81.9%	1990-91	53.6%	22.0%	44.8%	80.0%
1986-87	51.9%	19.5%	44.3%	77.0%	1991-92	51.3%	19.0%	37.3%	73.5%
1987-88	52.8%	20.3%	42.2%	77.4%	1992-93	52.9%	18.7%	36.2%	72.5%
1988-89	51.6%	18.8%	41.5%	75.0%	1993-94	51.0%	16.2%	44.4%	80.6%
Tenth FC: States' in crisis, severe resource constraints					Eleventh FC: Significant Fiscal Correction at the State level				
1995-96	48.9%	18.7%	35.9%	70.4%	2000-01	54.9%	27.4%	38.6%	65.9%
1996-97	50.7%	19.7%	34.7%	70.5%	2001-02	55.0%	27.4%	41.8%	68.8%
1997-98	51.2%	20.7%	40.2%	73.0%	2002-03	54.0%	26.7%	39.1%	58.7%
1998-99	55.4%	29.9%	44.4%	67.9%	2003-04	55.5%	28.1%	34.7%	40.6%
1999-2000	56.1%	30.7%	37.0%	62.6%	2004-05	51.5%	22.9%	29.9%	40.8%
Twelfth FC: Fiscal Consolidation both at the Center and States					Thirteenth FC: Constrained Fiscal Space for Inclusive Growth				
2005-06	50.1%	17.3%	29.9%	57.1%	2010-11	49.7%	14.8%	33.5%	60.4%
2006-07	48.2%	13.0%	24.8%	52.3%	2011-12	48.2%	13.3%	41.5%	71.5%
2007-08	48.5%	11.7%	23.4%	53.0%	2012-13	46.7%	13.5%	37.0%	66.9%
2008-09	51.4%	16.3%	38.5%	66.9%	2013-14	47.8%	15.3%	34.4%	63.3%
2009-10	52.6%	19.5%	43.6%	69.8%	2014-15	51.9%	17.1%	33.2%	67.6%
Fourteenth Finance Commission: Substantial increase in Unconditional Transfers to States					Fifteenth Finance Commission: Uncertain Macroeconomic conditions due to Global Pandemic				
2015-16	55.6%	18.7%	32.5%	74.6%	2020-21	56.3%	24.0%	53.2%	88.7%
2016-17	58.1%	20.7%	29.8%	71.6%	2021-22	53.1%	16.9%	42.4%	84.1%
2017-18	52.0%	15.0%	32.5%	78.2%	2022-23	49.9%	16.5%	42.8%	80.3%
2018-19	53.5%	15.0%	32.4%	78.9%	2023-24	54.2%	19.8%	38.2%	77.0%
2019-20	53.5%	16.4%	36.9%	76.6%	2024-25 RE	52.3%	18.5%	34.2%	73.8%
					2025-26 BE			32.1%	74.2%

Source: Indian Public Finance Statistics (various issues), MoF, Handbook of Statistics and State Finance Bulletin, RBI, GoI Budget Documents (archives and recent), staff estimates.

Note: Follows the methodology provided in Rangarajan and Srivastava (2011) and Zahir (2020). Figures are not comparable to the previous paper by Zahir (2020) due to adjustments to the data and further refinements in the methodology.

37 Financial restructuring of state power distribution utilities has been a regular feature in the past - One Time Settlement (OTS) in 2003; Financial Restructuring Plan (FRP) in 2012; and UDAY (Ujwal Discom Yojana) in 2015. These schemes significantly affected state finances. The OTS of 2003 caused deterioration in states' debt position from 2003–04 till 2014–15. The FRP of 2012 expanded states' outstanding guarantee liabilities without improving the financial performance of utilities. By 2014–2015, power distribution utilities had accumulated losses of US\$45.6 billion and outstanding debt of INR 4.3 lakh crore (US\$51.6 billion), with banks reluctant to provide finance for additional losses. Under UDAY, which encompasses all states/union territories except West Bengal, Odisha, and Delhi, the scope of debt restructured was larger than under earlier programs. State governments took over 75 percent of outstanding liabilities of DISCOMs in the form of grants or equity. 16 states (including all the seven FRP states) signed comprehensive financial and operational turnaround agreements under the program, which was funded through non-SLR (Statutory Liquidity Ratio) UDAY bonds of INR 2.1 lakh crore (US\$25.2 billion). Finances of these states in the bond issuance years (2015–16 and 2016–17) were significantly affected; interest payments, redemptions, and DISCOMs' loss funding continued to affect state finances.

2.5 Conclusions and Considerations

As in many federal countries, India experiences significant VFIs because of a mismatch between revenue assignments and expenditure assignments to the central and state governments. Based on fiscal outcomes, the central government raises about 65 percent of revenue and states about 35 percent; however, expenditure responsibilities are the converse, with states responsible for about 60 percent of expenditure.

Transfers from the central government are intended to mitigate the VFI, and the Finance Commission allocations constitute the largest component of these transfers to the states.

During the most recent Finance Commission period, total current transfers reached 5.5 percent of GDP, with Finance Commission transfers accounting for 3.4 percent of GDP. Among these transfers, shared taxes devolved to the states represent the majority—approximately 85 percent of total Finance Commission transfers under the Fifteenth Finance Commission.

Each Finance Commission determines the percentage of the divisible tax pool to be devolved to the states, which has progressively increased, reaching 41 percent in recent years. However, cesses and surcharges, which do not form part of the divisible tax pool, have been increasing rapidly as a proportion of total taxes, doubling since 2011 to 18 percent of gross central tax revenue. This trend suggests that fiscal pressures at the central level may incentivize the increased utilization of cesses and surcharges.

The formulaic approach currently used by the Finance Commission in India primarily addresses broad financial outcomes such as changes in state expenditures and tax revenues. However, it often falls short of considering the specific fiscal challenges faced by individual states. VFI is typically measured by comparing the tax revenues generated at a normal tax effort with the expenditures required to maintain public services at a minimum level. The existing formula does not adequately account for how states utilize grant money to achieve fiscal balance nor does it incentivize improvements in tax administration or rate adjustments. An alternative approach to addressing

fiscal balance involves calculating the VFI indicator based on the actual fiscal performance of state governments. This would require an analysis of factors influencing fiscal outcomes, such as the quality of tax administration, tax rates, and tax preferences. Additionally, it would consider the adequacy of public service provision, infrastructure maintenance, procurement practices, and budgeting procedures. Such an approach would enable the identification of specific reform areas that could enhance overall fiscal balance in the system, addressing the fiscal gap more effectively through targeted transfers.

Ideally, measurement of VFIs would draw on a normative approach in which the vertical gap between levels of government is based on the difference between the degree to which state governments are meeting a minimum standard of expenditure and the revenue that they are able to raise based on a normal tax effort. The government is then able to determine how much of this gap it can afford to fill. This approach helps shape incentives in a way that will reinforce analysis of the minimum standard expenditures to attain the desired outcomes as well as incentivize more effective revenue collection. Such an approach is possible and is used in several countries, but it requires consistent, high-quality data at the necessary intervals and agreement on the norms of spending for key services as well as on a normal tax effort. Reaching consensus on these issues can be difficult. To optimize the effectiveness of its transfers, the Indian government may wish to consider preparing for such an approach as its counterparts in the BRICS are doing (Brazil).

In lieu of a normative approach, this chapter has considered several measures of VFI that draw on existing fiscal data and these measures are largely consistent. The first is a basic measure of fiscal dependency, which is the ratio of gross transfers to states' total expenditure and net lending. The fiscal or transfer dependency ratio in aggregate for all states in the last 18 years (2006–24) covering the period from the Twelfth to the Fifteenth Finance Commissions has been on average 36 percent,

implying transfers have been financing more than one-third of the total spending by the states. A second measure considers the share of state expenditures covered by transfers and other forms of financing (essentially borrowing, but it could include any other forms of finance such as arrears). This measure finds that on average over time, 50 to 60 percent of state expenditures are funded by transfers and borrowing.

A last set of measures considers the degree to which transfers have helped close the vertical imbalance. For states a first measure (P1 and P2) also finds that own revenues have typically covered about 50 percent of state expenditure and that central transfers brings the amount of state expenditure that remains to be financed to about 20 percent. At the same time, the central government has its own fiscal deficits to consider and the measures of the impact of transfers C1 & C2 suggest that these transfers have tightened the center's fiscal space.

Deciding whether to completely close the vertical fiscal gap is a crucial policy choice for the government. This decision depends on the overall fiscal situation and how effectively additional resources can be deployed at the subnational level. A key factor in addressing this gap is the Finance Commission's decision on the percentage of the divisible tax pool to be shared with the states. This percentage has gradually increased over time and is now at 41 percent of the central government's gross tax revenue. To further reduce the VFI, one option is to increase this share even more. States have often called for a 50:50 share, but the Finance Commission will need to determine the appropriate rate considering the fiscal pressures at both the central and state levels.

On the revenue side, the government could consider the possibility of expanding the base of revenues shared with the states (the divisible pool), such as by including revenue from cesses and/or surcharges. Although it is understood that the Constitution calls for separation of tax bases, many countries around the world use a 'piggy-back

tax' on PIT (Personal Income Tax) in which states may choose to add a surcharge within a band of rates set by the federal government, to increase their revenues and therefore reduce the vertical imbalance.

Another option involves revisiting the expenditure and revenue assignments of the states to reduce the vertical imbalance. Given that spending closer to the point of contact with citizens is usually considered more effective and the structural rigidities on the spending side—such as requirements for education, health, power sector dues, subsidies, pensions, and the like—it may be difficult to reassign state-level spending to the center. An important issue that has not been addressed in this review is the effectiveness of the assignments of revenue and expenditure and consequent transfers from the states to the local government bodies.³⁸

Other aspects of addressing the vertical fiscal gap include more attention to data and measurement. More precise definitions of the vertical fiscal gap can help provide a 'target' for reducing the VFI, if that is the goal. Better measurement and oversight of revenues, expenditures, and financing sources can help reduce gaps. The fiscal roadmaps and MoUs developed with states under the Eleventh and Twelfth Finance Commissions seem to have been effective in closing vertical imbalances while at the same time not reducing equalization. These roadmaps also supported state fiscal reform and alignment with fiscal rules.

Another, more radical, consideration for potential reform is for the government to separate the transfer system into separate pools to address vertical and horizontal imbalances separately. To some degree, non-Finance Commission transfers (the centrally sponsored schemes and central schemes) are conditional transfers to help governments close some vertical imbalances. The advantage of this approach is having a specific instrument to address the various goals of the government, as opposed to including all the goals into the Finance Commission transfers. Options and simulations of such an approach could be developed.

38 See Muralidaran (2024) for an extensive treatment of these issues at the state level.

Annex 2.1

Phases of Finance Commission and Implications for VFI

Rangarajan and Srivastava (2011) analyzed the distribution of the aggregate share of central tax revenues in detail by categorizing the approach of the Finance Commissions into three distinct phases:

- **Phase I (First to Seventh Finance Commissions):** This phase relied on distinct distribution criteria for income tax and union excise duties. Income tax sharing was mandatory, while sharing of union excise duties was at the discretion of the center. Additionally, separate criteria were provided under two separate articles of the Constitution (Article 270 and Article 272).
- **Phase II (Eighth to Tenth Finance Commissions):** Marking a move toward convergence, this phase saw two noticeable changes: unification of the formulae for inter-se distribution of both income tax and union excise duties and the allocation of a portion of the union excise duties for distribution according to 'assessed deficits'.
- **Phase III (Eleventh Finance Commission onward):** This phase marked full convergence, replacing four distinct sets of shares with one set under the global sharing agreement.

The First Finance Commission (1952–1957) through the Seventh (1979–84) reflected a phase that drew heavily from the pre-independence framework.

Single party rule existed at both the center and states and the relationships were like 'a joint family system' that did not require formal rules (Rao 2022).³⁹ This was a period of state planning dominated by the public sector, with heavy industry-based, import-substituting industrialization influencing

allocative decisions. The First Finance Commission recommended that the states should share 55 percent of the proceeds of the income tax. The successive Finance Commissions had raised the states' share in income tax to 85 percent. In addition to this, the share of excise taxes (discretionary) rose to 40 percent on all tax commodities by the Seventh Finance Commission.

An important discussion during this early phase was the design and implementation of the planning function (the five-year plans). The Planning Commission was established in March 1950, to formulate medium- to long-term plans, advising on the allocation of funds to ministries in the union government through the annual budget, approving the plan of each state, and allocating both untied and tied funds to activities or schemes under the plan.⁴⁰ Plan funds were generally equated with public investments and capital outlays of the budgets. Effectively, this set up a parallel channel of funds to the states.

Some felt that any financial transfer outside of the Finance Commission was not envisaged by the Constitution. The First and Second Finance Commissions allocated resources for both non-plan and plan functions. The majority of the Third Finance Commission advised continuation of this practice, but a Member Secretary submitted a note of dissent to the government and the government ruled that the Finance Commission should confine itself to the non-plan revenue expenditure requirements of the states. Following this decision, the role of the Finance Commission diminished and discretionary transfers increased.⁴¹

³⁹ Rao (2022, 2) notes that over time this 'family harmony' broke down as different coalitions evolved and there were open expressions of disharmony and mistrust, as well as competition over both vertical and horizontal fiscal space and complaints about asymmetric treatment. A notable absence since the beginning of the system is the absence of institutions for fostering intergovernmental cooperation and coordination, bargaining, and conflict resolution.

⁴⁰ The National Development Council (NDC) was established in 1952 and was chaired by the Prime Minister. The functions of the NDC were related to formulating the national plan, reviewing the working of the plan, and considering questions of social and economic policy affecting development. The Planning Commission was meant to be guided by the NDC, but the functioning of the NDC depended on the Prime Minister.

⁴¹ The Planning Commission was discontinued in 2014, and plan/non-plan distinction was later removed. These decisions overlapped with the 14th Finance Commission period. For details, see Panda (2019, 8); Rao (2022, 8); Reddy and Reddy, (2019, 13–16).

The period from the 8th Finance Commission (1984–89) through the Tenth Finance Commission (1995–2000) reflected a transition from a centralized to a more liberalized economy, marked by economic crisis. From the mid-1980s, the buildup of ‘twin’ fiscal and balance of payments deficits brought India to the precipice of default in 1991. At that time, economic policy was fundamentally changed toward a more open economy and reliance on market forces, a larger role of the private sector, and a change in the role of the government.⁴² In addition, in 1992, Articles 73 and 74 of the Constitution recognized the third tier of government, and the Finance Commissions’ role expanded to providing grants directly to local governments as well as to states. Policy changes required both central and state governments to face global competition and market forces together in the spirit of cooperative federalism. However, incentives were for states to increase both current and capital expenditure and this generated a significant deterioration in state public finances from 1995 to 2000.

In the pre-1991 period, poverty reduction was the primary focus of government efforts. With the new policy regime, economic growth with economic efficiency became the predominant objective, with poverty folded into the emphasis on economic growth. Over this period, economic efficiency also included increasing focus on state-level deficits, which were rising.⁴³ Over the course of the Eighth, Ninth, and Tenth Finance Commissions, guidance was increasingly focused on fiscal issues. The 9th Finance Commission was the first to be asked to focus on the sustainability of state public finances and fiscal responsibility. It was also the first Finance Commission to take a normative approach to this task. It recommended the gradual phasing out of revenue deficits. The Tenth Finance Commission, the first Finance Commission after the liberalization of the economy, was mandated to restore fiscal equilibrium through balancing revenue accounts and even generating surpluses to fund capital expenditure.

In terms of the share of resources devolved to the states, the Eighth Finance Commission (1984–89) and Ninth Finance Commission-I (1989–90) maintained the 85 percent devolution of income taxes established by the Seventh Finance Commission and increased the states’ share in excise taxes to 45 percent (Table 2.3). The Eighth Finance Commission also introduced the earmarking of 5 percent of the net proceeds of shareable excise duties exclusively for non-plan revenue deficit states. The 9th Finance Commission-II (1990–95) reduced the states’ share in income tax proceeds to 77.5 percent but retained the 45 percent share in excise duties. The 10th Finance Commission (1995–2000) maintained the income tax share at 77.5 percent but increased the share in excise taxes to 47.5 percent, of which 7.5 percent was earmarked for revenue deficits.

In 2000, the 80th Amendment to the Constitution accepted the recommendation of the Tenth Finance Commission to include in the divisible pool⁴⁴ all taxes and duties except cesses and surcharges. The 11th Finance Commission allocated 29.5 percent of the divisible pool to the states. Over time, that share increased to 42 percent under the 14th Finance Commission and now stands at 41 percent under the 15th Finance Commission (Table 2.3). The jump from 32 to 42 percent between the 13th and 14th Finance Commissions reflects the incorporation of resources that would previously have been received through the Planning Commission, but with the end of the Planning Commission in 2014, were incorporated into the devolution funds.

Pressures also began to build up during the convergence phase regarding the Planning Commission. Unlike the Finance Commission, the Planning Commission was a permanent body with primary authority over capital spending.⁴⁵ Each year states bilaterally negotiated the size of their own plans with the Planning Commission, at which time access to—and limits on—borrowing from all

42 See Ahluwalia (2002a, 2002b); Pinto and Zahir (2004a, 2004b); Pinto, Zahir, and Pang (2006); and Zahir (2020).

43 Pinto, Zahir, and Pang (2006) note that significant reform-induced losses in revenues to trade, excise, and financial repression taxes were a fundamental part of the worsening fiscal situation. Worsening deficits were not necessarily due to increased spending.

44 Divisible pool refers to all taxes in the Union List except the duties and taxes referred to in Articles 268, 269 and 269-A, surcharges, and any cess levied for a specific purpose under an Act of Parliament.

45 In the early years of the Planning Commission, assistance was decided based on projects approved in line with Five-Year Plans. In 1969, the Gadgil Formula was adopted and based assistance to the states as follows: 30 percent of total assistance was to be earmarked for special category states, which were to receive 90 percent of assistance by way of grants and the remaining 10 percent as loans. Assistance to general category states was set at 30 percent grants and 70 percent loan. Loans and grants to states were based on a formula that included weights for population (60 percent), per capita income (25 percent), a combined index of tax effort, literacy and completion of foreign aid projects (7.5 percent) and special problems (7.5 percent). States could also receive specific purpose grants at the discretion of the Planning Commission, see Hemming, Richard et al. (1997, 533).

sources, including the central government, domestic financial institutions, and additional assistance for externally aided projects were determined. Despite the reliance on a formula, annual bilateral negotiations with the states introduced a lack of transparency in the allocation and encouraged states to pursue fiscal policies that could lead to a moral hazard problem.⁴⁶ Different data might be presented by states to the Planning Commission to gain greater access to investment resources and borrowing, than to the Finance Commission where states might emphasize gaps that needed to be filled.

The lack of synchronization across Five-Year Plans and Finance Commission periods also complicated matters, as did the proliferation of discretionary CSS which often required matching funds. In the earlier periods, state plan schemes together with centrally sponsored schemes played a dominant role among the non-Finance Commission transfers. It was in the Fourteenth Finance Commission that state plan schemes were subsumed in the vertical formula. Their share drastically dropped in the total current transfers from 21.3 percent in the Thirteenth Finance Commission to 8.0 percent in the Fourteenth Finance Commission and then they

ceased to exist while the centrally sponsored schemes were restructured, and their share increased from 14.4 percent in Fourteenth Finance Commission to 21.8 percent during the Fifteenth Finance Commission period (Table A2.1). The share of Finance Commission transfers in the total current transfers from the Tenth Finance Commission to the Thirteenth Finance Commission remained around 66 percent on average; it increased to 69.4 percent and 74.2 percent in the Fourteenth and Fifteenth Finance Commission periods, respectively.⁴⁷

During the second phase, the operating environment of the states in India underwent significant change. The growth of regional political parties shifted the dynamics between the center and state and there was a push for greater emphasis on the states' role in federalism. Zahir (2020) refers to the post-reform period as one of 'market preserving federalism' in which goals were indicated as a broad direction, with the precise endpoint and pace of transition left unstated to minimize opposition and produce consensus. The result was a process of change that was sporadic and opportunistic and left the challenges of rebalancing center and state relationships, including the balancing of equalization with fiscal efficiency, to later Finance Commissions.⁴⁸

Table A2.1. Finance Commission and Non-Finance Commission Transfers as percentage of Total Current Transfers

	FC transfers	Non-FC transfers ¹	
		CSS	State Plan Schemes
Tenth FC	65.7	9.2	19.3
Eleventh FC	66.0	8.3	20.4
Twelfth FC	65.0	8.3	19.8
Thirteenth FC	65.7	8.8	21.3
Fourteenth FC	69.4	14.4	8.0
Fifteenth FC (2021-25)	74.2	21.7	0.1

Source: RBI State Finance Bulletin, staff estimates.

Note: ¹Include other grants such as central plan schemes. Grants exclude GST compensation from 2019/20 onward.

46 See McCarten (2003, 259).

47 Share in central taxes accounted for 80–85 percent of the Finance Commission transfers. With the Fourteenth Finance Commission emphasizing untied transfers, the state's share of central taxes further increased to 87–88 percent.

48 Zahir 2020, 253.

The third phase could be described as balancing need, equity, and efficiency in response to shocks.

The Eleventh Finance Commission (2000–2005) was heralded in a period focused on fiscal correction and adjustment to a range of economic shocks, including the Great Financial Recession in 2008 and the subsequent COVID crisis. Since the Eleventh Finance Commission, the ToRs and considerations of the subsequent Finance Commissions have varied considerably, responding to key issues of the moment. In response to the fiscal crisis, the Eleventh Finance Commission was asked to draw up monitorable fiscal reform programs for the states and recommend how fiscal improvements in the states' non-plan revenue deficit could be incentivized through grants, with the goal of eliminating revenue deficits by 2004–05.

The Twelfth Finance Commission highlighted an objective of balancing the revenue and expenditure efforts of the center and states in response to new rules for fiscal responsibility. It was also requested to consider maintenance expenditure on plan schemes excluding salary and wage related expenditure, thereby

limiting maintenance expenditure to the non-salary components. Considerations for the Thirteenth Finance Commission included the impact of the proposed introduction of GST, the need to improve the quality of public expenditure, and a greater focus on sustainable development, including ecology, the environment, and climate change. The Fourteenth Finance Commission considered the sustainability of subsidies, the pricing of public utility services, and the need to make public enterprises competitive and market oriented, as well as criteria for divestment.

The Fifteenth Finance Commission considered a broad range of issues: the higher levels of tax devolution proposed by the Fourteenth Finance Commission, performance-based grants in four areas,⁴⁹ national considerations (defense and internal security), state-specific grants, and reforms of fiscal architecture. Thus, the Finance Commissions began to take on the role of an advisory body, well beyond the core functions of determining the share of taxes to be devolved to the states and the distribution mechanism across states.

⁴⁹ These four areas are (i) the social sector (health and education); (ii) rural economy (agriculture and rural needs); (iii) governance and administrative reforms (judiciary, statistics, aspirational districts); and (iv) the power sector.

Chapter 3

Horizontal Fiscal Imbalances and Fiscal Equalization

3.1 Introduction

HFIs refer to the disparities between revenues and expenditures of governmental units within the same level of government. In the Indian context, these imbalances are characterized by an excess of expenditures over revenues across different state governments. Efforts to address these imbalances have involved equalizing transfers from the central government, inherently indicating the presence of some degree of vertical imbalance. HFIs may arise from incongruities in revenue or expenditure among states. Variations in revenues across states could be from differences in fiscal capacity or effort, while expenditure deviations could be attributed to differences in the quantity or quality of public services provided, or disparities in unit costs. These cost differences may be attributed to factors beyond the control of the states or differences in fiscal policies and practices.

Chapter 2 focused on vertical imbalances within the Indian federalism and how the first core

function of the Finance Commission—considering how much of general revenue to devolve to the states—has sought to address that imbalance.

This chapter will consider the second core function of the Finance Commission, which is to determine how the devolved revenues should be distributed among the states. As in all countries, the states in India have considerable differences in terms of endowments and in terms of their revenue and expenditure capacities. All countries have disparities in development of subnational entities and the goal of horizontal equalization is to help address these imbalances. The most stated objective for horizontal equalization systems globally is to ensure that all subnational entities can provide a 'minimum' level of the services assigned to them if they exert a 'normal' revenue effort.⁵⁰ However, this frequently gets confused with efforts to help subnational governments attain similar levels of per capita income or to help promote lagging regions.

3.2 Evolution of the Criteria for Distribution to the States

To reduce horizontal imbalances, Finance Commissions adopted varied criteria with assigned weights, significantly simplifying these criteria after the Tenth Finance Commission. This chapter will first consider the distribution criteria for the First through Tenth Finance Commissions. It will then look in detail at the degree to which the approaches of the Tenth through the Fifteenth Finance Commission were equalizing. What analysis of the data on per capita transfers across states indicates is that the Eleventh, Twelfth and Thirteenth Finance

Commissions were the most equalizing. This is interesting because, although equity had a large weight in the formula for distribution of devolved resources during this period, fiscal capacity measures were also given higher weight than in other Finance Commission periods.

The formula used by the Finance Commissions for distribution of resources to the states has evolved considerably over time and has tried to address multiple objectives:

⁵⁰ Bahl and Bird (2018, 284). The literature reinforces that it is critical to clearly define the objective of what is being equalized for effective horizontal equalization systems.

- (i) Need - financial resources a state would need to deliver its assigned services. In India, this measure has been proxied by population and from the 10th Finance Commission onward, by area.
- (ii) Equity - concerns the relative disparities in the level of economic or financial development of a state. In India, this has typically been measured by comparing the income of a state to the highest income state or to the average of a few high-income states.
- (iii) Efficiency - measured as some form of fiscal efficiency such as tax effort and has been measured in different ways over the different Finance Commissions.
- (iv) Fiscal disability – considered in recent Finance Commissions, reflecting the opportunity cost of not using a resource such as forests.

across states were largely based on population⁵¹ as a general measure of need (80 or 90 percent of weight) and that state’s ‘contribution’ to tax collections (derivation-based principle, 10 or 20 percent of the weight) (Figure 3.1a, b).⁵² Equity considerations were first discussed in the distribution of excise taxes for the Third Finance Commission, for example, the relative financial weakness of the state or disparities in the level of development. The Third Finance Commission was not specific about its formula, but the Fourth Finance Commission introduced the notion of relative economic and social backwardness (though it also did not define how it determined this factor). The Sixth Finance Commission increased the weight of backwardness, and for the first time it was defined as the distance of a state’s per capita income from that of the state with the highest per capita income, multiplied by the 1971 population of the state concerned. The Seventh Finance Commission made a more radical change in the distribution of excise taxes, reducing the weight of population to 25 percent and introducing the inverse of per capita income (25 percent), the percentage of poor (25 percent), and revenue equalization (25 percent), thus placing a much greater emphasis on equity factors—essentially raising the weight of equity considerations to 75 percent of the formula.

The first through the 7th Finance Commissions (1952–84). During the first phase of central planning, the Finance Commissions relied on distribution criteria that were distinct for income tax and union excise duties. Income tax sharing was mandatory, while sharing excise duties was at the discretion of the center. Horizontal distribution proceeds from income and excise taxes

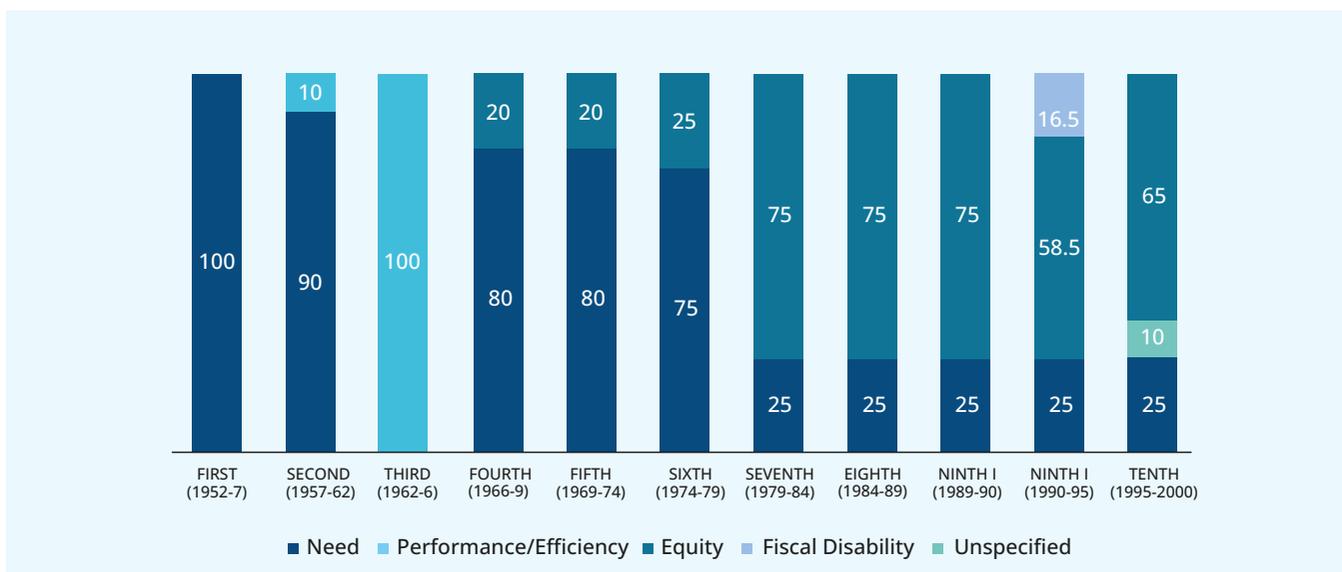
Figure 3.1a. Balance Between Need, Efficiency and Equity in Inter se Formula: First to Tenth FCs (Distribution of Income Tax Proceeds)



51 Population from the 1951 census was used until the Sixth Finance Commission, which used the 1971 population figures.

52 See Table 3.6 for the detailed formulas across the Finance Commissions.

Figure 3.1b. Balance Between Need, Efficiency and Equity in Inter se Formula: First to Tenth FCs (Distribution of Union Excise Duties)



From the Eighth to the Tenth Finance Commissions (1984–2000)—a phase of addressing fiscal crisis and moving toward convergence—the formulas for inter se distribution of tax shares across states signal a significant shift from the prior phase. As seen in Figure 3.1a and 1b, the goal was to emphasize equity factors, maintain some focus on need, and introduce efficiency in an approach where fiscal disadvantage was taken care of, but fiscal imprudence was discouraged (Rangarajan 2006). From the 8th Finance Commission onward, the formula for sharing income tax proceeds shifted away from need—the weight of which dropped to 22.5 percent—toward equity with a weight of 67.5 percent. A measure of income distance and the inverse of per capita income were the primary factors for sharing both income and excise proceeds. Need was based on the 1971 population, and efficiency was based on income tax contributions (weight of 10 percent for distribution of income taxes.). The first Ninth Finance Commission Report introduced poverty as an indicator with a weight of 11.25 for income taxes and 12.5 for excise taxes. It included the notion of backwardness as an indicator with the same weights in its second report. The second report of the Ninth Finance Commission introduced the non-plan deficit to indicate fiscal disability in the sharing of excise taxes with a weight of 16.5.

The Tenth Finance Commission was focused on restoring fiscal discipline. It harmonized the formulas for both income and excise duties,

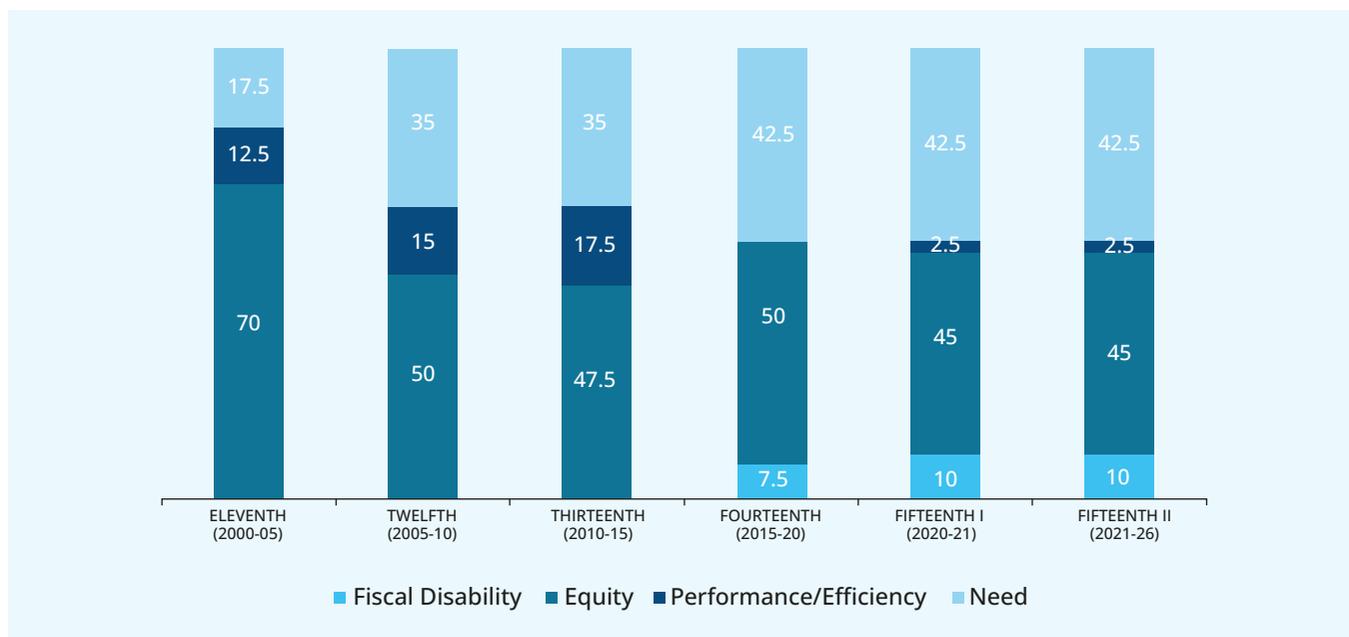
increasing the weight of equity with an indicator of income distance to 60 percent, reducing the weight of population (need) to 20 percent. It also introduced area and an index of infrastructure at 5 percent weight each. It was the first Finance Commission to incorporate a notion of tax effort (fiscal performance/efficiency) with a weight of 10 percent in the sharing formula. The tenth Finance Commission was also the first to recommend grants for local bodies and proposed the pooling of all taxes as the base for devolved resources to the states.

The Eleventh to the Fifteenth Finance Commissions—from 2000 to date—introduced a period of balancing need, equity, and efficiency in response to shocks while also considering so-called fiscal disabilities. The 11th Finance Commission gave ‘need’ the lowest weight of all Finance Commissions, with 10 percent of the formula’s weight for population (1971) and 7.5 percent for area (Figure 3.2). At the same time, the weight for equity was high at 70 percent, with 62.5 percent for income distance and 7.5 percent for an index of infrastructure. About 12.5 percent of the 11th Finance Commission formula’s weight was dedicated to fiscal performance and/or efficiency with 7.5 percent for fiscal discipline and 5 percent for tax effort. For the Twelfth Finance Commission and 13th Finance Commissions, the inter se formula doubled the weight dedicated to need, with a 35 percent weight (25 percent population and 10 percent area). The weight of equity was 50 percent in the 12th Finance Commission and fell to 47.5

percent under the Thirteenth Finance Commission.⁵³ Under the 12th Finance Commission, performance/efficiency focused on tax effort and fiscal discipline

(7.5 percent weight each) and in the 13th Finance Commission, efficiency focused on a fiscal discipline index with a weight of 17.5.⁵⁴

Figure 3.2. Balance between Need, Efficiency, and Equity in inter se formula: Eleventh to Fifteenth Finance Commissionsa



Source: Finance Commission Reports 11th–15th Finance Commissions, Finance Commission India.

The Fourteenth Finance Commission was the first after the dissolution of the Planning Commission. As noted in Chapter 2, the percentage of devolution was increased, and a small percentage was distributed through statutory grants, so states received mostly ‘untied’ resources. The 14th Finance Commission kept similar shares for need, basing the formula on both 1971 (17.5 percent weight) and 2011 (10 percent weight) population numbers and area (15 percent weight). Equity, based on income distance was weighted at 50 percent, and for the first time, the notion of forest cover, as a fiscal

disability (due to the opportunity cost of maintaining dense forests) was included with a weight of 7.5. The 15th Finance Commission reintroduced performance/efficiency indicators with a tax and fiscal effort indicator weighted at 2.5 percent and a demographic performance indicator weighted at 12.5 percent. The weight of need indicators dropped to 30 percent (15 percent 2011 population, 15 percent area). Equity was weighted 45 percent based on income distance. ‘Fiscal disability’ was also included, with a 10 percent weight given to forest and ecology.

53 The Thirteenth Finance Commission introduced an entirely new measure called the fiscal capacity distance, which is similar to how many countries presently measure fiscal capacity in their equalization formula. It used separate averages for measuring the tax capacity of general and special category states. It first calculated the three-year average per capita GSDP for individual states for 2004–2007. It then obtained an average tax/GDP ratio as a weighted mean separately for general and specific category states. The group averages were then applied to the states in each category to obtain potential per capita tax revenue of each state. The fiscal distance was obtained for each state by the distance of its estimated per capita revenue from the estimated per capita revenue of Haryana. These distances defined as per capita revenue entitlements of each state were multiplied by the respective 1971 population of each state to achieve their share. (Reddy and Reddy 2019). The equity indicator returned to the traditional income per capita distance from the highest state under the 14th Finance Commission.

54 The fiscal discipline index measured the improvement in the ratio of own revenues of a state to its total current expenditure relative to a similar ratio for all states.

The evolution of the distribution criteria over time suggests a significant change from a system that was based primarily on per capita financing toward a system that since 2000 is balancing many competing objectives—need, equity, efficiency, and fiscal disabilities introduced in the effort to meet environmental objectives (maintaining forest cover). Starting with the Seventh Finance Commission, there were continuous efforts to improve the distribution formula, with adjustments to the weights of different indicators

and their definitions. There is little information on how specific weights were determined. There is also not much evaluation of results when innovations were introduced, such as the use of a fiscal distance measure as the equity indicator under the Thirteenth Finance Commission or the use of efficiency/performance indicators under the Eleventh, Twelfth, and Thirteenth Finance Commissions. The next section assesses the equalization impacts of these different formulas.

3.3 Distribution of Transfers to the States—Have They Been Equalizing?

When considering the question of whether transfers to the states have been equalizing, the first question that arises is what, exactly, is the system trying to equalize? The previous section demonstrated that as the system in India developed, it has tried to balance the competing objectives of need, equity, and efficiency. This makes it more difficult to assess whether the system has equalized. As noted earlier, theoretically, the goal of many transfer systems is to ensure that all subnational entities can provide a ‘minimum’ level of the services assigned to them if they exert a ‘normal’ revenue effort. This objective has not been the specified goal of the Finance Commissions nor are the data available to assess whether it has been achieved in India. To assess the degree to which the Finance Commission’s transfers have been equalizing, this section will therefore focus on per capita Finance Commission transfers received by states under each Finance Commission period. We will also focus on the degree to which per capita transfers are allocated to lower-income states based on the distribution formulas used by the different Finance Commissions.

In the next sections, we consider the impact of distribution formulas on horizontal equalization using three dimensions. The first, drawn on Mohan and Shyjan (2009), examines the share of lower-income states in the inter se allocation compared to that of the higher- and middle-income states. Second, the distribution of per capita transfers can be assessed, and third, simple regressions can be undertaken to determine the significance of the relationship between state GDPs per capita and per capita Finance Commission transfers. Note that in each of these three assessments, only the transfers from the Finance Commission are considered, not transfers provided through centrally sponsored schemes. Also note that the analysis considers only 14 general category states (excluding Goa) and aggregates those states that have been divided over time so that the analysis is comparable over time. The analysis thus shows data for undivided Bihar, undivided Uttar Pradesh (UP), undivided Madhya Pradesh (MP), and undivided Andhra Pradesh (AP).

3.4 Relative Shares of Lower-Middle and Higher-Income States in Devolution Transfers

Mohan and Shyjan (2009) consider the equalization impact of grants to states from the Seventh Finance Commission through the 11th Finance Commission and find that the impact of tax devolution through the inter se distribution was more equalizing than the distribution of grants. They note that the distribution of grants is

based on discretionary elements, whereas the distribution of devolved taxes is based on criteria. Following their approach, Tables 3.1 and 3.2 show the relative shares of the 14 general category states for the distribution of income tax and excise duties, respectively, for the Eighth through the Tenth Finance Commission periods.

For the distribution of income taxes, the shares of the different income groups remained relatively stable during the 8th and Ninth Finance Commissions but then shifted in favor of the lower-income states at the cost of the higher-income states during the

Tenth Finance Commission (Table 3.1).⁵⁵ The share of the middle-income states remained stable at about 32 percent throughout these three Finance Commission periods. During the Tenth Finance Commission, an index of infrastructure was introduced.

Table 3.1. State (Inter Se) Shares for Income Taxes Devolved: Eighth to Tenth Finance Commission

Type of state	State	8 th Finance Commission 1984–1989	9 th Finance Commission 1990–1995	10 th Finance Commission 1995–2000
High income	Gujarat	4.409	4.232	4.046
High income	Haryana	1.074	1.048	1.238
High income	Maharashtra	8.392	10.11	6.126
High income	Punjab	1.744	1.522	1.461
TOTAL		15.619	16.912	12.871
Middle income	Andhra Pradesh	8.187	7.344	8.465
Middle income	Karnataka	4.979	4.937	5.339
Middle income	Kerala	3.76	3.553	3.875
Middle income	Tamil Nadu	7.565	7.614	6.637
Middle income	West Bengal	7.800	7.539	7.471
TOTAL		32.291	30.987	31.787
Low income	Bihar (Undivided)	12.08	12.314	12.861
Low income	Madhya Pradesh (Undivided)	8.378	8.000	8.290
Low income	Odisha	4.202	4.054	4.495
Low income	Rajasthan	4.545	4.773	5.551
Low income	Uttar Pradesh (Undivided)	17.907	18.326	17.811
TOTAL		47.112	47.467	49.008
Note: Special Category		4.978	4.634	6.334
GRAND TOTAL		100	100	100

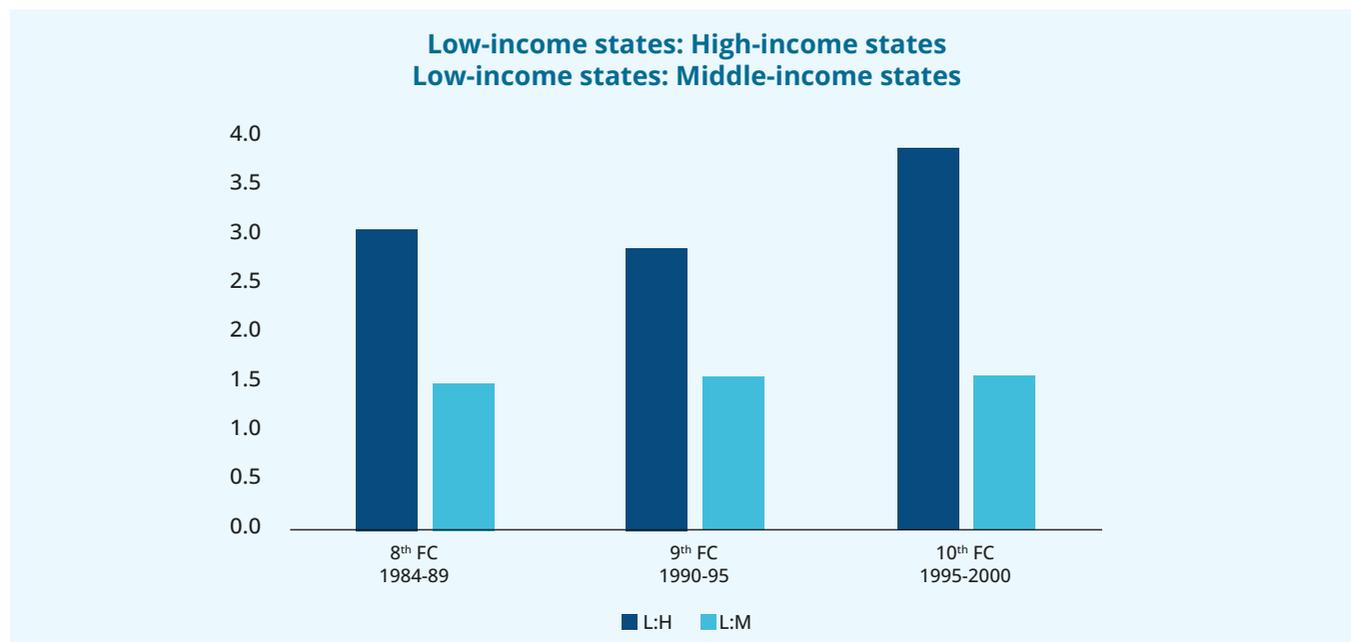
Source: 8th–10th Finance Commission Reports, Finance Commission India.

⁵⁵ Mohan and Shyjan (2009) note that there is no movement between the groups, that is, high-income, middle-income, and low-income states, although there have been some movements within the group since the state rankings changed over time across various Finance Commission periods (particularly between 1980–1985 and 2000–2006). In Tables 3.1, 3.2, and 3.3, the state groupings are the same; however, the movements within the group in the table are not reflected.

Figure 3.3 indicates that the ratio of devolved income taxes received by the lower-income states increased compared to higher-income states,

though the ratio between lower- and middle-income states remained the same.

Figure 3.3. Average ratios of inter se shares Eighth to Tenth Finance Commissions: Income tax



Source: 8th-10th Finance Commission Reports, Finance Commission India.

The distribution of excise tax revenues to the states shows a slightly different pattern. Lower-income states receive about 50 percent of these devolved revenues, and their share increases during the Ninth Finance Commission period (Table 3.2). The share of middle-income states in excise taxes is also steady during these periods, at about 32 percent. Figure 3.4 indicates that the overall ratio of sharing of excise taxes of low to high states is higher: lower-income states receive over four times the

number of transfers than higher-income states. This ratio increases under the Ninth Finance Commission but falls again under the Tenth. The ratio of low- to middle-income states remains steady for excise tax distribution, also at about 1.5. Note that under the Ninth Finance Commission, an additional 16.5 percent of excise taxes was allocated for revenue deficit grants. This was in proportion to each state's deficit in the total deficit of all states,⁵⁶ which may explain the increase in shares to the lower-income states during this period.

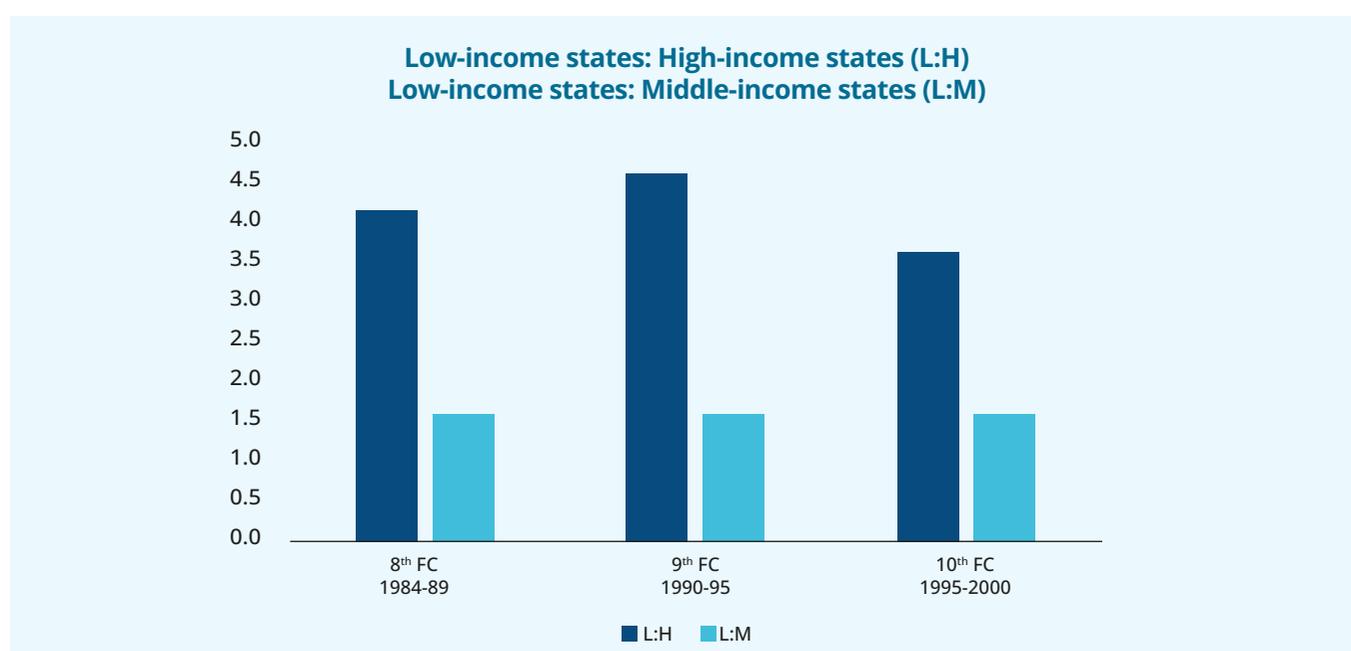
⁵⁶ See Reddy and Reddy (2019, 84).

Table 3.2. State (Inter Se) Shares for Income Taxes Devolved: Eighth to Tenth Finance Commission

Type of state	State	8 th Finance Commission 1984–1989	9 th Finance Commission 1990–1995	10 th Finance Commission 1995–2000
High income	Gujarat	3.506	3.109	4.046
High income	Haryana	1.017	1.077	1.238
High income	Maharashtra	6.216	5.635	6.126
High income	Punjab	1.317	1.31	1.461
TOTAL		12.056	11.131	12.871
Middle income	Andhra Pradesh	8.587	7.858	8.465
Middle income	Karnataka	5.077	5.092	5.339
Middle income	Kerala	3.800	3.707	3.875
Middle income	Tamil Nadu	7.317	7.785	6.637
Middle income	West Bengal	7.449	7.729	7.471
TOTAL		32.23	32.171	31.787
Low income	Bihar (Undivided)	13.202	13.573	12.861
Low income	Madhya Pradesh (Undivided)	8.852	8.726	8.29
Low income	Odisha	4.592	4.454	4.495
Low income	Rajasthan	4.695	5.097	5.551
Low income	Uttar Pradesh (Undivided)	19.097	19.877	17.811
TOTAL		50.438	51.727	49.008
NB: Spec. Category		5.276	4.971	6.334
GRAND TOTAL		100	100	100

Source: 8th–10th Finance Commission Reports, Finance Commission India.

Figure 3.4. Ratios of inter se shares Eighth to Tenth Finance Commission: Union excise duty



Source: 8th–10th Finance Commission Reports, Finance Commission India.

After the Tenth Finance Commission, the distribution criteria were applied to a unified base of general revenues. Table 3.3 shows the shares provided to states from the Eleventh to the Fifteenth Finance Commissions, keeping the high, middle and lower-income state groupings constant over time. The share of the total transfers directed to the high-income states is 9.5 percent of the total under the Eleventh Finance Commission; this gradually increases to 12.7 percent by the 15th Finance Commission. The share of the middle-income states drops considerably over time, from 29.2 percent of the total share during the Eleventh Finance Commission to 21.2 percent in the Fifteenth Finance Commission. Lower-income states attain their highest share of the total during the Twelfth and Thirteenth Finance Commission (54.7 percent of the

total) and their share remains generally steady through the Fifteenth Finance Commission.

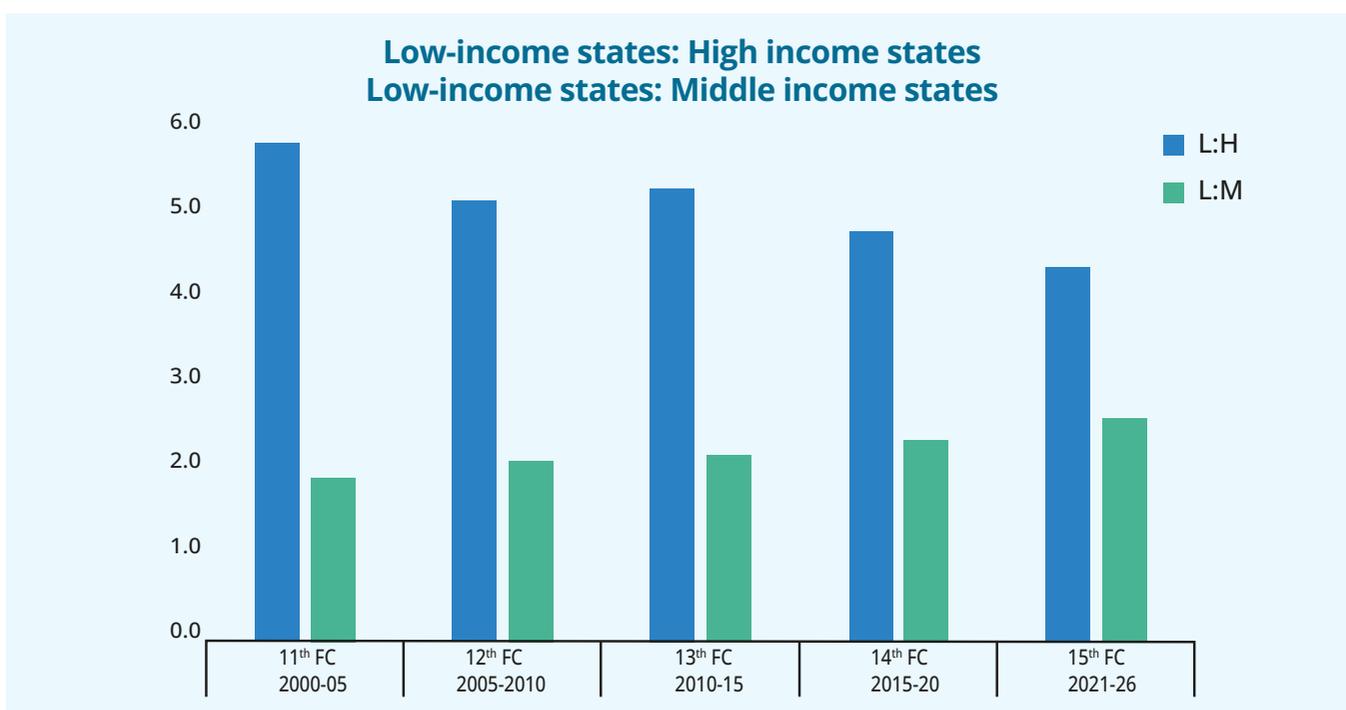
Figure 3.5 shows the ratios of lower-income states compared to higher-income and middle-income states during the Eleventh -Fifteenth Finance Commissions, based on the inter se shares presented in the Finance Commission reports. During the 11th Finance Commission, the five lower-income states received 5.7 times the revenue devolved to the four higher-income states. Since then, this ratio has remained above 4. Over the same period, the ratio between the lower- and middle-income states continued to increase, indicating that the share of the middle-income group of states has declined over time. Overall, the pattern demonstrates that the inter-se shares supported equalization in favor of the lower-income states.

Table 3.3. State (Inter Se) Shares for Devolved Taxes: Eleventh to Fifteenth Finance Commission

Type of state	State	11 th Finance Commission 2000–2005	12 th Finance Commission 2005–2010	13 th Finance Commission 2010–2015	14 th Finance Commission 2015–2020	15 th Finance Commission 2021–2026
High income	Gujarat	2.821	3.569	3.041	3.084	3.478
High income	Haryana	0.944	1.075	1.048	1.084	1.093
High income	Maharashtra	4.632	4.997	5.199	5.521	6.317
High income	Punjab	1.147	1.299	1.389	1.577	1.807
TOTAL		9.544	10.940	10.677	11.266	12.695
Middle income	Andhra Pradesh	7.701	7.356	6.937	4.305	4.047
Middle income	Karnataka	4.920	4.459	4.328	4.713	3.647
Middle income	Kerala	3.057	2.665	2.341	2.5	1.925
Middle income	Tamil Nadu	5.385	5.305	4.969	4.023	4.079
Middle income	West Bengal	8.116	7.057	7.264	7.324	7.523
TOTAL		29.179	26.842	25.839	22.865	21.221
Low income	Bihar (Undivided)	14.597	14.389	13.719	12.804	13.365
Low income	Madhya Pradesh (Undivided)	8.838	9.365	9.59	10.628	11.257
Low income	Odisha	5.056	5.161	4.779	4.642	4.528
Low income	Rajasthan	5.473	5.609	5.853	5.495	6.026
Low income	Uttar Pradesh (Undivided)	19.798	20.203	20.797	19.011	19.057
TOTAL		53.762	54.727	54.738	52.580	54.233
Special Category		7.515	7.491	8.746	13.289	11.851
GRAND TOTAL		100	100	100	100	100

Source: 11th–15th Finance Commission Reports, Finance Commission India.

Figure 3.5. Ratios of inter se shares Eleventh to Fifteenth Finance Commission



In addition to the shares in the devolved funds prospectively allocated by the Finance Commission, it is also useful to consider actual outcomes or ex post shares received by the states. Income per capita of states changed over time and given the changes in allocation ex post, the

variation in ranking of states by income per capita is considered along with the implications for the higher-, middle-, and low-income groups (see Table 3.4). From 2000, Haryana was the top state. Bihar and Uttar Pradesh remained at the bottom, but many states in between changed position.

Table 3.4. Ranking of States by Per Capita GSDP - changes over Finance Commission periods

General category states (undivided) ranked by GSDP per capita					
1995–2000	2000–2005	2005–2010	2010–2015	2015–2020	2021–2024
1 Punjab	Haryana	Haryana	Haryana	Haryana	Haryana
2 Maharashtra	Punjab	Maharashtra	Maharashtra	Karnataka	Tamil Nadu
3 Haryana	Maharashtra	Gujarat	Kerala	Kerala	Gujarat
4 Gujarat	Gujarat	Punjab	Tamil Nadu	Gujarat	Karnataka
5 Tamil Nadu	Kerala	Kerala	Gujarat	Tamil Nadu	Kerala
6 Kerala	Tamil Nadu	Tamil Nadu	Karnataka	Maharashtra	Maharashtra
7 Karnataka	Karnataka	Karnataka	Punjab	Punjab	Punjab
8 Andhra Pradesh	West Bengal	West Bengal	Rajasthan	Andhra Pradesh	Andhra Pradesh
9 West Bengal	Andhra Pradesh	Andhra Pradesh	Andhra Pradesh	Rajasthan	Odisha
10 Rajasthan	Rajasthan	Rajasthan	West Bengal	West Bengal	Rajasthan
11 Madhya Pradesh	Madhya Pradesh	Odisha	Odisha	Odisha	West Bengal
12 Odisha	Odisha	Madhya Pradesh	Madhya Pradesh	Madhya Pradesh	Madhya Pradesh
13 Uttar Pradesh	Uttar Pradesh	Uttar Pradesh	Uttar Pradesh	Uttar Pradesh	Uttar Pradesh
14 Bihar	Bihar	Bihar	Bihar	Bihar	Bihar

Source: Based on GSDP current prices (2011–2012), previous years 1993–1994, and 2004–2005 base as provided by Ministry of Statistics and Programme Implementation (MoSPI).

Table 3.5 shows the shares of actual total Finance Commission transfers per capita by higher-, middle-, and lower-income state groupings and the share of devolution transfers per capita (the difference is the grants-in-aid provided by the Finance Commission). This considers the relative shares among the 14 states and does not include the special category states, as in Table 3.3. The share of devolution transfers in the center of the table are similar to the patterns in Table 3.3 until the Fifteenth Finance Commission period. In that period, the share of transfers for the higher-income states decreases, the share for middle-income states ticks up, and the share for lower-income states drops.

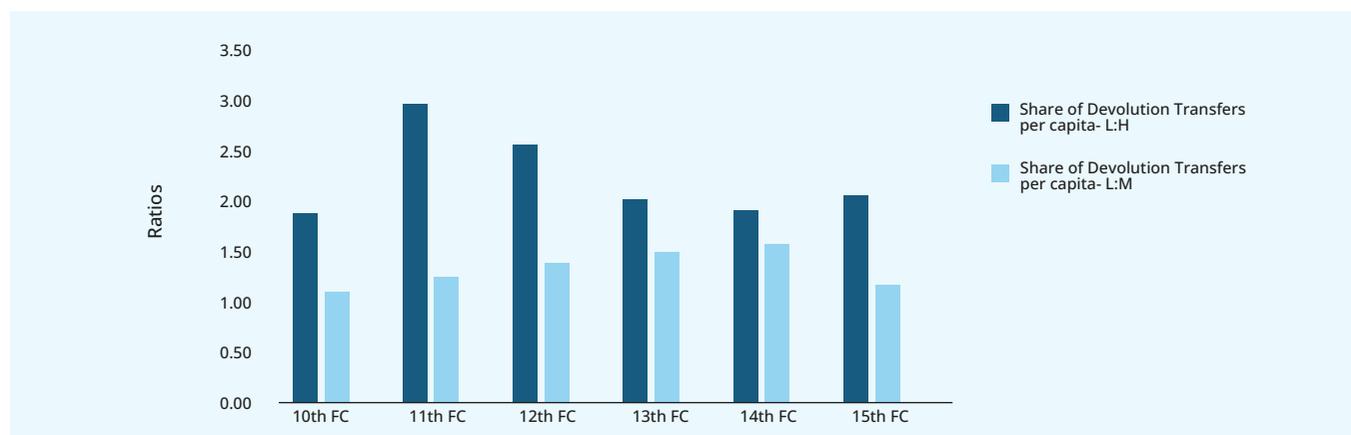
Lower-income states still receive the bulk of transfers, though the ratios of lower-income to higher-income states and lower- to middle-income states are not as high as in the (previous) figure 3.5. The ratio of devolution transfers to lower-income states relative to higher-income states peaks at 3 during the Eleventh Finance Commission and then declines until an uptick during the Fifteenth Finance Commission. The data also suggest the same squeezing of middle-income states through the Fourteenth Finance Commission and a shift during the Fifteenth Finance Commission. The data also suggest that the system has been equalizing, though this equalization has diminished over time.

Table 3.5. Shares of Total and Devolution Transfers Per Capita by State Income Groups

	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020	2021-2025
Share of Finance Commission transfers per capita (%)	10th Finance Commission	11th Finance Commission	12th Finance Commission	13th Finance Commission	14th Finance Commission	15th Finance Commission
Higher-income states	21.1	16.1	18.3	22.7	24.7	20.4
Middle-income states	38.7	37.9	34.1	30.7	29.7	37.9
Lower-income states	40.2	46.0	47.6	46.6	45.6	41.7
Share of devolution transfers per capita	10th Finance Commission	11th Finance Commission	12th Finance Commission	13th Finance Commission	14th Finance Commission	15th Finance Commission
Higher-income states	20.9	15.6	18.4	22.7	24.0	21.3
Middle-income states	39.1	37.3	33.9	30.7	29.2	34.3
Lower-income states	40.0	47.0	47.7	46.6	46.8	44.5
	10th Finance Commission	11th Finance Commission	12th Finance Commission	13th Finance Commission	14th Finance Commission	15th Finance Commission
Share of Finance Commission transfers per capita-L:H	1.90	2.86	2.60	2.05	1.84	2.05
Share of Finance Commission transfers per capita-L:M	1.04	1.21	1.39	1.52	1.54	1.10
Share of Devolution transfers per capita-L:H	1.91	3.01	2.60	2.05	1.95	2.09
Share of Devolution transfers per capita-L:M	1.02	1.26	1.41	1.52	1.60	1.30

Source: RBI State Finance Bulletin, MoSPI, Staff Estimates

Figure 3.6. Ratios of Shares of Devolution Transfers Per Capita-Lower Income to Higher income and Lower Income to Middle Income



Distribution of per capita transfers to states

Many countries often lack the data to assess whether a minimum level of standard services is being provided across states and measure the degree of equalization as per capita transfers by state. Figure 3.7 shows the distribution patterns of per capita transfers (vertical axis) across Indian general category states, ranking states from lowest per capita state income (on the left) to the highest (on the right) for the Tenth through Fifteenth Finance Commissions. The darker blue bar reflects total Finance Commission transfers per capita for a state and the lighter blue bars reflect total devolution transfers per capita per state. The difference between the height of the two bars reflects the amount received from the Finance Commission in grants other than devolution transfers (such as for disaster management and urban and local financing). When examining all the graphs, it is clear that the patterns of transfers are driven by devolution transfers and non-devolution Finance Commission grants do not affect overall patterns of equalization.

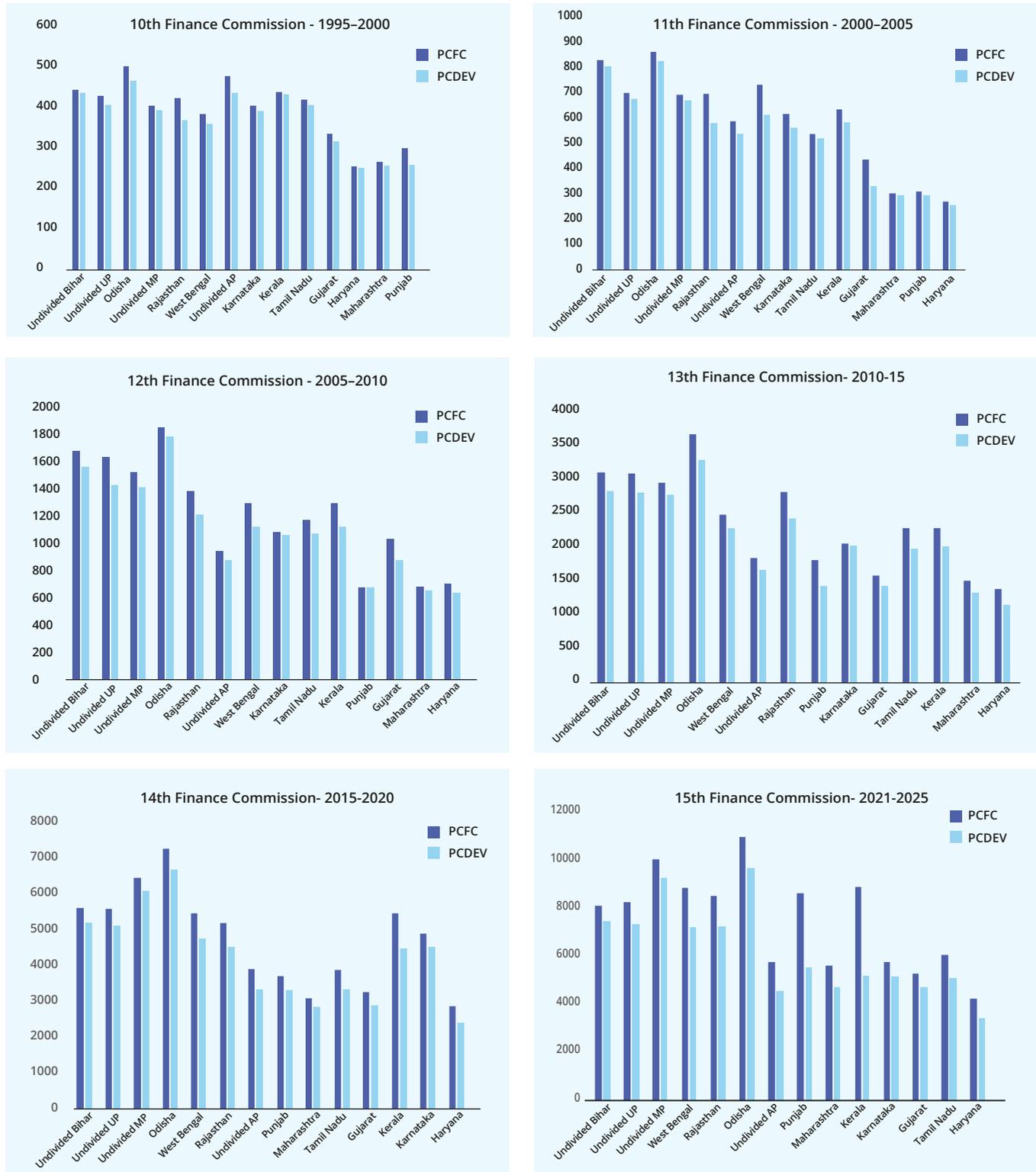
In an equalizing system, we would expect to see the states on the left-hand side of the charts receive the most per capita transfers and the states further on the right receiving the least number of per capita transfers. In a purely equalizing system, transfers would reflect a notional diagonal line starting from the top left of the chart dropping down to the bottom right of the chart. The more downward sloping the pattern is to the right, the more equalizing the transfers have been.

The patterns demonstrated in these charts suggest that, overall, Finance Commission transfers have generally been equalizing. However, the degree of equalization varies over different Finance Commissions and it is not uniformly equalizing. In some periods, some high-income states receive more as per capita transfers than middle-income states and—rather than a downward sloping line—the charts appear to have some ‘waves’. No pattern is strictly correct per se. The patterns reflect both changes in weights in the formula and changes in some of the underlying characteristics of the states over time.

Under the Tenth Finance Commission, the distribution to states is downward sloping but relatively flat, with some middle-income states receiving more per capita transfers than the lower-income states to their left. The top four states receive noticeably less per capita transfers than the lower- or middle-income states, as would be expected in a system that equalizes.

Under the Eleventh Finance Commission, the data suggests a stronger degree of equalization with a downward sloping pattern affected by only a few anomalies in the downward sloping pattern, such as Odisha, West Bengal, and Kerala. Of all the Finance Commissions under consideration, the Eleventh Finance Commission placed the most weight on equity (70 percent), and this is evident from the resulting patterns of per capita transfers. Interestingly, it also introduced a weight of 5 percent for tax effort and 7 percent for a fiscal discipline index, but this does not seem to have affected the formula’s equalizing properties.

Figure 3.7. Distribution of Transfers to General Category States (undivided) by Per Capita Income, By Finance Commission lowest (left) to highest (right), in rupees per capita



Source: RBI State Finance Bulletin, various issues, MoSPI and Staff Estimates

Note: PCFC=Per Capita Finance Commission Transfers, PCDEV= Per Capita Tax Devolution

Under the Twelfth and Thirteenth Finance Commissions, the formula was rebalanced with the weight of 'need' factors increased to 35 and the weight of equity factors reduced to 50 percent and 47.5 percent, respectively.

The weight of fiscal factors also increased to 15 percent and 17.5 percent and as noted earlier, the Thirteenth Finance Commission employed an entirely new measure of fiscal capacity as its equity indicator. The data show that these formulas were still largely equalizing, although in the Twelfth Finance Commission period, transfers per capita to some of the middle-income states are noticeably larger than those to lower-income states. The pattern under the 13th Finance Commission is more erratic and seems to reflect that some states are moving up the state income per capita ladder, but their transfers remained as in earlier periods (Rajasthan, Tamil Nadu, and Kerala).

Under the Fourteenth Finance Commission period, transfers per capita to the states become less equalizing, still with the pattern showing a dip in transfers to the middle-income states relative to lower-income and higher-income states.

The Fourteenth Finance Commission retained the weights of the need and equity factors (with the equity factor returning to the pre-Thirteenth Finance Commission measure of distance of per capita income from the highest state), but it removed criteria related to fiscal efficiency and introduced a fiscal disability factor related to forest cover (share of dense forest of each state in total

of dense forest of all states) at a weight of 7.5 percent. It also employed a weighted average of the population factor with a 17.5 percent weight for the 1971 population data and a 10 percent weight for the 2011 population data.

Under the Fifteenth Finance Commission (which is yet to be completed), we see some significant changes in patterns relative to earlier Finance Commission periods. The weights in the formula remain the same as the Fourteenth Finance Commission, although the formula now uses population data for 2011 at a weight of 15 percent and introduces a demographic performance indicator, at a weight of 12.5 percent, that rewards those states that have reduced their fertility rates. It also introduces a fiscal performance indicator with a weight of 2.5 percent. In the first instance, the data for the Fifteenth Finance Commission period to date suggest that in general non-devolution transfers have become more important relative to devolutions transfers, and this is the case in Punjab and Kerala. This may be due to addressing specific disasters in these states, but the difference is nonetheless to be noted. Regarding equalization, the pattern of the Fifteenth Finance Commission appears to be less equalizing than earlier Finance Commissions, with middle-income (excepting Odisha) and higher-income states receiving about the same amount in per capita devolution transfers and the lower-income states receiving considerably more—the pattern is flatter and more bifurcated than in earlier periods.

Regression Analysis

The third lens through which equalization is considered is regression analysis, which provides information on the statistical significance and strength of the findings on equalization.

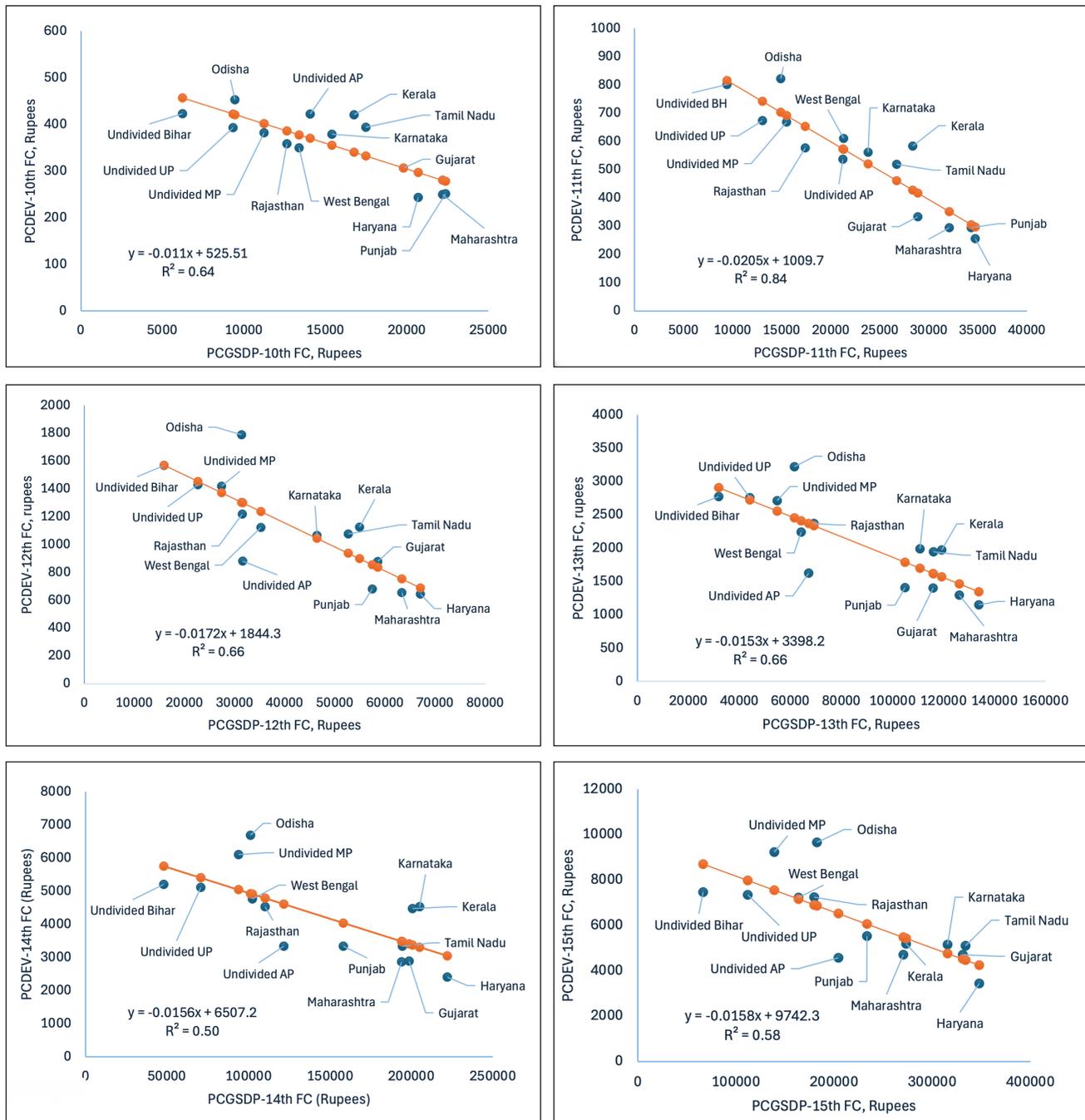
A regression analysis of per capita tax devolution on per capita nominal GSDP indicates that from the Tenth to the Fifteenth Finance Commission, a 1 percent increase in per capita GSDP in a state would lead to a fall in per capita tax devolution (Figure 3.8a). There is a negative relationship between the nominal per capita GSDP and the state's per capita share in central taxes, indicating that poorer jurisdictions are expected to get a higher share of devolved transfers. Regression results are statistically significant, demonstrating that the strength of the relationship and direction of results provide a convincing measure of the degree of equalization (*ceteris paribus*). The results confirm that the devolved transfers for general category states have generally been equalizing across the Tenth to the Fifteenth Finance Commissions, but that equalization has been stronger in some Finance Commissions.

The significance of the relationship is strongest for the Eleventh Finance Commission period,

with a R² of 0.84 and a coefficient of -0.02, implying that for every INR 100 increase in per capita GSDP, the per capita transfer is expected to decrease by approximately 2.05 percent.

This reinforces the argument that richer states receive relatively lower transfers, indicating that Finance Commission transfers promote fiscal equity. The coefficient of the regression equation also suggests the steeper the trend line, the stronger the degree of equalization. For instance, during the Eleventh Finance Commission period, low-income states like undivided Bihar, undivided Uttar Pradesh, and undivided Madhya Pradesh with nominal per capita income levels in the range of INR 9,000–15,000 received per capita transfers of about INR 650–850 through devolved taxes. In contrast, high-income states like Maharashtra, Punjab, and Haryana with per capita GSDPs in the range of INR 30,000+ received a tax share of approximately INR 250 per person. Moving from the Eleventh Finance Commission to the Fourteenth and Fifteenth Finance Commissions, the degree of equalization is lower with a lower R² and a beta value of 1.5 percent. There are several underlying factors for the variations in the degree of equalization over various Finance Commission periods.

Figure 3.8a. Regressions of Tax Devolution Per Capita against Per Capita Income, Tenth to Fifteenth Finance Commission



Source: RBI State Finance Bulletin, various issues, MoSPI and Staff Estimates.
Note: All regressions are statistically significant at 5% level of significance

As noted in the previous section, the balance between need, equity, and efficiency principles is managed by 12–15 indicators (income distance,

population, area, tax effort, fiscal discipline, and so on) whose weights have changed over different Finance Commissions (Table 3.6).

Table 3.6. Criteria and Weights for Inter se Allocation of Tax Devolution Eleventh Finance Commission onwards

Criterion	Eleventh 2000-05	Twelfth (2005-10)	Thirteenth (2010-15)	Fourteenth (2015-20)	Fifteenth (2020-2021)	Fifteenth (2021-26)
Population (1971)	10	25	25	27.5		
Population (2011)					15	15
Income Distance	62.5	50		50	45	45
Area adjusted	7.5	10	10	15	15	15
Infrastructure	7.5					
Tax effort	5	7.5				
Fiscal Discipline	7.5	7.5				
Fiscal Capacity			17.5			
Distance			47.5			
Forest Cover				7.5		
Demographic Performance					12.5	12.5
Forest and Ecology					10	10
Tax and Fiscal Effort					2.5	2.5

Source: Finance Commission Reports

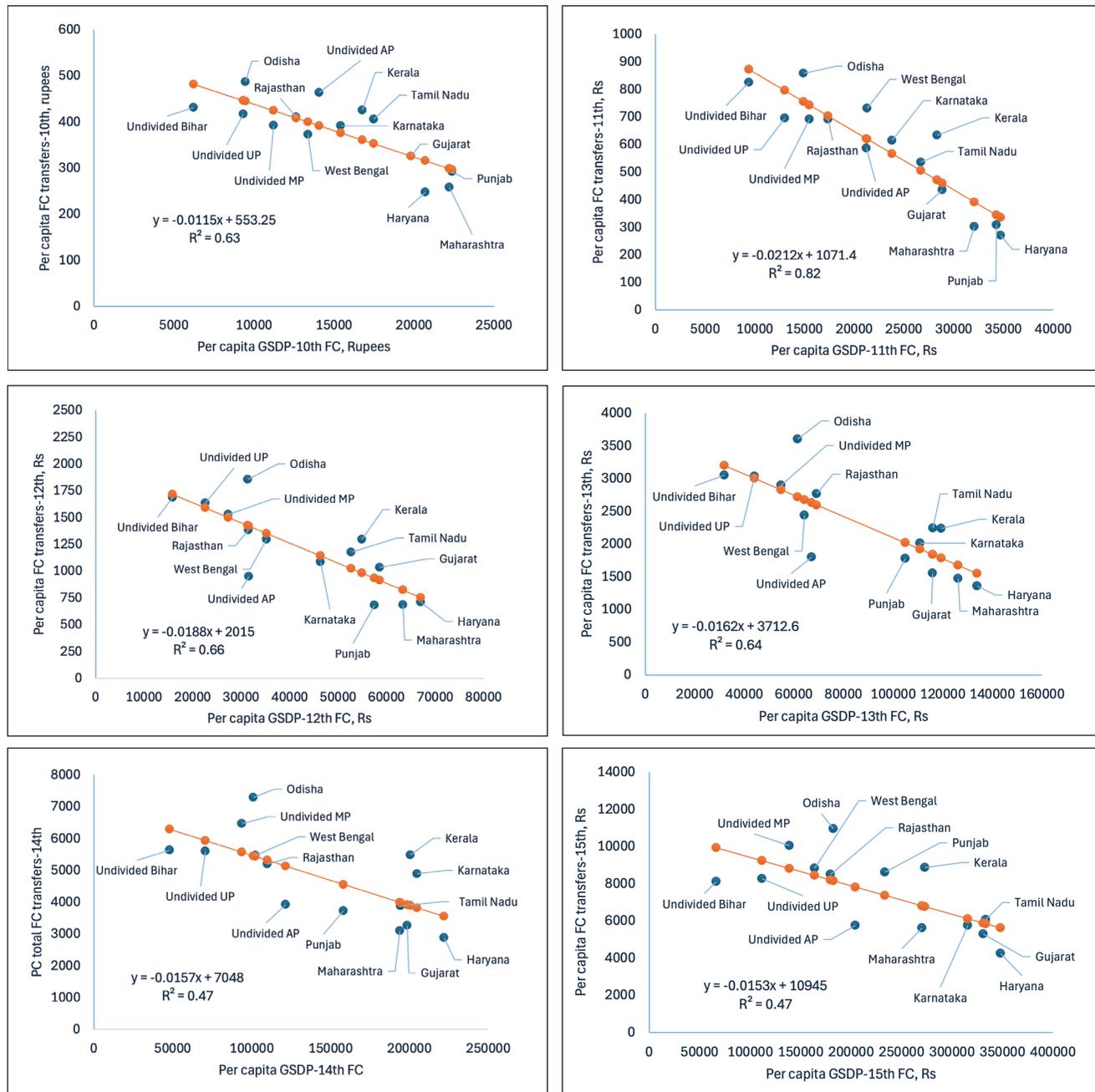
In Chapter 2 on VFI, one of the reasons for the long-term stability in the share of tax revenues (of both center and states) in general government total tax revenues can be attributed to the balance between need, equity, and efficiency and the weights assigned to the core variables (indicators).

The main criteria for sharing central taxes rests on population and income distance. The income distance formula serves as a mechanism for fiscal capacity

equalization (based on some assumptions). The population criteria serve as a tool for vertical transfers as it provides equal per capita transfers to all states independent of their fiscal capacities. In addition to this, for fiscal capacity equalization, the total transfers required depend on the average tax to GSDP ratio (tax effort) and distribution of population and per capita GSDPs.⁵⁷

⁵⁷ Srivastava and Rao 2010.

Figure 3.8b. Regressions of Total Finance Commission Transfers Per Capita against Per Capita Income, Tenth to Fifteenth Finance Commission



For Figure 3.8b, the key takeaway is that 'per capita grants-in-aid' or statutory grants from the Finance Commission do not offset the overall equalization and trends are consistent with per capita tax devolution with Eleventh Finance Commission, indicating a relatively stronger degree of equalization. The regression results are statistically significant across the relevant Finance Commission periods with varying degrees of R^2 . While the distribution of tax proceeds between the center and states have dominated the popular debates and discussions around the Finance Commissions in India, the 'grants-in-aid' component of Finance Commissions has its own importance and relevance. In the full convergence

phase, where the global sharing agreement became increasingly important as a source of vertical devolution, the share of grants in total current transfers has been declining. The Fourteenth Finance Commission departed significantly from earlier Finance Commissions as it did not recommend any grants for sector-specific and state-specific schemes. The reason provided by the Fourteenth Finance Commission was that these grants were not based on any formula or any uniform principle and thus were quite ad hoc and often led to duplication. However, the 15th Finance Commission brought back the sector-specific grants such as those for health, disaster risk management, and air quality grants to million-plus cities.

3.5 Conclusion

HFIs refer to the disparities between revenues and expenditures of governmental units within the same level of government. Over the years, the Finance Commissions have sought to pursue equalization by balancing need, equity, and efficiency goals. In the first phase, through the Seventh Finance Commission, sharing of the divisible pool was almost entirely based on population. From the Eighth to the Tenth Finance Commissions, the focus shifted to equity measures, but by the Tenth Finance Commission, restoring fiscal discipline had become a key issue, so an indicator on tax effort was added. From the 11th Finance Commission, the effective balancing of equity and need with some element of efficiency and fiscal disability has persisted.

The allocations of per capita Finance Commission transfers based on the sharing formula provided lower-income states with 5 times the amount of transfers per capita than to high-income states during the Eleventh Finance Commission and this ratio declined to about 4 through the period to the Fifteenth Finance Commission. The share of transfers of lower-income states to middle-income states increases from 1.5 to 2 over this period. Fiscal data on actual transfers showed similar patterns, although at a slightly lower level, with the ratio of low-income to high-income states reducing slightly during the Fifteenth Finance Commission. During this time, middle-income states have experienced increased pressure.

On addressing horizontal imbalances, the evidence demonstrates that since the Tenth Finance Commission, the Finance Commissions have generally adopted an equalizing approach, but the degree of equalization was highest during—and has diminished since—the Eleventh Finance Commission. The Eleventh Finance Commission placed a high weight on equity measured as income distance, but it also emphasized tax effort and fiscal discipline. These latter two factors did not outweigh the emphasis on equity relative to other Finance Commission periods. Regression analysis reinforces these results, with the relative strength of equalization during the Eleventh Finance Commission having the most significance.

Broadly speaking, most equalization systems aim at equalizing revenue capacity, minimum standards of services, or fiscal gap. The equalization objective of the Finance Commission in India is not clear, given that it is trying to balance need, equity, and efficiency. Prioritizing what the system is aiming to equalize could potentially make the system more effective. Considering the removal of factors that might be better addressed through a conditional grant, such as supporting maintenance of forest cover, might also strengthen equalization.

One option is to consider different measures of tax effort (or tax capacity) based on experience. Are there lessons to be learned from the indicators that measure fiscal capacity under the Thirteenth Finance Commission and why were they discontinued? Has India evolved so that 10 years later, such an approach may be reconsidered? Will state governments respond to incentives for increasing taxes? The major issues are whether only high-income states will respond, how much the incentive would need to be, and whether this element of reward for higher taxes may crowd out some equalization (**Annex 3.1**).

India may wish to consider transitioning to a fiscal gap approach over time, focusing on a horizontal grant distribution system to close the gap between the cost of a minimum standard of public services needs and the fiscal capacity required to meet those needs. This transition is likely necessary, but it will take time. This would involve the development of more tailored measures of expenditure needs and deepen the definition of revenue capacity. As seen in Chapter 4, many countries around the world draw on such an approach. The Finance Commission may wish to seek the help of a permanent steering committee or secretariat for implementation of Finance Commission recommendations, improved and ongoing data collection, and monitoring and evaluation of transfer outcomes and lay the groundwork for transition to an equalization system based on measuring the fiscal gap.

Annex 3.1

Tax Effort and Revenue Mobilization

Federal government concern with weak tax effort of subnational governments is not always without reason.

In many cases, subnational governments underutilize their taxing authority, either due to structural constraints or because generous transfers reduce the incentive to raise subnational government revenues. Empirical evidence from countries such as the Philippines, Indonesia, and Nigeria demonstrate how large unconditional transfers can foster fiscal complacency, a phenomenon sometimes referred to as ‘fiscal laziness’ or simply the ‘inertia effect’ (Bahl and Bird 2019). Conversely, there is evidence of transfers acting as stimulants to revenue mobilization. Derivation-based transfers—where allocations are linked to revenue generation at the state/local level—can incentivize greater fiscal effort, as seen in the case of China. Nonetheless, the overall empirical record based on international experience remains mixed, with outcomes entrenched in the specific design of the transfer mechanisms and the elasticity of demand for public services. It is difficult to unpack the effects of different types of transfers, thereby obscuring the nuanced impacts of conditional versus unconditional transfers.

The impact of intergovernmental transfers on revenue mobilization and fiscal equity has been a matter of debate in India for several years across various Finance Commissions.

To understand the impact of central transfers (shared taxes and grants from the center) on the revenue mobilization efforts of the states, several factors need to be kept in mind since the relationship between the two variables is not straightforward. Central transfers (both conditional and unconditional) can affect revenue mobilization in different ways and can either lead to (i) substitution effect - act as a perverse incentive which impedes tax effort by substituting it by transfer; (ii) stimulant effect - create an incentive for the states to collect more or raise more revenues; (iii) inertia effect (fiscal laziness) - complacency with higher transfers.

The underlying question in exploring these effects in India also relates to the principles of tax assignments between the central government and the state governments. In India, the ‘separation’ of

tax bases between the center and the states can create an inertia or substitution effect among states with relatively higher fiscal dependency exerting low tax effort. When a derivation-based principle is applied theoretically, the central transfers can stimulate states to improve tax effort since part of the revenues collected accrue to the state or the concerned jurisdictions directly.

The issue of what Finance Commissions in India can do to stimulate states tax effort must be assessed in the context of the question what Finance Commissions are trying to achieve.

The Finance Commission tries to do (at least) two things with its transfer. Equalize fiscal capacity and stimulate tax effort, with a much greater weight on the former. The choice is the trade-off between interstate equalization and the stimulation of revenue effort. More equalization would likely steer more money to states that will substitute transfers for taxes. Therefore, for policy implications, the relationship between tax effort and equalization needs to be better understood and jointly analyzed. Much of the empirical evidence in India is based on understanding the two aspects separately. Over several decades, Finance Commissions have tried to balance multiple objectives with one policy instrument and this has made it difficult to isolate the effect of the multiple objectives on the states’ revenue-raising capacity. A transfer focused solely on equalization could help in understanding the implications of the transfers (in particular, Finance Commission transfers) on the revenue mobilization efforts of the states.

Empirical evidence indicates a negative relationship between central transfers and revenue effort in India.

The findings consistently indicate a negative impact of central fiscal transfers on states’ own revenue efforts (Table A3.1). This suggests that higher transfers may reduce the incentive for states to mobilize their own revenues, leading to revenue substitution and inefficiencies. The results from these studies are provided after the table, with further analysis of more recent data.

Table A3.1. Empirical Evidence of Impact of Central Transfers on States Revenue Effort

Study	Regression Equation	Model Specification	Variables	Independent Variables	Key Coefficients & Significance	R ² Values	Diagnostic Tests	Main Findings / Conclusions
Kumar and Kaur (2023)	$Y_{it} = \mu + \alpha_i + \beta X_{it} + \lambda_t + v_{it}$ Where: - Y_{it} : Own Tax Revenue (OTR) - X_{it} : Vector of explanatory variables - α_i : State-specific effects - λ_t : Time effects - v_{it} : Error term	Two-way fixed effects panel regression (preferred over random effects via Hausman test)	Dependent Variable: Own Tax Revenue per capita (OTR) Independent Variable: Central tax transfers, statutory grants, state plan grants, discretionary grants, total transfers, asymmetric variables, fiscal space, tax complexity (HH), internal debt, development expenditure, per capita income, agriculture share, dependency ratio, political affiliation, election dummy, FRBM dummy	Central tax transfers, statutory grants, state plan grants, discretionary grants, total transfers, asymmetric variables, fiscal space, tax complexity (HH), internal debt, development expenditure, per capita income, agriculture share, dependency ratio, political affiliation, election dummy, FRBM dummy	- Central tax transfers: -0.067*** (p=0.00) - Statutory grants: -0.193*** (p=0.00) - State plan grants: -0.276*** (p=0.00) - Discretionary grants: -0.103** (p=0.04) - Total transfers: -0.140*** (p=0.00) - Asymmetric state plan grants: 0.162*** (p=0.00) - Fiscal space: -11.61*** (p=0.00) - Tax complexity (HH): -62.659*** (p=0.00) - Development expenditure: 0.277*** (p=0.00) - Internal debt: 0.117*** (p=0.00) - Per capita income: 0.014*** (p=0.00) - Dependency ratio: 3.455, 1*** (p=0.00) - Political affiliation: -1.51* (p=0.06) - FRBM dummy: 2.9861* (p=0.09)	Within R ² : 0.61 (Model 1), 0.56 (Model 2)	- Hausman test: 245.78*** (p=0.00) - F-statistic: 53.32*** (Model 1), 63.45*** (Model 2) - Multicollinearity: No strong correlation among variables (Appendix) - Robustness: Corrected for autocorrelation and heteroscedasticity	All forms of central transfers negatively affect states' own tax revenue. - Asymmetric decline in state plan grants positively influences tax effort ("fiscal replacement" effect). - Political alignment with the center reduces tax effort. - Fiscal space and tax complexity hinder internal debt, development expenditure, and per capita income enhance tax effort. Political variables have a stronger impact than economic ones. Suggests redesigning transfer mechanisms to avoid fiscal lethargy and promote equalization.
Lakshmanasamy (2022)	$STR/NSDP = \beta_0 + \beta_1 NSDPpc + \beta_2 GRANTS/REV + \beta_3 SCT/REV + \beta_4 REVEXP/NSDP + u$	Panel data regression using fixed effects model for 15 major Indian states (1980-81 to 2019-20)	Dependent Variable: STR/NSDP: Own tax revenue of state as a ratio of NSDP Independent Variable: NSDPpc: Per capita NSDP; GRANTS/REV: Grants from central taxes as ratio of state revenue; REVEXP/NSDP: Revenue expenditure as ratio of state revenue; SCT/REV: Share in central taxes as ratio of state revenue; REVEXP/NSDP: Revenue expenditure as ratio of NSDP	NSDPpc: Per capita NSDP; GRANTS/REV: Grants from central taxes as ratio of state revenue; SCT/REV: Share in central taxes as ratio of state revenue; REVEXP/NSDP: Revenue expenditure as ratio of NSDP	Coefficients (Fixed Effects) NSDPpc: 0.0092 (***) GRANTS/REV: -0.0057 (***) SCT/REV: -0.0077 (***) REVEXP/NSDP: 0.324 (***) Constant: 0.025 (***) All coefficients significant at 1% level (***).	Within R ² : 0.856 Between R ² : 0.063 Overall R ² : 0.61	Hausman Test: $\chi^2 = 67.32$, p-value = 0.00 → Fixed effects preferred	Central transfers negatively affect states' tax effort (revenue substitution effect). NSDP per capita and revenue expenditure positively influence tax effort. Fixed effects model statistically more appropriate than random effects.
Rangarajan and Srivastava (2008)	Analytical and policy-oriented framework with empirical references		Focus on fiscal capacity, vertical and horizontal imbalances, and incentive structures					- Excessive reliance on grants may reduce states' incentive to mobilize own resources. - Grants should be targeted and conditional to encourage effort. - Tax devolution should be designed to reward fiscal discipline and effort, not just fill gaps. Transfers must be structured to avoid moral hazard. - Incentives for tax effort and fiscal discipline should be embedded in transfer formulas. - Emphasis on designing transfer mechanisms that reflect fiscal realities and promote accountability.
Srivastava and Rao (2014)	Descriptive and comparative analysis of transfer dependence across state categories		Share of central transfers in total revenue receipts					Rising dependence on central transfers, especially in low-income and special category states; Discretionary transfers more distortionary than formula-based ones. Emphasizes the need for predictable, formula based transfers to avoid fiscal complacency. Highlights the importance of performance linked transfers

Source: Compilation of the studies listed in the table.

Econometric Analysis of Impact of Central Transfers on State Tax Effort

The panel regression analysis examines the determinants of tax effort across Indian states over time. The analysis builds on the framework originally proposed by Rangarajan and Srivastava (2011), which examined the influence of fiscal transfers and structural characteristics on state tax

performance. Based on their approach, we estimate a series of fixed effects models using annual data from the RBI State Finance Bulletin database of 27 states and union territories covering 1990–2024, capturing both cross-sectional and temporal variation.

Model Specification

The specifications follow a linear fixed effects structure of the form

$$\text{TaxEffort}_{it} = \alpha_i + \beta_1 \cdot \text{Transfers}_{it} + \beta_2 \cdot \text{GSDP}_{it} + \beta_3 \cdot \text{Population}_{it} + \beta_4 \cdot \text{Urbanization}_{it} + \varepsilon_{it}$$

where

- TaxEffort_{it} : state own tax revenue (excluding shared taxes) as a share of GSDP for state i in year t
- Transfers_{it} : shared taxes and grants as a share of state GSDP
- GSDP_{it} : per capita Gross State Domestic Product
- Population_{it} : total state population
- Urbanization_{it} : urban population as a share of total state population
- α_i : state fixed effects controlling for time-invariant heterogeneity
- ε_{it} : idiosyncratic error term

This analysis builds on Rangarajan and Srivastava (2011) by aiming to account for heterogeneity across state types and explore interaction effects or alternate transfer measures. The model is extended in two ways:

- **Disaggregating effects for special category states (SCS):** We interact transfers with a binary indicator for SCS to allow differential marginal effects between special and general category states.
- **Alternative transfer measures:** We test the robustness of results using transfers as a share of GSDP with additional controls for urbanization and population to capture structural factors.

Transfers expressed as a share of GSDP offer a standardized measure of transfer dependency across states compared to per capita transfers. This is because tax effort itself is defined as tax revenue relative to GSDP, and expressing transfers on the same denominator (GSDP) allows for a more consistent interpretation of the incentive effect.

Transfers expressed as a share of GSDP offer a standardized measure of transfer dependency across states compared to per capita transfers. This is because tax effort itself is defined as tax revenue relative to GSDP, and expressing transfers on the same denominator (GSDP) allows for a more consistent interpretation of the incentive effect.⁵⁸

Results Summary

Across specifications (Models 1–4, Table A3.2), central transfers as a share of GSDP are consistently and significantly negatively associated with tax effort. The results confirm the core insight from Rangarajan and Srivastava (2011) that large fiscal

transfers may reduce the incentive for states to mobilize their own revenue. In Model 6, interaction terms are introduced between transfers and a special category (SC) dummy. The results show that

58 Often, per capita transfers do not account for the underlying size of the economy and can blur the argument of how much fiscal space is being filled by central transfers relative to the state's economic base. Therefore, transfers-to-GSDP is a more reasonable metric when assessing potential substitution effects between own-revenue mobilization and intergovernmental support.

- For **general category states**, the marginal effect of transfers on tax effort is negative but not statistically significant.
- For **SCS**, the marginal effect is significantly negative (coefficient = -1.156 , $p < 0.05$), suggesting that transfers are particularly distortionary in states with structurally weaker revenue bases and higher grant dependence.

The results indicate that central transfers may have a negative relationship for tax mobilization, but this effect appears to be concentrated in SCS. For general category states, the relationship between transfers and tax effort is statistically insignificant. This distinction suggests that structural dependency and fiscal incentives may operate differently across

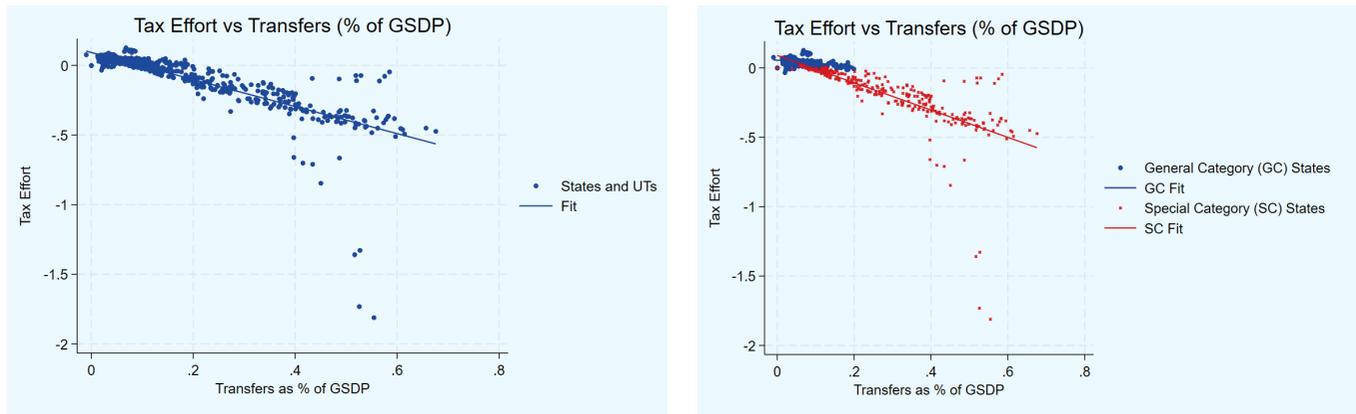
state types. However, this conclusion should be interpreted with caution, as the regressions do not fully account for deeper institutional, structural, and political dynamics that may influence state fiscal behavior and revenue bases. However, further research is needed to fully unpack the causal channels behind these observed associations.

Urbanization is insignificant across models, though per capita GSDP retains a small but positive effect in most specifications. The lack of significance in urbanization through the different model specifications can be due to multicollinearity with other variables. Urbanization usually implies stronger tax handles and greater revenue-raising capacity and is significantly and positively correlated to tax effort in other analyses.

Table A3.2. Results of Linear Fixed Effects Model

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Baseline	Transfers as % GSDP	With Population	With Urbanization	All controls	Special Category States interaction
Transfers Per capita	4.33e-06*** (1.06e-06)					
Transfers (% GSDP)		-1.188*** (0.372)	-1.174*** (0.381)	-1.314*** (0.376)	-1.306*** (0.386)	-0.244 (0.209)
GSDP per capita	7.98e-08 (1.92e-07)	2.46e-07** (1.00e-07)	2.60e-07** (1.16e-07)	2.57e-07 (1.50e-07)	2.68e-07 (1.71e-07)	2.00e-07 (1.57e-07)
Urbanization rate				-0.000317 (0.00153)	-0.000336 (0.00155)	-0.000219 (0.00141)
Population			-3.07e-10 (5.96e-10)		-1.83e-10 (6.18e-10)	
Transfers (% GSDP) × Special Category State						-1.156** (0.481)
Constant	-0.0896*** (0.0194)	0.104* (0.0533)	0.114** (0.0493)	0.135** (0.0626)	0.141** (0.0623)	0.107* (0.0531)
Observations	810	810	810	735	735	735
R-squared	0.254	0.380	0.381	0.386	0.386	0.396
Number of States UTs	27	27	27	27	27	27
Robust standard errors in parentheses						
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$						

Figure A3.1. States Tax Effort and Transfers as percentage of GSDP



Source: RBI State Finance Bulletin, various issues, staff estimates

Conclusion

The fixed effects model indicates, in overall terms, a negative relationship between central transfers and revenue effort in India; these results are consistent with previous studies. The results suggest that higher transfers may reduce the incentive for states to mobilize their own revenues, leading to revenue substitution and inefficiencies. However, using fiscal capacity in the fixed effects model may lead to more nuanced results.

It is better to estimate fiscal capacity through a potential tax base although there may be institutional and technical challenges of implementing such metrics. Tax effort is the ratio of taxes raised to taxable capacity, and in India we do not have a satisfactory measure of that. In addition to this, any performance-based grants have a limited impact and are less effective although they are increasingly

promoted as tools to enhance accountability and service delivery. While these grants often include rigorous compliance requirements, their administrative and compliance costs can be substantial, and their long-term efficacy is uncertain.

More importantly, stimulating tax effort by states is better handled through institutional reforms than by tweaking the distribution formula. These institutional reforms may include the following: (i) provide state governments more discretionary taxing powers; (ii) reduce the vertical share of transfers to richer state governments; (iii) tap the potential of urban areas with property taxation and user charges; (iv) incentivize states to give more revenue-raising powers to local governments; (v) eliminate the practice of filling gaps in the intergovernmental transfer system.

Chapter 4

International Experience in Equalization

4.1 Introduction

The previous chapters highlight many of the choices various Finance Commissions have made over the years to address vertical and horizontal imbalances. While every country has unique conditions, the Finance Commission may find it useful to consider how other countries have addressed the issues that arise in promoting equalization in their own countries. These experiences may provide insights that might be adapted to support results in India.

This chapter explores how other countries have addressed some of the core elements of fiscal equalization. It considers key questions such as what is the institutional structure for addressing fiscal equalization? What is the overall goal of the fiscal equalization system? How large are vertical gaps and horizontal disparities? What is the approach to revenue sharing or devolution? How are allocations among the states determined? Are there particular lessons from a country's experience that may be useful as India considers the update of its own system?

Most countries around the world practice some form of equalization transfers to subnational governments, usually with the objective of reducing disparities in their ability to deliver basic services. Generally, the 'state-of-the-art' approach in the design of equalization systems around the world is the 'fiscal gap' approach, defined as the difference between separate estimates of fiscal capacity of states and expenditure needs. It is generally agreed that Australia's approach, in which the equalization formula is administered by an independent commission with meticulous annual calculation of fiscal capacity and expenditure needs, is the 'best-in-class' approach, though it has significant data requirements and is not always well understood by the population.⁵⁹ Canada's system focuses on equalization of revenue capacity without considering expenditure needs and South Africa's system considers mostly equalization of expenditure needs. Many countries, including Brazil, use a weighted index approach with variables that approximate revenue capacity and expenditure needs. This is the approach that mostly closely

resembles what is currently used in India.

This chapter will provide an overview of the country experiences of Australia, Brazil, Canada, South Africa, and various countries of the EU. Table 4.1 sets out the basic parameters relating to equalization across these countries, which is then followed by sections on each country. Background papers for each country have been prepared for the Sixteenth Finance Commission and present a deeper dive into each case. The following are some key lessons that stand out from this review.

First, the importance of identifying what one is trying to equalize to the overall design of the system. For example, Canada and Germany's systems focus on equalization of revenue capacity and thus draw on approaches such as the Representative Tax System that highlight effective measurement of the sources of provincial/state revenue and how each subnational government compares to a given benchmark. In contrast, South Africa's system focuses on expenditure needs, and revenue collection is highly centralized. Many systems try to measure fiscal gaps and include elements of both revenue capacity and expenditure needs. Systems using a weighted formula approach such as that in Brazil and India tend to be less clear on what exactly is being equalized. Most equalization systems aim to support the provision of a standard or minimum level of public services to citizens across a country, though in some cases there is the desire to equalize income per capita across states. This latter objective goes beyond what equalization systems typically undertake as provision of basic services is only one part of supporting state or regional development.

Second, investment in timely and accurate data is key to an effective system of equalization. Though systems such as those in Australia, Canada, Germany, Norway, South Africa, and Sweden are data intensive, they have largely been successful because they have been accompanied by an effort to ensure that the required data are available and updated, even if delayed. This also allows systems to

⁵⁹ See Jorge Martinez-Vazquez (2024). Intergovernmental Transfers Systems in the EU with a Special Focus on Equalization: Lessons for India. Martinez-Vazquez notes that an increasing number of countries have adopted a fiscal-gap methodology including Canada for its Northern Territories, Italy, Japan, Korea, the United Kingdom, as well as China, Indonesia, Latvia, Peru, Russia, Ukraine, Vietnam and Uganda.

draw on rolling averages (as for the calculations of average national revenues for the different revenue bases in Canada) and to be more responsive to changing conditions. Countries with systems that do not manage to draw on updated data—such as in Brazil or Italy—do not typically meet the overall goals of their system.

Third, equalization is typically only one part of the transfer system, and this component must be considered in the context of and in harmony with

other key transfers, such as conditional transfers directed toward education or health. In Canada, equalization transfers are about 28 percent of overall transfers provided to provinces whereas in South Africa the equitable share to provinces and localities is over 80 percent of total transfers. For equalization to be most effective, transfers provided through other mechanisms—especially to support current spending needs such as in education and health—need to be incorporated into the mechanisms that support equalization.

Table 4.1. Comparative Equalization Systems: Australia, Brazil, Canada, South Africa

	Australia	Brazil	Canada	South Africa
Population (millions)	27.1	212	40.1	63.2
Size in million km ²	7.7	8.5	9.9	1.2
Subnational entities	Six states, two territories; 500 local governments councils	27 states, including the Federal District; 5,570 municipalities	10 provinces, three territories, 3,600 local governments	Nine provinces; 278 municipalities (eight metros, 44 districts, 226 local municipalities)
Status of local governments	Local governments subordinated to states	Local governments are sovereign entities	Local governments subordinate to provinces	Local governments are sovereign entities in the Constitution, but subject to policy standards and regulations by the center.
Institutional structure for managing/overseeing transfers	Commonwealth Grants Commission, since 1933. Part-time chairperson and three part-time commissioners. Agency of 35 staff.	No established institution for regularly overseeing/evaluating transfers	No established institution for regularly overseeing/evaluating transfers - Commissions from time to time (2006)	Finance and Fiscal Commission: An independent body that provides recommendations to the government on intergovernmental fiscal matters
Total transfers of state (%GDP)	6.70	7.92	3.30	10.00
Total transfers for equalization (%GDP)	3.40	3.93	0.91	8.30
Pool of funds	GST, with some supplements (about AUD 1 billion per year) from the central government	21.5% of federal income tax and 21.5% of industrial products tax for state equalization fund, 24.5% of same taxes for municipal equalization fund	General revenue of the government	Divisible pool includes all revenue sources, including borrowing. Provinces have little taxing authority.
Method of allocation of shares to states	Fiscal gap approach	Weight index	Fiscal Capacity - Representative Tax System	Expenditure needs: weighted formula
Funds to local governments	Through states, based on population	Direct from federal government and through states	From provinces to localities. Some direct capital grants to communities on a matching basis.	Direct from central government to localities through local equitable share, based on cost of delivery of basic and community services

Source: Country background papers prepared for Sixteenth Finance Commission.

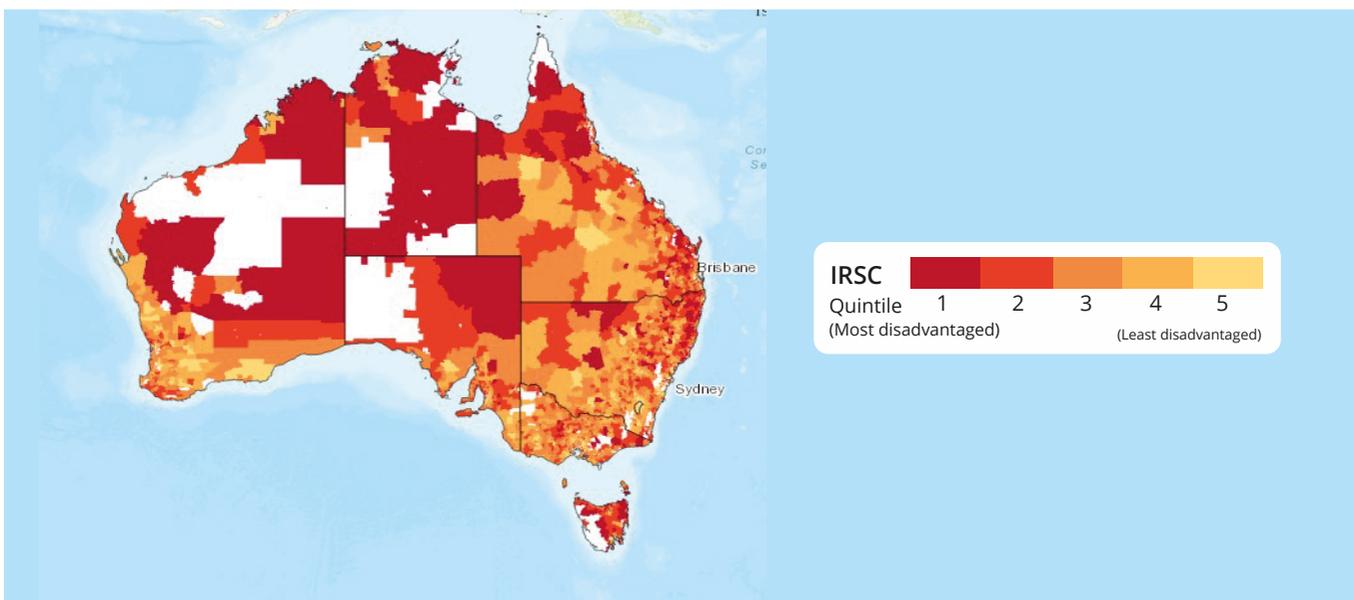
4.2 Country Experiences

Australia⁶⁰

Background. Australia is a geographically large (7.7 million km²) and lightly populated (27.1 million people) country with a great diversity across states. Australia supports equalization across six states and two territories (treated as states in the formula and discussion in this paper) through the Commonwealth Grants Commission, which is an independent and specialist government body that has been operating since 1933.⁶¹ The goal

of Australia's equalization system is to put all states on a similar fiscal footing. This is challenging because Australia's states vary widely in terms of their revenue-raising capacity, geography, and demography (Figure 4.1). Australia's approach is distinctive both because of the use of an independent, expert body and the adoption of an approach that draws on all elements of fiscal capacity, including revenue, expenditure, and capital investment to calculate equalization transfers annually.

Figure 4.1. Socioeconomic disadvantage in Australia



Note: White areas uncalculated due to lack of population.

Total Australian payments to the states in 2024–2025 are estimated to be 6.7 percent of GDP. About half of those payments (3.3 percent of GDP) are conditional grants, for specific purposes in health, education, housing and to support productivity-enhancing reforms such as investments in infrastructure and skills. The other half is general revenue assistance—or unconditional transfers—that support equalization to states at 3.4 percent of GDP in 2024–2025.

Australia has over 500 local government councils and the Australian Government also provides funding to localities via the states through funding which is generally untied and allocated to the

states based on population. As in India, local councils in Australia are subsidiary to the states and local government grants commissions in each state recommend the distribution of local government funding along principles that are broadly similar to those used by the Federal Grant Commission.

Framework for fiscal equalization. The pool of funding to be used for equalization is based on the GST, though since 2021–2022, the Australian Government has supplemented the pool with additional contributions of about AUD 1 billion. The Commission's task is to assess states' relative fiscal capacities and to recommend to the

⁶⁰ This section draws heavily on Jonathan Rollings. (2024). Australia's Approach to Fiscal Equalization. A background paper prepared for the Sixteenth Finance Commission.

⁶¹ The Commission currently comprises a part-time chairperson and three part-time commissioners, appointed by the Australian Government. Supporting them is an agency of around 35 staff.

government the shares of the GST that each state should receive consistently with fiscal equalization. The Commission’s recommended per person GST share for each state is expressed as a ‘GST relativity’ (Table 4.2). Fiscally stronger states have a GST relativity below 1 (and receive less than the average GST per person) and the fiscally weaker states have a GST relativity above 1 (and receive more than the average GST per person). The pool of funds is fixed so any adjustment to increase relativity implies a reduction in that of another state.

The Commission aims to estimate the GST share that each state requires to have the fiscal capacity

to provide a comparable level of services, if it makes the average effort to raise revenue. The Commission aims to identify and quantify the drivers beyond the direct control of the state that cause their fiscal capacities to diverge, drawing on four supporting principles: the role of states (what states do); policy neutrality (the states policy choices do not affect its GST share); practicality (sound and reliable data and simple methods); and contemporaneity (aim for the distribution of GST in a year to reflect the circumstance of that year based on a three-year moving average of the finalized data of the past three years).

Table 4.2. Australia: GST relativities and calculated GST distribution

	GST relativities		GST shares		GST distributions		
	2023–2024	2024–2025	2023–2024	2024–2025	2023–2024	2024–2025	Difference
			%	%	AUD, millions	AUD, millions	AUD, millions
New South Wales	0.9235	0.86736	29.0	27.1	24,535	24,224	-310
Victoria	0.85169	0.96502	21.9	24.8	18,541	22,227	3,686
Queensland	1.03118	0.95232	21.2	19.5	17,929	17,460	-469
Western Australia	0.7	0.75	7.6	8.1	6,419	7,257	838
South Australia	1.39463	1.40312	9.7	9.7	8,214	8,671	457
Tasmania	1.7908	1.82832	3.8	3.9	3,257	3,476	219
Australia Capital Territory	1.1954	1.20419	2.1	2.1	1,778	1,889	111
Northern Territory	4.98725	5.06681	4.7	4.8	4,002	4,257	256
Total	1.00000	1.00000	100.0	100.0	84,675	89,462	4,787

Source: Commonwealth Grants Commission, 2024. GST Revenue Sharing Relativities 2024 Update: GST Relativities for 2024–2025. 2024 Update | Commonwealth Grants Commission, page 17, table 1.1.

The Commission’s approach for estimating differences in state capacities starts with assessments (for example, statistical or econometric estimation) of the national average per person expenditure on key services and adjusting these up or down to reflect each state’s particular cost disadvantages or advantages to calculate state expense needs. Table 4.3 details the assessments that are undertaken.

On the revenue side, the major sources of tax revenue are mining royalties, payroll tax, transfer duty on conveyances, and land tax. Key drivers of state revenue-raising capacity include the amount of minerals within a state’s borders, wages paid by businesses, and the value of land and property. For

each tax base, the Commission calculates how much each state would raise if it applied the national average tax rate for the tax to the relevant tax base in the state.

The Commission’s estimates also include some payments from the Australian Government to the states for specific purposes (conditional grants) where the payments contribute to state budgets that would otherwise be funded from state budgets. Investment in public infrastructure is also factored into the state’s relative fiscal capacity, typically based on the proportion of its population that is expected to use the infrastructure and how that population changes. For example, the need for

capital investment in schools is driven by the state's share of children attending government schools. Although responding to natural disasters is a state function, the Australian Government provides funding for immediate assistance to help disaster-affected communities. The Commission recommends that

states should receive GST revenue in proportion to what they spend beyond the amount reimbursed by the central government. This means that states experiencing natural disasters receive a higher share of the GST pool and therefore the cost of responding to disasters is shared across the states.

Table 4.3. Commission Assessments

REVENUES	EXPENSES	CAPITAL	COST DRIVERS
Mining	Health	Investment	Wages
Payroll Tax	Schools	Net borrowing	Geography
Land Tax	Welfare		Socio-economics
Transfer duties	Transport		
Insurance taxes	Roads		
Motor vehicle taxes	Post-secondary education		
	Housing		
	Justice		
	Community services		
	Industry services		
	Natural disaster relief		

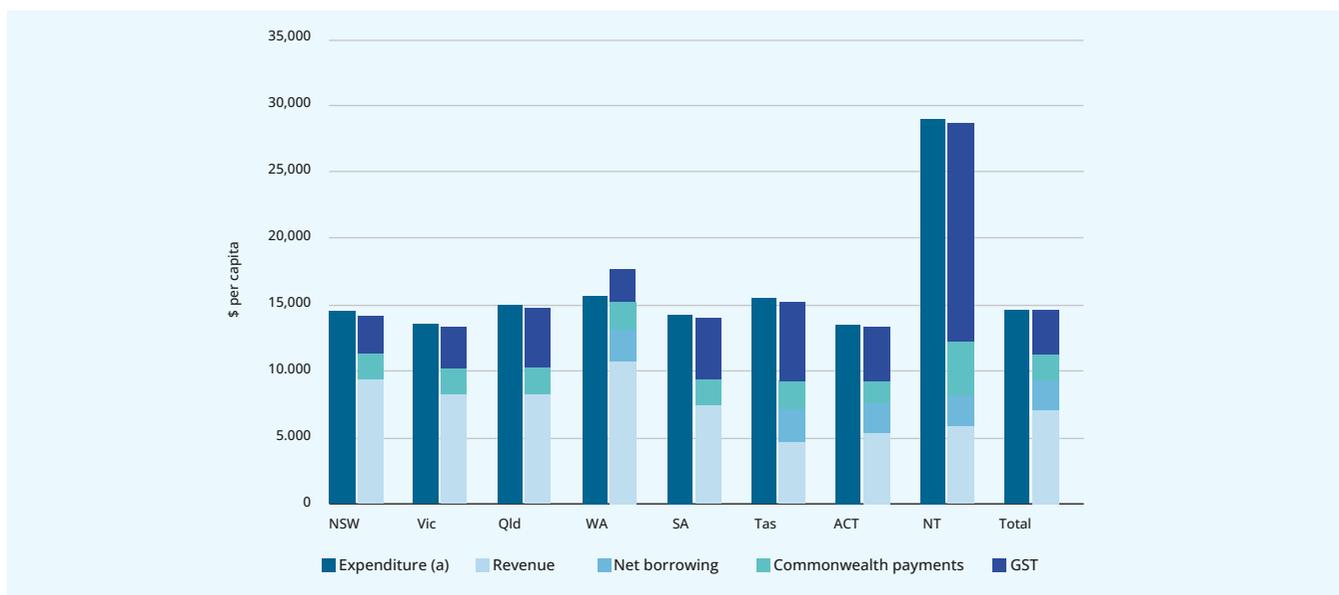
Source: Commonwealth Grants Commission, 2025. Commission's Assessment of Methodology. <https://www.cgc.gov.au/publications/commissions-assessment-methodology>

These calculations of expense needs, investment needs, and revenue-raising capacity are brought together to calculate how much GST each state would need to give it the same capacity to provide services as other states (Figure 4.2).

Key lessons. Australia's approach is considered state of the art in assessing both expenditure needs and fiscal capacity and demonstrates that it is feasible to use a fiscal gap approach to achieve equalization. However, some have suggested that it may be too complex. It is desirable for states, local governments, and citizens to clearly understand the nature of the equalization system and how results are determined. To some, the process of making assessments, while following rigorous guidelines, may appear to be more like a black box. Although estimating expenditure needs is not an exact science, there are some key criteria for such an approach to be effective. The first criterion is the need for quality and fit-for-purpose data, given the intensive approach to assessing expenditure needs and

revenue capacity. Use of such systems requires politically independent agencies that are responsible for the collection and oversight of a robust set of data that is comparable across states. It is also important that the data and calculations undertaken be transparent and presented publicly. It is also important to have transparency regarding the amounts that are disbursed to states. A second criterion for the system to be effective is close consultation with the key stakeholders. In Australia, states are involved in reviewing the assessment methods and working through new issues in the annual updates. All the Commission's calculations are made available to states and every five years the methodology undergoes a review to ensure its methods are appropriate and that it is using the best available data. The Commission also responds to questions and issues raised by the states and others. A third important aspect of the Australian system is its timeliness. Data are updated every year to incorporate the latest information and to ensure that the assessments remain relevant.

Figure 4.2. Calculating GST Shares - Assessed budgets per capita



Source: Commonwealth Grants Commission, 2024. GST Revenue Sharing Relativities 2024 Update: GST Relativities for 2024–25. 2024 Update | Commonwealth Grants Commission, page 18, figure 1.1.

Fundamentally, the success of a system of equalization will depend on the degree to which it is perceived to be ‘fair’ that citizens across a country should be able to access the same quality of service no matter which part of the country that they live in. Reaching such an agreement can be challenging. States have raised the fairness issue in Australia. Some states with high mineral royalties have argued that it is not fair that they receive such a small share of the GST pool, compared to those with lower capacity to raise revenues. To help address this issue, a minimum GST share was introduced in 2018. Each country will need to seek its own national consensus on what is considered fair to underpin the equalization system.

Brazil⁶²

Background. Brazil is a country of 212 million inhabitants and has a land mass of 8.5 million km²—an area almost three times larger than that of India (3.2 million km²). Population density is much lower in Brazil (25 inhabitants/km²) than in India (488 inhabitants/km²); however, Brazil is a highly urbanized country compared to India, with 88 percent of the population in urban areas compared to only 36 percent of India. Brazil is a highly decentralized federation with 27 states (including the Federal District) and 5,570 municipalities. In Brazil, municipalities are sovereign entities and are

not subordinated to the states, though the states and municipalities work together on many issues and some funds flow from the states to municipalities. With wide divergences in income and geography across the country, Brazil has many characteristics and challenges that are similar to India’s, including imbalances in the economic development of states. Brazil’s intergovernmental transfer system is also based on a weighted formula, like India’s.

Subnational governments account for about 52 percent of total general government expenditure and states and municipalities collect 34 percent of total tax revenue. Education, health, and public pensions are the largest expenditure items at the state level (57 percent of state spending in 2022). Municipalities also spend 53 percent of their resources on education and health.

The bulk of taxes (68 percent of all taxes) are raised at the federal level. States have significant sources of taxation (26 percent of all taxes), whereas municipalities only raise a small amount of total taxes (7 percent). Brazil does not separate its tax bases and there is an extensive system of tax sharing. The federal government is assigned the personal income tax and the corporate profit tax, among other taxes, that it shares with lower levels of government.

62 This section draws extensively on Tufani and Wetzel (2024).

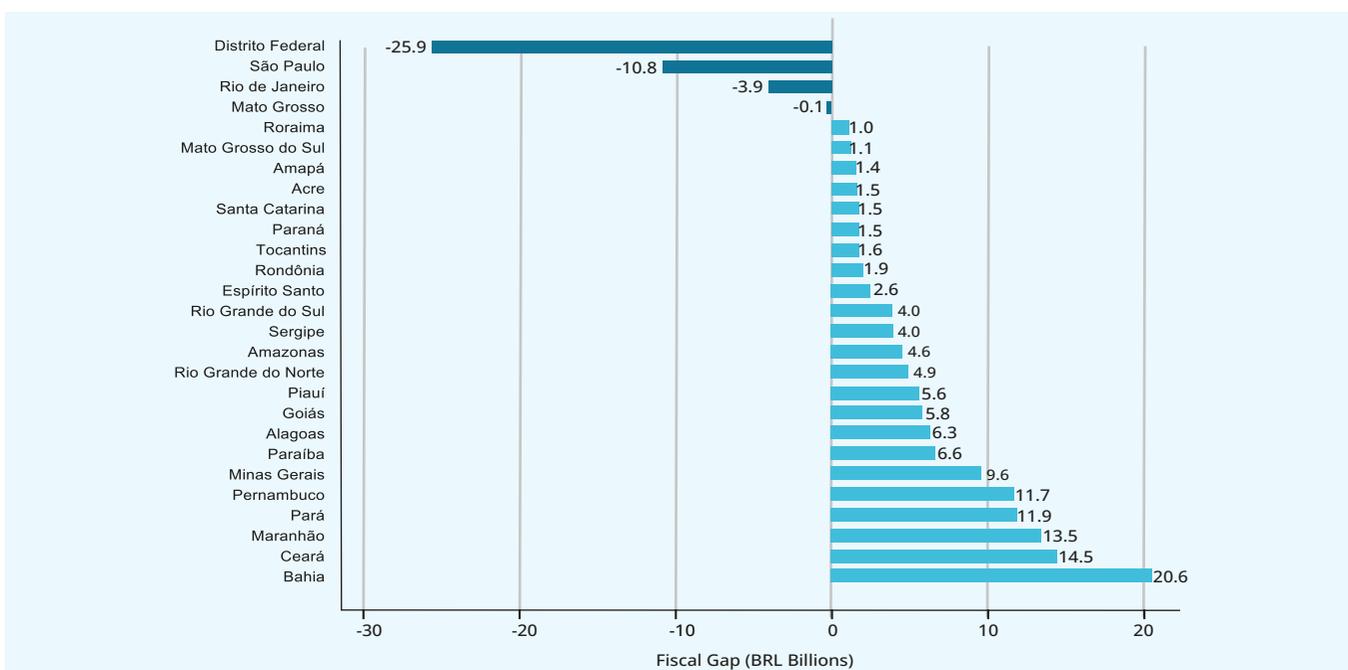
The states are assigned the value-added (ICMS—Imposto sobre Circulação de mercadorias e Serviços, a quasi-VAT tax) tax, which is the largest source of revenue in the country, as well as the personal property tax—both of which are shared with municipalities.⁶³

In terms of vertical imbalances, just over one-third of subnational government expenditure is financed through transfers. This masks a relatively low vertical imbalance with the states (about 10 percent) and a relatively high imbalance for municipalities. As in India, there are vast differences in terms of population, endowments, and geography across states. Figure 4.3 shows the horizontal fiscal gaps for each state of Brazil in 2018; the gaps in 2023 are similar.⁶⁴

The equalization framework. The Brazilian intergovernmental transfer system relies on three broad pillars to address imbalances: (i) tax sharing, (ii) equalization grants, and (iii) earmarked

matching grants for education and health (Table 4.4). Overall transfers from the federal government to subnational governments were 7.92 percent of GDP in 2023. The two primary transfers that support equalization are the Fund for State Participation (FPE) and the Fund for Municipal Participation (FPM). The FPE represents about 1.2 percent of GDP and the FPM represents 1.4 percent of GDP. The FPE is funded by 21.5 percent of the revenue from the federal income tax and the industrialized products tax. FPM is funded by a 24.5 percent share of the same taxes. Originally designed in 1966, the allocation formula for the FPE considered state’s population shares and the inverse of their GDP per capita. A small share (5 percent) was allocated based on area. However, the formula also included input-output tables that assigned different weights for different ranges of per capita income and population. The formulas were updated annually, but the final distribution of transfers ended up being more ad hoc, given their reliance on the input-output tables that were not fully transparent.

Figure 4.3. The Horizontal Fiscal Gap (2018), BRL billions



Source: Based on World Bank 2022.

63 Figures 3 and 4 in Tufani and Wetzel (2024) set out taxes and sharing rates in detail. In 2023, the Government approved a significant tax reform combining and rationalizing various taxes into a Contribution on Goods and Services and a Selective Tax at the federal level and a Tax on Goods and Services at the state level. The transition to this new system will take place over 10 years beginning in 2025.

64 The horizontal fiscal gap is calculated as the difference between expenditure needs to meet similar service delivery across all states and fiscal capacity. See World Bank (2022) for details.

In 1989, after the introduction of the new Constitution, the FPE went through a 'temporary' reform that lasted more than three decades. An apportionment rule defined that 85 percent of the pool of equalization funds were earmarked to the lagging states of the north, northeast, and midwest regions of the country; 15 percent was earmarked to the wealthier states in the south and southeast with the objective of reducing regional inequalities. The 1989 reform froze the coefficients of the FPE formula, with the intent of updating them after the 1990 census data came in; however, they remained in effect until 2015 when a marginal reform of allocation coefficients was implemented. The population numbers used in the formula have therefore been based on the 1989 figures for almost four decades, despite significant population shifts away from the interior states and toward large cities and the coastal states in the northeast.

The current legislation for FPE allocation draws on both old and new systems to determine the coefficients for the distribution of funds.

However, only the amount exceeding that distributed by the FPE in 2015 (adjusted for inflation and GDP growth) is apportioned by the new criteria. If the pool of funds is smaller than that of 2015 (adjusted), all states receive the same share as in the 1989 Law. If the pool of funds is larger than in 2015, all states get the adjusted 2015 value plus an additional increment distributed according to the following rules:

- The population factor (ranging between 0.012 and 0.07) and the inverse of per capita income, each weighted 50 percent.
- If a state's per capita income is more than 72 percent above the national average, its coefficient is reduced by the size of the identified 'surplus'. However, no state can receive a coefficient smaller than 0.05 percent.

Table 4.4. Brazilian Intergovernmental Transfers, 2023 (percentage of GDP)

			Total	Federal to states	Federal to municipalities	States to municipalities
Type	Transfer		Percentage of GDP			
Unconditional	Equalization	FPE	1.19%	1.19%		
		FPM	1.40%		1.40%	
	Non-matching	Federal Emergency Support	0.06%	0.02%	0.04%	
		Federal Temp. Support	0.04%	0.03%	0.01%	
	Origin based devolutionary	ICMS	0.86%			0.86%
		IPVA	0.30%			0.30%
		ITR	0.02%		0.02%	
		IPI-FPEX	0.04%	0.04%		
ICMS-Comp		0.09%	0.09%			
	Royalties	0.60%	0.30%	0.30%		
Earmarked	Matching	FUNDEB (top up)	0.34%	0.06%	0.28%	
		FUNDEB	1.50%	0.24%	0.39%	0.87%
	Non-matching	SUS (Health)	1.01%	0.26%	0.75%	
		Voluntary grants	0.46%	0.18%	0.28%	
		CIDE (transport)	0.00%			
Total			7.92%	2.41%	3.48%	2.03%

Source: Compiled from STN (Tresouro Transparente and Finbra).

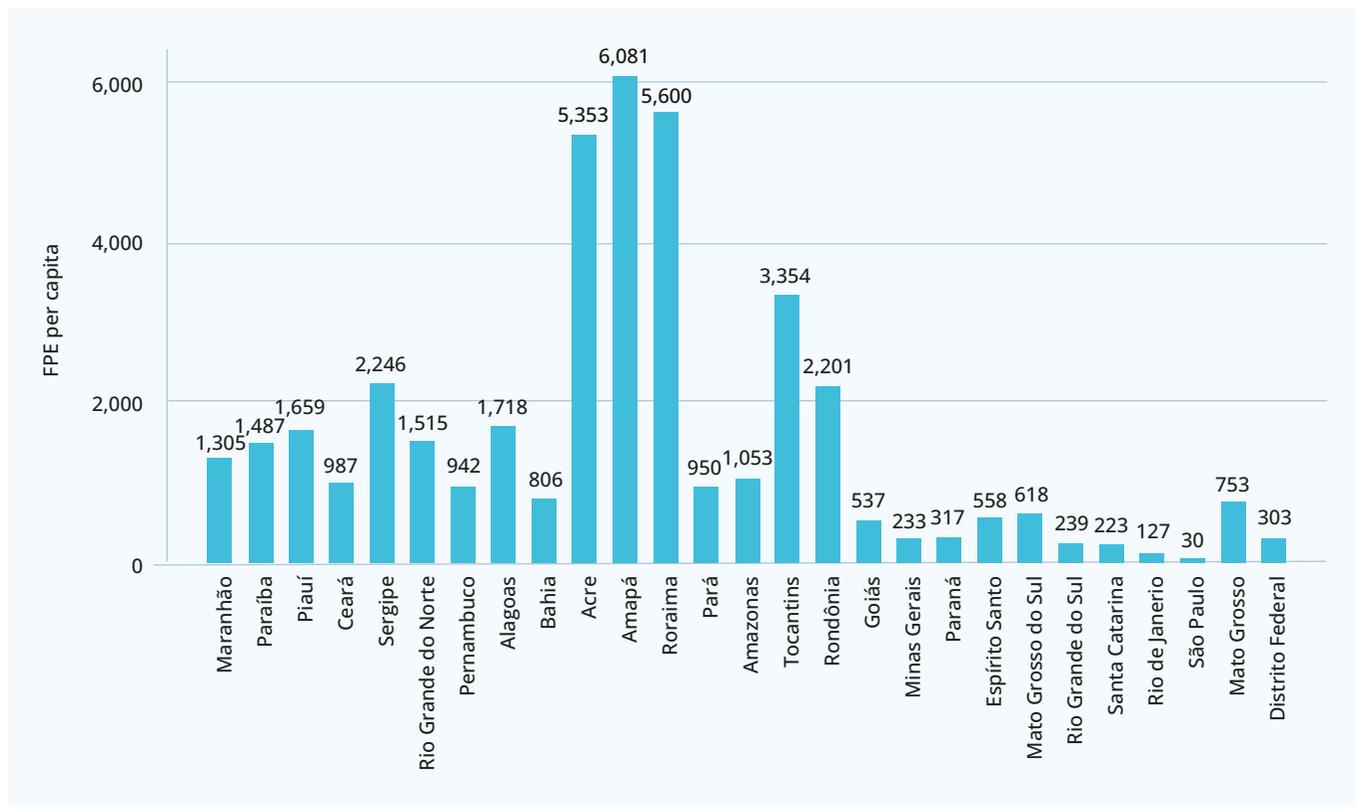
Notes: FUNDEB is the system of funds for education, and SUS is the system of grants in health.

Although the FPE transfer was originally envisioned to reduce disparities across state governments, the allocation formula has had a limited equalizing impact.⁶⁵ First, considering the apportionment rule, whereby lagging regions receive 85 percent of the

pool funds, there has been some success in redistributing resources from rich states to poorer states. However, those states in the middle of the income distribution benefit significantly more than poorer states (Figure 4.4).

65 World Bank 2022.

Figure 4.4. FPE per capita transfer, from poorest (left) to richest state (right), 2022



Source: World Bank 2022.

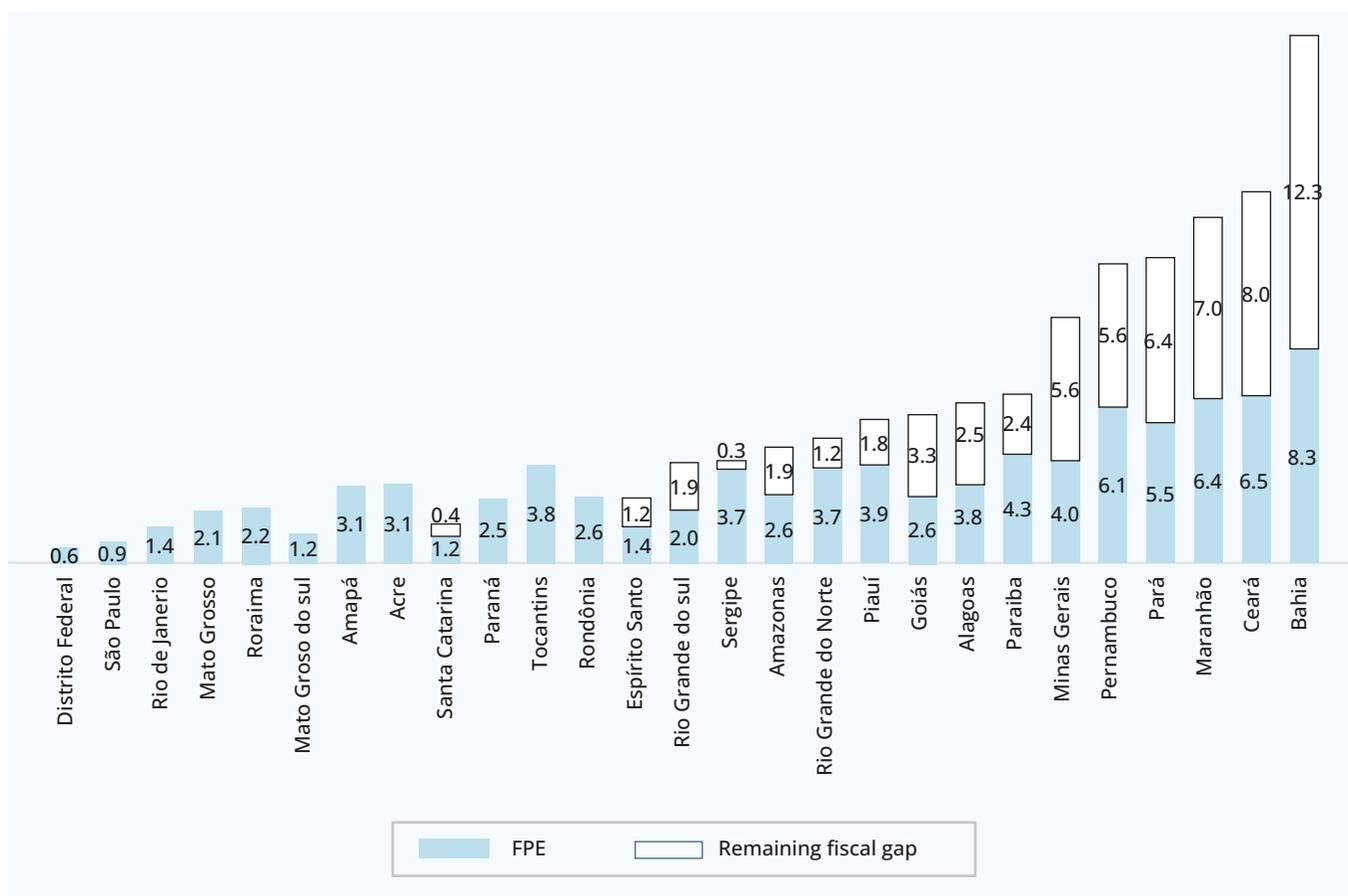
Even factoring in the emphasis toward states in the north, northeast, and midwest, the FPE does not seem to have been consistent in attaining equalization goals. Scarcely populated states such as Acre, Amapá, and Roraima receive about seven times more as per capita transfers than states such as Bahia and Ceará, which have higher service delivery needs. While some states have gone through significant economic and population changes since the 1989 Law was approved, the allocation of FPE shares is essentially the same.

It could be, however, that states with larger fiscal gaps are not necessarily the poorest ones, in which case a careful analysis of each state fiscal gap should be considered to evaluate the effectiveness of the equalizing transfer in closing fiscal gaps. As seen in Figure 4.3, the fiscal gap across states in Brazil varies widely. Perhaps not surprisingly, the pool of funds available under FPE is smaller than the sum of the fiscal gaps of states. The question that arises is, “given the variation in fiscal

gaps across states, to what extent does the FPE bring more cohesion and balance to the system?”

As Figure 4.5 shows, the regional apportionment rule does not reduce fiscal gaps in a balanced way. In fact, FPE creates even more imbalance and accentuates some inequities in the system of intergovernmental transfers in Brazil. States that already have a negative fiscal gap, meaning that their fiscal capacity is larger than the expenditure needs, such as Distrito Federal, São Paulo, Rio de Janeiro, and Mato Grosso, still receive the equalizing transfer from FPE. In addition, the FPE more than closes the fiscal gap in some states, such as Mato Grosso do Sul and Roraima, leaving these states with higher fiscal capacity than expenditure needs once the transfer is accounted for. Despite the generous transfers allocated to states with negative or small fiscal gaps, the FPE is not sufficient to close the gaps in poorer states, with large fiscal gaps, such as Maranhão, Ceará, and Bahia.

Figure 4.5. Equalization Transfer (FPE) and Remaining Fiscal Gaps, 2018



Source: World Bank 2022.

Note: States ordered in terms of fiscal gap, from smallest to largest.

Equalization transfers to municipalities. The establishment of a general unconditional grant from the federal government to municipalities in 1966, which is decentralized directly to the municipalities and does not pass through state governments, is considered a key driver in the increase in the number of local governments over the years (Table 4.5) (Mendes, Miranda and Blanco 2008). Between 1960 and 2020, the number of municipalities in Brazil more than doubled, increasing administrative costs of local governments and reducing gains from economies of scale. Most municipalities rely heavily on transfers from state and federal governments to finance their expenditures.

Similar to the FPE, the pool of funds for the FPM is based on revenue from the federal income tax and the tax on industrialized products (24.5 percent of

the total from each). Currently, the FPM distribution rules are more equalizing for capital cities than for small municipalities. State capitals receive 10 percent of the FPM resources, while non-capital municipalities receive 86.4 percent. The remaining 3.6 percent is distributed among the most populous municipalities. The allocation to state capitals is determined using population and per capita income. However, the allocation to non-capital municipalities is determined exclusively based on population. A minimum allocation is given according to population ranges. The minimum allocation strongly favors small municipalities regardless of their per capita income, which weakens equalization objectives and encourages municipalities to split. It was only in the 2000s that the rules became stricter, stating that new municipalities could only be created via federal law.

Table 4.5. Transfers to Municipalities and the FPM (2023)

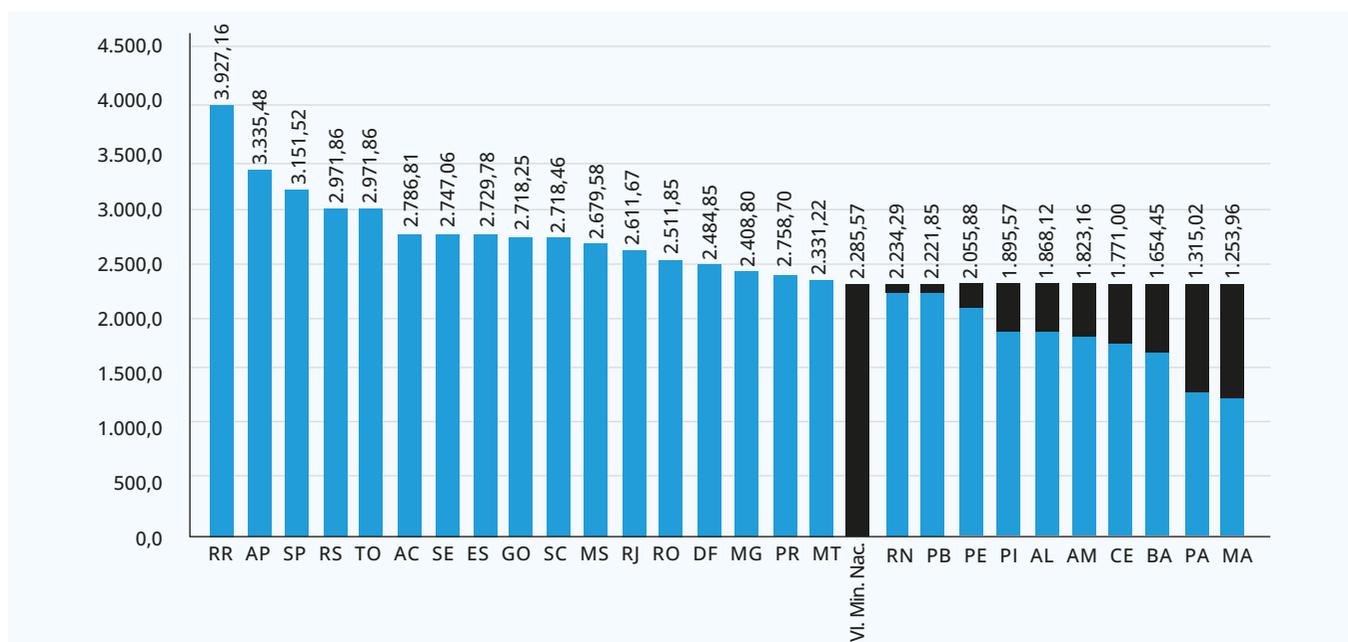
Population size	Share of transfers overall revenue (%)	Share of FPM transfers overall revenue (%)	Average FPM per capita transfer
Less than 10,000	87.66	37.14	2774.81
10,000–50,000	82.29	25.62	1420.33
50,000–100,000	72.96	17.06	919.52
100,000–500,000	63.43	11.50	575.78
above 500,000	46.50	5.78	329.76

Source: Tufani and Wetzel (2024).

Equalization in the education conditional transfer system. Although Brazil's overall system for equalization has not been completely effective in attaining equalization goals, an interesting example of effective equalization in Brazil is in the education sector. The 1988 Brazilian Constitution mandates that states and municipalities must spend 25 percent of their net revenues on education. Being based on net revenue collection, amounts allocated varied widely across states and municipalities. To address these disparities, the federal authorities introduced an education equalization system, now known as FUNDEB, to balance the pool of resources. FUNDEB is a two-stage equalization: (i) a within-state fund equalization, that happens in each state fund through the pooling of resources and (ii) federal top-up. In the first step, resources⁶⁶ are distributed according to the number and level of students across the state, creating a minimum state spending level. In the second step, the state fund with the

lowest expenditure per student receives a top-up until it achieves the level of the state fund with the next lowest expenditure per student. This is repeated until the top-up funds are depleted. The amount of top-up funds is determined by the federal government and has typically been between 10 and 17 percent of the state funds pool. Figure 4.6 illustrates the distribution of federal funds at the end of the process in 2018. The dark bars represent the top-up that each fund received (shown in per student amount). Through this mechanism, the federal government helped raise funding per student to a higher minimum level than would have otherwise been the case. This approach has been credited with improving the redistribution of resources for education and a strong increase in enrollment rates. It has also supported increases in teachers' salaries. However, results in improving the quality of education were not as strong and the government is now seeking to address this.

Figure 4.6. Distribution of Federal FUNDEB top-up across states



Source: World Bank 2022.

⁶⁶ The pool of FUNDEB resources consists of 20 percent of tax collection and transfers received by states and municipalities, including transfers from the federal government such as FPE and FPM. See Tufani and Wetzel (2024) for more detail.

Key lessons. This brief overview of Brazil's equalization transfers highlights some important lessons. First, it is important to be clear on what the system is trying to equalize—is it equality in per capita income or in basic service delivery? The initial creation of the system in Brazil seemed to focus on equalization of income, but over time the goals changed to service delivery without much change in the system. Second, while in theory, the formula being used—drawing on population and the inverse of per capita income—is simple and effective, this will not hold if the data are frozen for a long period—almost 40 years in Brazil's case. The use of input-out matrices until 1989 meant that the basis for allocations was not fully transparent. After 1989, the decision not to update population figures in the formula meant that the outcomes no longer reflected expenditure needs effectively as state populations were shifting. Population can be a good proxy for expenditure needs, but only if current information is used and important differences in composition (such as the proportion of old and young people receiving core services) are accounted for. Third, to support better equalization outcomes, the transfer system could be designed in a way to better assess the needs for key services and the minimum expenditure required to achieve them. The Brazilian government has found an interesting solution that seems to be effective regarding education and it is possible to broaden this approach to transfers by taking a more detailed look at expenditure needs and fiscal capacities. Overall, while the Brazilian system of equalization seems to be supported by a political equilibrium, it is not achieving its equalization goal.

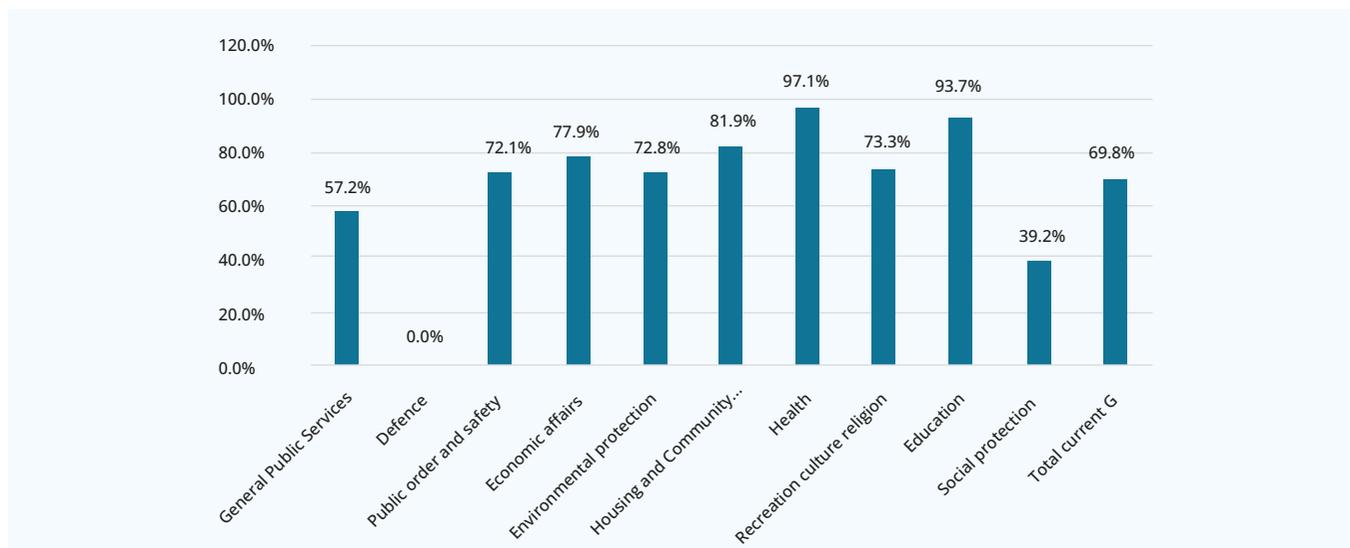
Indeed, the Supreme Court of Brazil has called the system unconstitutional and has requested proposals for reform of the system by end 2025.

Canada⁶⁷

Background. By land mass (9.9 million km²), Canada is the second largest country in the world after the Russian Federation. Its population reached 40.2 million people in 2024. Canada's structure of subnational governments consists of ten provinces that exercise constitutional authorities and three territories that exercise delegated authorities from the federal government. While the territories cover almost 40 percent of Canada's land mass, they contain only 0.3 percent of Canada's population with numerous 'fly-in fly-out' communities and are funded by a specific set of federal transfers.⁶⁸ Canada has 3,600 local governments, which are subordinated to the provinces and do not have constitutional status. About 80 percent of Canadians live in urban areas. Provinces may adjust both responsibilities and transfers to local governments to manage budget pressures. In what follows, the responsibilities and revenues of provinces and local government are considered together.

Spending by Canadian governments as a share of GDP has averaged about 41 percent of GDP.⁶⁹ Social protection, health, and education account for about 60 percent of current spending. Provinces and local governments account for 70 percent of total spending and more than 90 percent of spending on education and public health services. The federal government is responsible for most social protection services as it is responsible for the Old Age Security Program and Employment Insurance.

Figure 4.7. Provincial Share of Government Spending in Canada, 2018–19



67 This section and its data are based upon Vaillancourt and Joanis (2024).

68 Territorial Formula Financing: <https://www.canada.ca/en/departement-finance/programmes/federal-transfers/territorial-formula-financing.html>

69 Government spending rose to 52.7 percent of GDP during the COVID epidemic in 2020, but by 2022 returned to 41.5 percent of GDP. See Vaillancourt and Joanis (2024, 3).

In 2018–2019, tax revenues accounted for 78 percent of all government revenues with the bulk (42.4 percent) coming from personal income taxes and the remainder coming from corporate income tax (13.8 percent), general consumption taxes (16.4 percent), and property taxes (11.8 percent). Provinces have access to the same tax and revenue sources as the federal government except for customs duties and some excise rights. Provinces collect about 40 percent of personal income and corporate taxes and 60 percent of general consumption taxes. Property tax is largely a local government revenue. The provinces also pay an annual amount to the federal government to gain sole access to the gambling revenues sources. The provincial share of tax receipts is about 55 percent, so considering provincial expenditure responsibilities at about 70 percent, the VFI is about 15 percent.

The equalization framework. In 2022–2023, total transfers from the federal government to other levels of government amounted to 3.3 percent of GDP and 18.8 percent of all federal spending.

Health and social transfers are about 64 percent of this amount and equalization transfers are about 27.6 percent. The largest transfer in the Canadian system is the Canada Health Transfer (CHT), which in recent years has been 52 percent of total transfers to the provinces. The Canadian Social Transfer (CST) is in most years about 18 percent of total transfers, though in 2022–2023 it fell to 17.3 percent. The CHT and CST are both equal per capita transfers, with no direct link

to provincial health and social spending and are set by federal law. They are financed by general fiscal revenues and their envelope is based on historical federal payments. The CHT normally grows at least 3 percent per year or at the rate of a three-year moving average of nominal Canadian GDP, whichever is higher. For 2023–2028, it will grow at a minimum of 5 percent. The CST grows at 3 percent per year. There are no spending co-funding or cost-sharing conditions associated with the CHT or on the CST.⁷⁰ This provides the provinces with a great deal of autonomy over how they use the resources at their disposal.

Equalization grants constitute just over 25 percent of transfers to the provinces.

Although these payments were introduced in 1957, their principle was inserted into the Constitution in 1982. The goal of Canadian equalization is to ensure that provincial governments have sufficient revenues to provide reasonably comparable levels of services at reasonably comparable levels of taxation. The equalization transfer in Canada is a vertical transfer funded from the general revenue of the government that takes only fiscal capacity into account using a Representative Tax System approach. Needs, unit costs, or total costs are not considered in the calculation of equalization payments.

The envelope of the equalization program has historically been determined by the formula that calculates provincial entitlements:

$$\text{Equalization Right province } j = \left[\left(\frac{\text{Fiscal capacity Standard per capita}}{\text{Fiscal capacity province } j} \right) * \text{Average tax rate} \right] * \text{Population province } j$$

The population used is updated yearly using information from Statistics Canada.⁷¹

The sum of equalization rights for each of the sources gives the equalization payment that province j is entitled to receive for a given year.

Provinces for which the sum of all the tax-specific rights yields a negative amount do not need to pay money to the federal government; they simply do not receive any equalization, that is, Canada has a gross equalization scheme. Thus, equalization ensures a minimum fiscal capacity by province but does not cap it.

Five tax bases were used in 2024 to calculate equalization. Four use fiscal capacity that is the tax base: (1) personal income tax, (2) business taxes, (3) consumption taxes, and (4) property taxes.

The fifth uses 50 percent of natural resources revenues, not the fiscal capacity since it is deemed impossible to measure. The standard is the national average for each base

In 2024, the total equalization payments were determined by the following calculations:

⁷⁰ The CST requires provinces not to impose minimum residency/waiting period requirements. The CHT requires provinces to respect the principles of the Canada Health Act which are (i) public administration, (ii) comprehensiveness - covers all insured acts, (iii) universal coverage, (iv) portability between provinces, and (v) accessibility without user fees.

⁷¹ The census is accrued out every five years (ending in 1 and 6) in Canada.

- Calculate the two-year lagged, three-year weighted average (50 percent weight for the nearest year and 25 percent for each of the two furthest) of non-resource fiscal capacity;
- Calculate the same for resource fiscal capacity;
- Calculate the equalization entitlements as the highest for each province with either 0 or 50 percent resource revenue inclusion;
- Calculate the equalization of each province so that it does not exceed the Fiscal Capacity Cap (Finance Commission, discussed below); and
- Adjust the payments to each province to account for an overall (total) cap or floor on the sum of payments to provinces. This was added to the calculations of equalization in 2008 during the financial crisis as a mechanism to protect federal finances and was seen as a cap on spending so equalization would grow no faster than the national economy.

There can be important differences between the amounts calculated in step 3 with or without including 50 percent of resource revenues. For example, Newfoundland is entitled to equalization with 0 percent of resource revenues included, but not with 50 percent.

The Fiscal Capacity Cap (FCC) is different from fiscal capacity for equalization (FCE); both include 100 percent of non-resource fiscal capacity (step 1 above) but FCE adds only 50 percent of resource

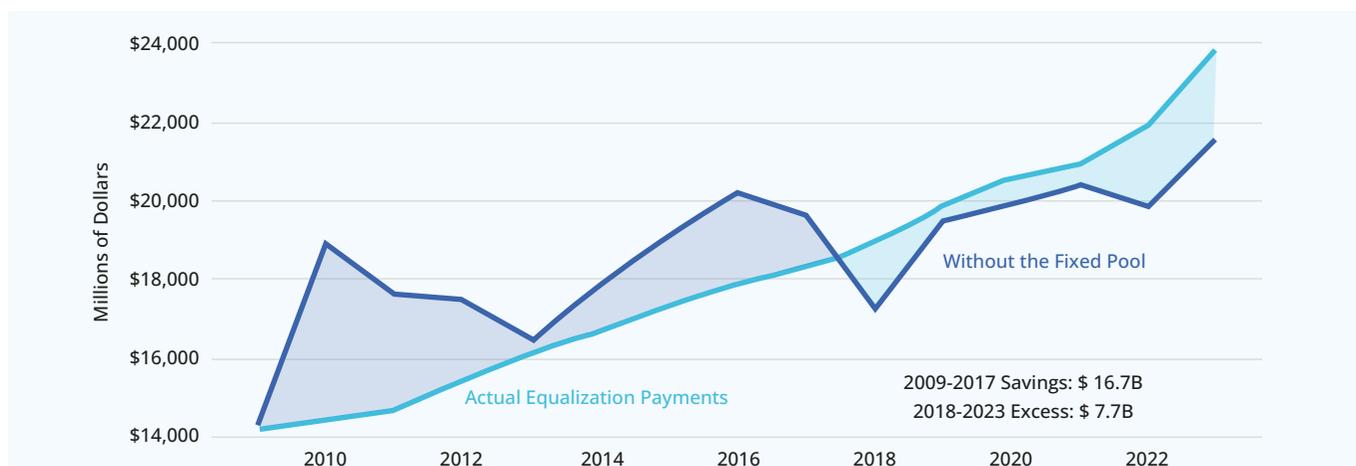
capacity (step 2) while FCC adds 100 percent of resource capacity and equalization entitlements. The calculation of the FCC depends on the share of the population that receives equalization payments as follows:

- When equalization-receiving provinces represent less than 50 percent of the Canadian population, FCC is determined by the total post-equalization per capita fiscal capacity of the lowest non-receiving province (usually Ontario)
- When equalization-receiving provinces represent more than 50 percent of the Canadian population (which means Ontario is a receiving province), FCC is determined as the average total post-equalization per capita fiscal capacity of all equalization-receiving provinces.

Turning to step 5, the aggregate equalization amount (AEA) that is the total cap or floor is set at CAD 14,185 million for 2010–2011⁷² based on the pre-AEA formula for the preceding year and with indexation applied⁷³ it is then indexed to the average growth of nominal GDP for the three calendar years preceding a fiscal year.⁷⁴

If the AEA is a cap, then the (federal) minister shall determine the per capita reduction for a fiscal year but if it is a floor they may be paid to a province for that fiscal year an adjustment payment (underlined by authors).⁷⁵ From 2009 to 2018, the AEA acted as a cap on equalization payments. Since 2018, it is acting as a floor as shown in Figure 4.8 below.

Figure 4.8. Total Equalization Payments, With and Without the Fixed Pool



Source: <https://thehub.ca/2023/01/16/trevor-tombe-ontario-to-receive-hundreds-of-millions-in-equalization-payments-despite-not-qualifying-as-a-have-not-province/>

72 3.4(5) Federal-Provincial Fiscal Arrangements Act (R.S.C., 1985, c. F-8).

73 See Michel Lambert-Racine and Edison Roy Cesar. 2024. (Revised from 2008) Canada's Equalization Formula. Library of Parliament. Publication No. 2008-20-E.

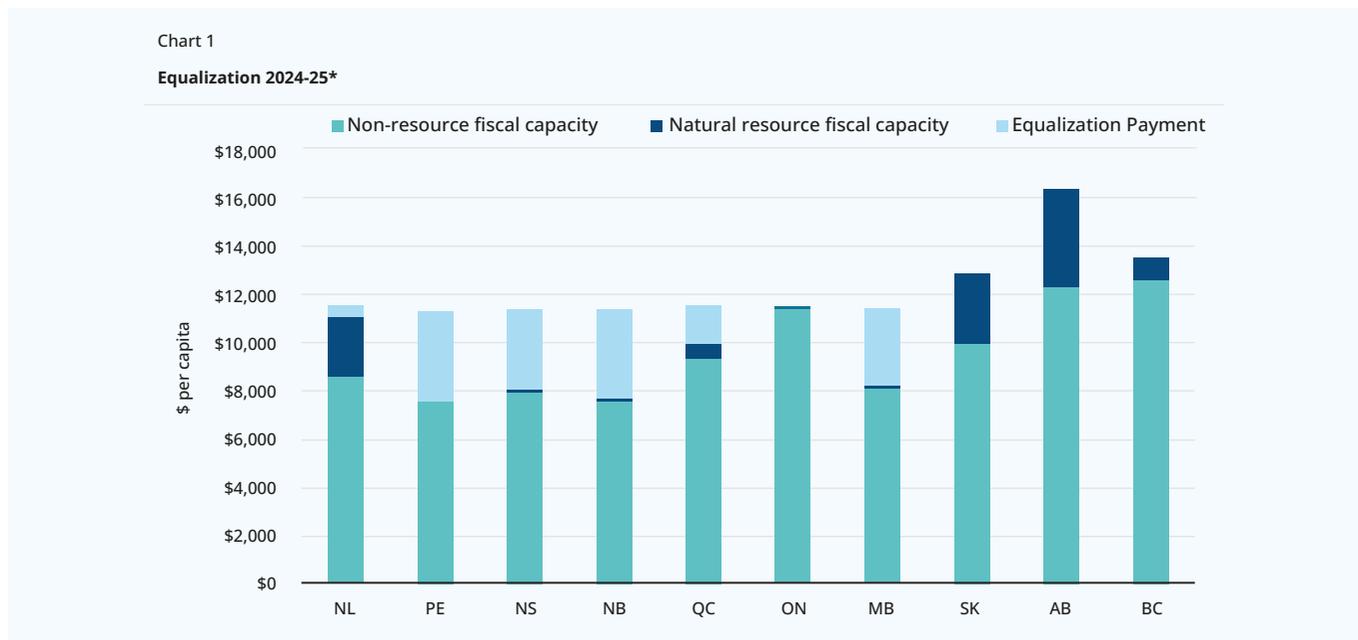
74 Fiscal year is April 1 to March 31 for the federal and provincial governments in Canada.

75 See footnote 74, sections (7) and (8), respectively.

Figure 4.9 shows the result of the equalization formula for 2024–2025. Provinces with lower per capita incomes and little in the way of natural revenues resources, such as Prince Edward Island (PE), Nova Scotia (NS), New Brunswick (NB), and Manitoba (MB) receive equalization payments to bring their fiscal capacity up to a standard level—just under CAD12,000 per capita. Those states that have fiscal capacity above that level—such as Saskatchewan (SK), Alberta (AB), and British Columbia (BC)—do not receive equalization

payments. Those provinces that receive equalization payments are also those that have the lowest per capita income. In 2023, provincial per capita incomes were CAD 57,129 in PE, CAD 56,389 in NS, CAD 56,520 in NB, and CAD 63,153 in MB, compared with provincial per capita incomes of CAD 90,715 in SK, CAD 96,576 in AB, and CAD 74,099 in BC.⁷⁶ The equalization system in Canada thus does ensure greater payments for those who have lower fiscal capacity and lower provincial per capita incomes.

Figure 4.9. Canadian Equalization, 2024–2025



The Canadian equalization system is noteworthy because it focuses entirely on the revenue side.

It does not consider either current or capital expenditure needs. Infrastructure Canada coordinates various cost-sharing investment programs in housing, public transit, and water and sewage investments⁷⁷ grouped under the Investing in Canada Infrastructure Program⁷⁸. This cost-sharing program is implemented through bilateral agreements between the federal government and each province. The percentage paid by the federal government is up to 40 percent for municipal projects, 50 percent for provincial projects, and 75 percent for aboriginal projects.⁷⁹

A per capita funding program is the Canada Community Building Fund (ex-Gas Tax Fund⁸⁰), allocated across provinces based on their population share (census adjusted every five years) but with a minimum (0.75 percent of the total envelope) for Prince Edward Island (PEI), the smallest Canadian province.⁸¹ It was first (2005–2014) funded by revenue from the federal gasoline excise tax but is now funded from consolidated revenues.

Key lessons. The Canadian system of equalization **successfully equalizes the fiscal capacity of provinces to a standard per capita level.** It relies on the strong agency of the provinces and consultation

76 https://en.wikipedia.org/wiki/List_of_Canadian_provinces_and_territories_by_gross_domestic_product

77 <https://housing-infrastructure.canada.ca/plan/funding-financement-eng.html>

78 <https://housing-infrastructure.canada.ca/plan/icp-pic-IFinance Commission-eng.html>

79 https://housing-infrastructure.canada.ca/plan/icp-pic-IFinance Commission-eng.html#s_3

80 <https://www.toronto.ca/city-government/accountability-operations-customer-service/city-administration/city-managers-office/intergovernmental-affairs/canada-community-building-fund/>

and <https://www.buildingcommunities.ca/about-the-fund/history-fund#:~:text=Budget%202005%20%E2%80%93%20Established%20the%20federal,to%20support%20environmentally%20sustainable%20infrastructure>

81 <https://housing-infrastructure.canada.ca/plan/gtf-fte-b2019-nat-eng.html>

between the federal level and the provinces. The target level of equalization has been a policy choice by the government that interacts in part with the treatment of natural resource revenues. The Representative Tax System approach can be used to measure the revenue a province would obtain if it applied to its five tax bases the average tax rate in effect in the 10 provinces and incorporating natural resource revenues. **Such an approach makes sense if sufficient data are available on each of the tax bases**, in each of the provinces. The approach, however, **does not incentivize increases in tax collection**. A growing issue in the Canadian system is the **absence of consideration of how needs vary across provinces**.⁸² For example, as the population ages, those provinces with a higher share of the 65 plus age group have considerably more expenditures than those with younger populations. Differentiated age structures create differentiated needs that may increase pressure on the provinces with higher needs. The absence of a cost component that would account for the geographical dispersion and age of its population is the first item raised in a recent (June 2024)⁸³ and unprecedented court challenge to the equalization formula. **The Canadian system also does not consider costs related to public goods/bads**. For example, both Saskatchewan and Alberta have a share of greenhouse gas emissions that are more than three times as large as their population share, yet this has no impact on the transfers they receive. Canada provides a very useful example of how fiscal capacity can be measured and drawn upon, but its relevance may be limited for countries that have large differences in needs across subnational entities.

South Africa⁸⁴

Background. South Africa has a population of 63.2 million people and a land mass of 1.2 million km². The current intergovernmental system emerged with the political settlement that generated the 1996 Constitution. The system includes tensions between both unitary and federal interpretations of the Constitution. From a federal perspective, the Constitution incorporates 9 provinces and some 278 municipalities (8 metro areas, 44 districts, and 226 local municipalities) with an opportunity for a more democratic and developmental approach. From the unitary perspective, significant control

remains at the central level with many referring to the system as one of unitary decentralization or a highly centralized federal state. The Constitution defines the three spheres of government—national, provincial, and local—each as a distinct government, each accountable to its own elected legislature or council. There is also a strong emphasis on ‘cooperative governance’, adopted as a conscious antidote to the domination of one tier over another under apartheid and inspired by Canada’s experience. The Constitution sets out the authorities of each level of government and any matter not listed falls under the authority of the central government.

The national level plays a predominant role in defense, policing, criminal justice and the courts (Figure 4.10).

Provinces are responsible for providing labor-intensive social services—such as education and health—which are generally free at the point of delivery and need to be financed by large transfers. Provincial housing and transport infrastructure programs are targeted at eliminating backlogs and providing community infrastructure. These are also financed out of general taxation from the center. Local government is focused more on delivery of capital-intensive services that can be funded by user charges. Some 70 percent of public service employees are at the provincial level and centralized bargaining limits provincial fiscal autonomy. More generally, the center uses its authority to establish detailed standards of service delivery, leaving little room for provincial flexibility and autonomy.

At the same time, most taxes are collected by the center (Figure 4.10) and this generates significant vertical imbalances.

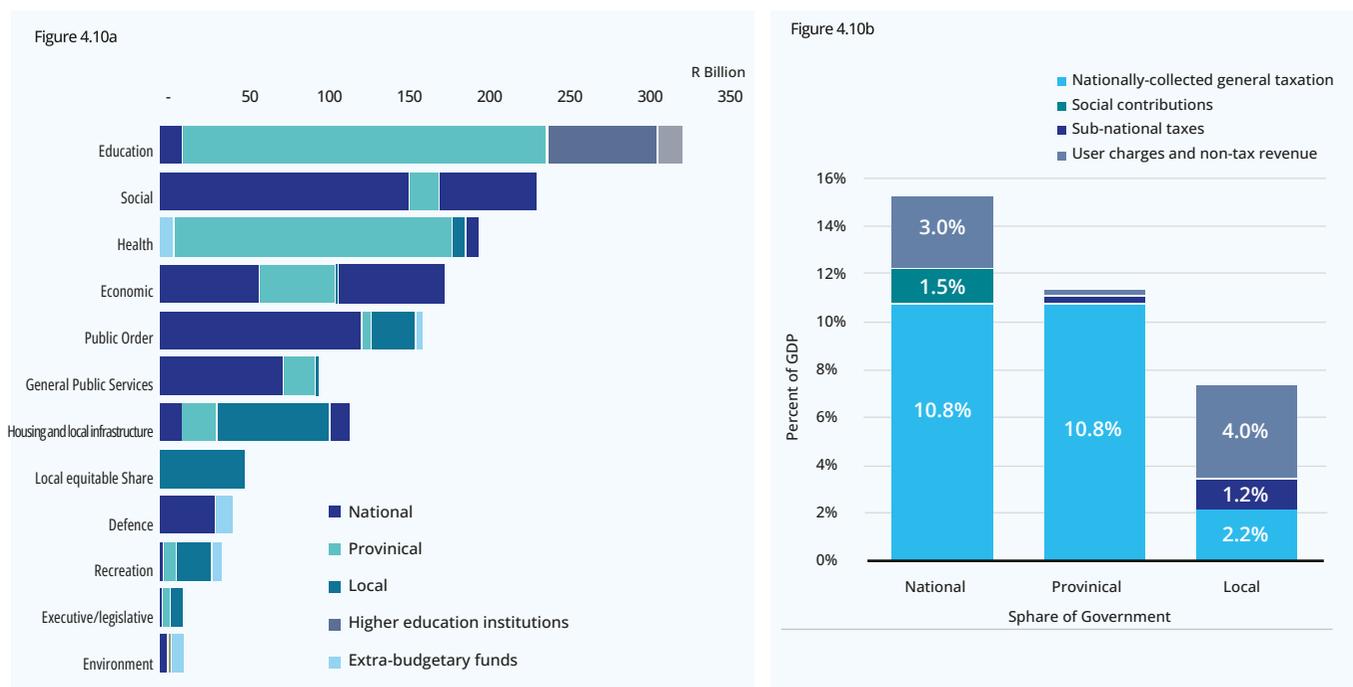
Provinces collect less than 1 percent of general government tax revenue, limited to gambling tax, vehicle licenses, and hospital charges. The Constitution allows surcharges on national tax bases, but this has never been activated by the provinces. As a result, provinces depend on transfers to fund 95 percent of their spending. Local government collects less than 5 percent of general government tax revenue, with property taxes covering about 20 percent of spending and user charges (benefit taxes) accounting for a large share of local government revenue. While subnational borrowing is allowed, it is carefully controlled by the center and is negligible.

82 This reflects the origin of the equalization in Canada wherein provinces controlled the tax bases prior to World War II and then chose to rent their income and succession tax fields to the federal government in exchange for federal payments to help assist in financing the costs of World War II. Equalization was born in Canada out of a need for equalizing revenues—not outcomes—while facilitating the tax autonomy and thus spending responsibility of the provinces.

83 <https://www.gov.nl.ca/releases/2024/jps/0626n08/>

84 This section is based on Sachs (2024).

Figure 4.10. General Government Spending by Function and Revenue Collection by Level, South Africa



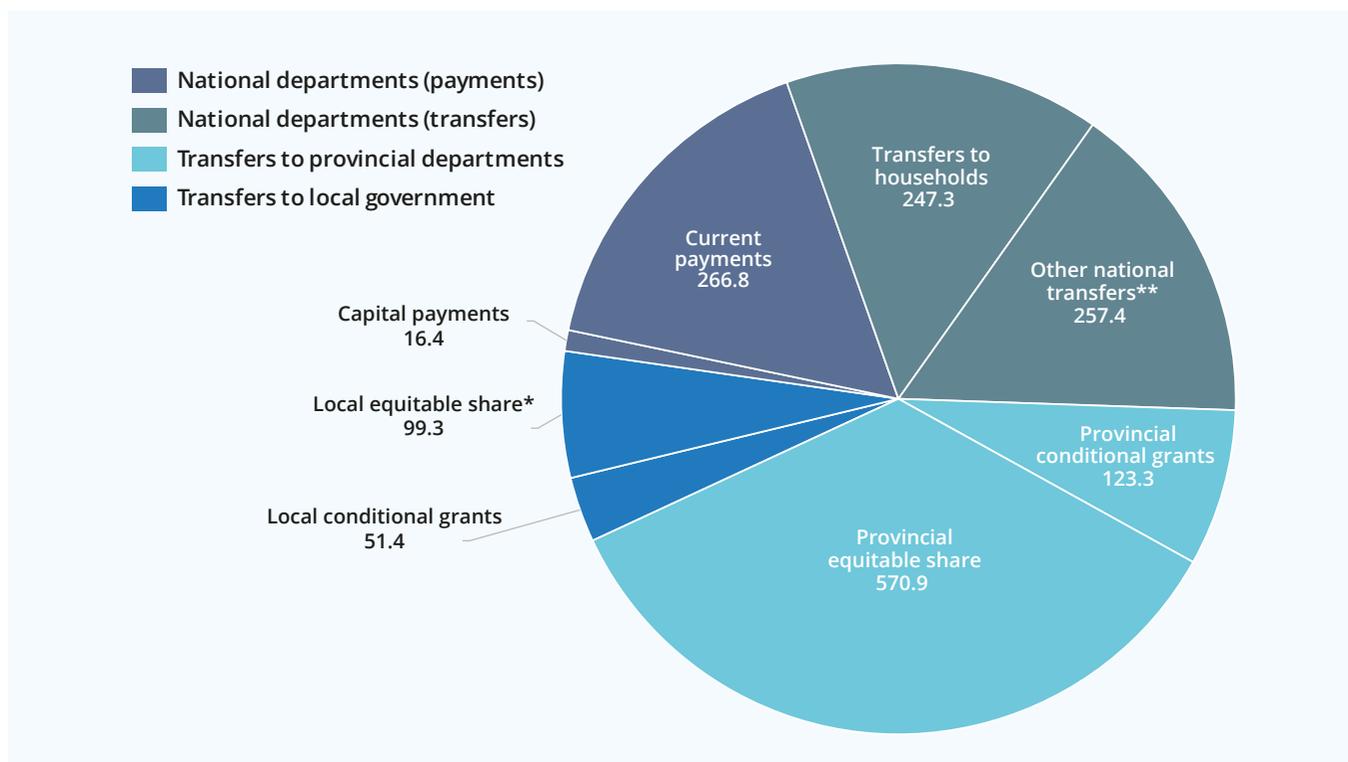
Source: Figure 4.10a - based on Stats SA: Financial Statistics of Consolidated General Government (2018/19) and National Treasury Budget data. Figure 4.10b - based on South African Reserve Bank: Government Financial Statistics (2019/20).

The equalization framework. As seen above, South Africa’s fiscal system is characterized by highly centralized revenue collection and allocation, but decentralized accountability for spending across provincial and local governments and a host of autonomous public agencies. The national government determines the overall spending envelope, allocates resources, controls expenditure, and decides on norms and standards for policy execution. After deducting debt service costs, a ‘Division of Revenue Act’ distributes resources between national, provincial, and local spheres of government. Parliament appropriates the national share (about 48 percent) in favor of each national ministry. National ministries act as standard setters and conduits for transfers to provinces, municipalities, national agencies, higher education institutions, and other public institutions. However, the bulk of funding to subnational governments is provided as unconditional block

grants. The provincial equitable share is intended to fund core services provided by provincial governments, and the local equitable share must ensure that municipalities are able to provide services, including distribution of electricity, water, and sanitation and solid waste removal. In 2023, the equitable share provided to provinces was 8.3 percent of GDP and conditional grants accounted for 1.7 percent of GDP amounting to 10 percent of GDP in total transfers to provinces (Figure 4.11).⁸⁵ The local equitable share for 2023 was about 1.3 percent of GDP, while conditional and other grants amounted to 0.9 percent of GDP. Procedurally, the Division of Revenue Act may only be considered by Parliament after extensive consultation with subnational governments. Also, the equitable share is not appropriated by Parliament to lower levels of government but is treated as direct charge against the national revenue fund.

85 Sachs 2024, 13.

Figure 4.11. National budget in South Africa, 2022/23, ZAR, billions



Source: Source: Based on National Treasury: Estimates of National Expenditure (2025)

Note: Data are from the audited outcome for the 2022/23 fiscal year. It excludes interest payments and capital transfers to state-owned companies.

* Includes the fuel-levy sharing grant, which is another unconditional grant

** Includes transfers to departmental agencies and accounts (ZAR 156 billion), higher education institutions (ZAR 52 billion), and public corporations and private enterprises (ZAR 42 billion).

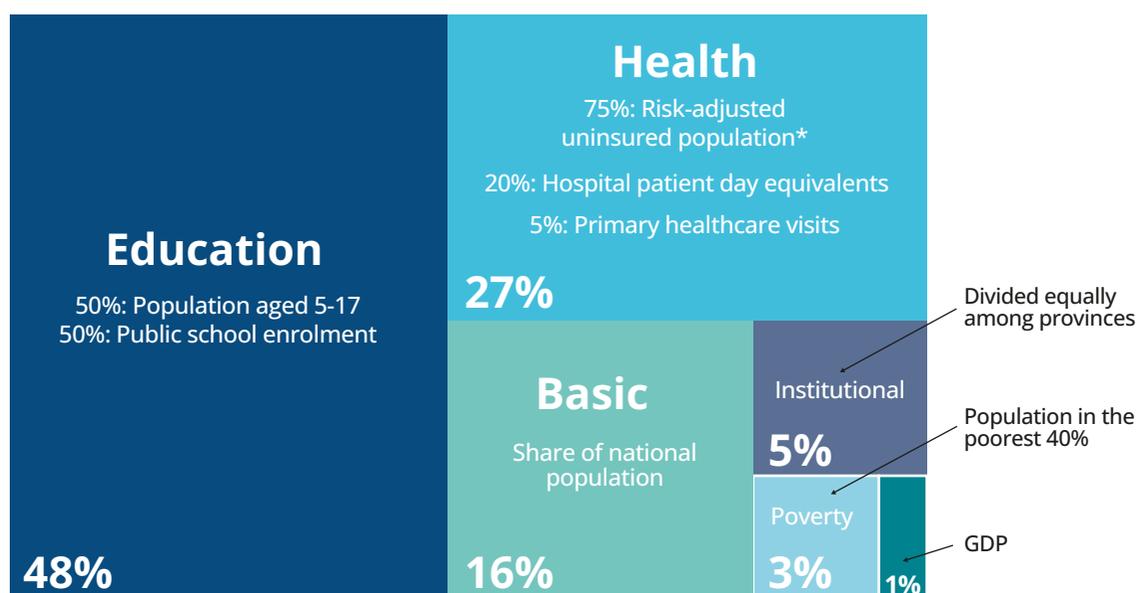
Regarding the pool of funds to finance subnational governments, while the Constitution mandates a pool of nationally raised revenue, in practice this has been interpreted very broadly.

Official documents make no distinction between tax and non-tax revenue in the definition of the pool and—perhaps uniquely among governments—also include the proceeds from national government borrowing used to fund public spending. From this broad definition of available funds, the national government subtracts interest payments and a small contingency reserve to arrive at the divisible pool. In other words, the pool of funds is identical to non-interest expenditure. This pool is then split between national, provincial, and local governments, based largely on convention and historical spending patterns, rather than any objective estimates of expenditure needs arising for assigned responsibilities.

With respect to division of the pool among provinces, the Finance and Fiscal Commission proposed a cost-norms approach. However, this approach was rejected by the Treasury as potentially having a negative impact on the ability to determine the pool of resources to be shared in line

with central funding constraints. The government did retain the use of weighted population estimates to inform the horizontal division of resources between the provinces with the basic principles underlying the split as equity and redistribution (in India the approach is based on a weighted formula). The formula thus sets out the relative demand for services, not the size of the budget envelope. Figure 4.12 sets out the components of the formula and their weights in determining the final share. The largest component is education (48 percent weight) which is based 50 percent on student population and 50 percent on public school enrollment. Health is the second largest component (27 percent), with most of the indicators based on the risk-adjusted uninsured population. The basic share (16 percent) is calculated based on the share of the population and a small poverty share calculates the share of poor people in each province, with poverty defined as those falling in the lowest quintile of the national income distribution. An institutional component is shared equally among provinces. The elements of the formula are based on official data sources, updated and published annually.

Figure 4.12. Components of the Provincial Equitable Share Formula in South Africa

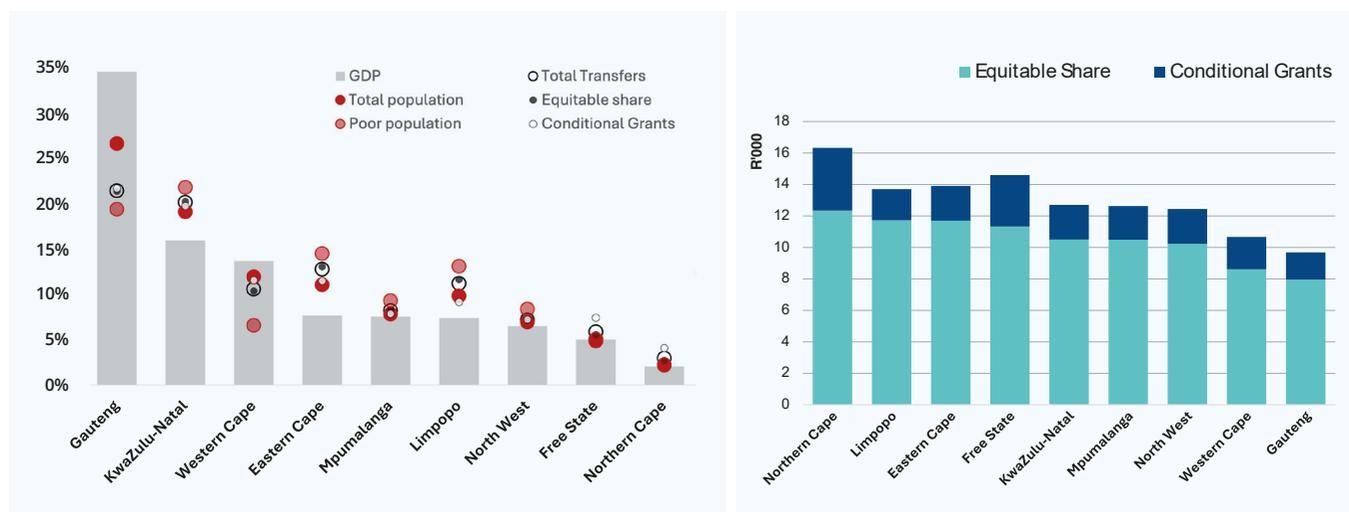


*Risk adjustment is based on an index that takes account of provincial indicators of age and sex (69%), fertility (3%), Premature mortality (12%), Sparsity (11%), multiple deprivation index (5%)

As a formula based largely on population, the funds should follow changing demand patterns as people move to different provinces. For example, in the last 30 years, South Africa has seen a large migration of school students toward more urban provinces where the quality of education is perceived to be higher. The equitable share has succeeded in reallocating resources across provinces to meet this shift in demand.

Overall, the provincial grant system has supported equalization across states and created convergence in per capita funding of the provinces (see Figure 4.13). Per capita transfers are relatively even and support those provinces with higher demands (based mostly on population). However, many have commented that the system has not served to incentivize better provincial service delivery performance as almost all mechanisms of control remain at the central level.

Figure 4.13. Provincial Shares of GDP, population and Transfers and Transfers per Capita, South Africa



Source: Based on National Treasury: Budget Review 2024 Annexure W1: Explanatory Memorandum to the Division of Revenue.

Key lessons. Although South Africa’s Constitution establishes a federal state, in practice it operates more like a unitary state with some federal features. Revenue collection is highly centralized with the provinces having almost no sources of their own taxation and the local governments relying on user charges for services delivered. While much of the responsibility for implementation and delivery of services is at provincial and local levels, the center maintains significant control of standards and norms of delivery. The constitution guarantees an equitable share of revenue to subnational governments, which is needed to help address the significant vertical imbalance that results from the system. **South Africa is unusual in that the divisible pool includes all revenue sources, including borrowing, rather than a specific set or share of revenue sources. This effectively breaks the link between expenditure requirements and revenue authority,** thus limiting the accountability of provincial governments to their citizens for effective services delivery. Also, the size of the divisible pool is a macro-policy decision taken by the central government, reflecting its view on the fiscal sustainability of the different levels of government. Typically, the choice of the vertical split is based on historical spending patterns and determines the provincial equitable share and the local equitable share.

South Africa uses a weighted formula to determine the allocation of the provincial equitable share across the provinces. This formula is not derivation-based but relies on a set of largely population driven indicators with education receiving the largest weight, then health, then basic share, and then a few smaller factors. **The formula seems to have led to a good degree of equity in the per capita funding** of the provinces, even though it has not incentivized better service delivery. One key area in which it seems to have been successful, and that is relevant for India, is that **it has been able to reflect shifts in the population from more rural to more urban areas, especially those moving to urban areas to seek better education.** This reflects the fact that the formula draws on official statistics—including population—that are updated

on an annual basis and therefore reflect changes in the population in a more gradual way.

Europe⁸⁶

European countries also have rich experience in addressing the detailed and complex issues related to intergovernmental fiscal transfers. As would be expected, the governmental structures of European countries vary and have shifted over time. The notion of subsidiarity is important in the European context and most European countries aim to have services delivered by the level of government closest to the population. European countries nevertheless confront the same issues as India in trying to assure that vertical imbalances are closed and that services are delivered at a standard level across the country, thereby closing horizontal gaps. What stands out in the variety of different European experiences is that to address vertical imbalances most countries use a mix of shared taxes and aim to support their own revenues at subnational levels. To address horizontal imbalances, most countries in Europe rely on measuring fiscal capacity and assessing expenditure needs and then drawing on them for some type of fiscal gap approach. While each country’s system is different, the European experience highlights the importance of being aware of fiscal capacity and in identifying expenditure needs for core services to be delivered by lower levels of government.

Table 4.6 provides basic information on how some European countries address closing vertical and horizontal gaps. Martinez-Vazquez (2024) provides more detail on the specific country’s experiences. For the purposes of this section, we will focus on broad comparisons across key countries. The number of regional/provincial/state administrative units in European countries is typically in the teens. The Netherlands has 12 provinces, France has 13 regional councils, and Germany has 16 federal states (Lander). Italy and Spain have a combination of general or common states and then provision for special regions, which are treated through separate systems. Italy has 15 ordinary regions and 5 special regions, whereas Spain has 15 regions in the general regime and 2 charter or special regions.

⁸⁶ This section draws on Martinez-Vazquez (2024).

Sweden has 21 regions and Switzerland 26 cantons. There is a wide range of structures and number of municipalities under the regional level, ranging from 101 departments and 35,416 municipalities in France to 290 municipalities in Sweden.

There are two elements to address vertical imbalances that need to be considered. The first is to consider providing regional or state governments with increased revenue autonomy. The second is introducing more revenue sharing. Low levels of tax autonomy (transfer dependency) have been shown in expensive empirical literature to lead to lower accountability to citizens, reduced expenditure efficiency, lower tax revenue effort, and laxer budgetary and fiscal discipline by subnational governments. Incentivizing better use of existing tax sources and efforts to enhance existing administrative capacity are also important, as opposed to an approach focused on introducing new tax handles.

To support revenue autonomy, most European governments provide some taxes exclusively to each level of government. In Germany, the exclusive taxes for the state level include the inheritance tax, the excise tax on beer, and the tax on property transactions.⁸⁷ In Italy, the tax system remains centralized with the exception of taxes on business activities and landfills.⁸⁸ In Spain, common regional governments have a set of devolved or 'ceded taxes' including the PIT (50 percent), a tax on

net wealth, and the inheritance and gift tax, and they also focus on environmental taxes.

Tax sharing is a key tool across Europe to help close vertical imbalances. It is most often done on a derivation basis, allowing regions a share of the revenue collected in their jurisdiction. Many countries make a clear separation in their transfer systems between the devolution objective (closing the vertical fiscal gap through revenue sharing) and the redistribution objective of addressing horizontal gaps among states or regions through an equalization mechanism. Both Brazil and India use a single instrument to achieve both objectives. The objective of devolution is to allow states/regions to keep some of the centrally collected tax revenues from their jurisdiction to incentivize the development of the state/region economy and to support a sense of national cohesion.

In Germany, the VAT, PIT, and corporate income tax (CIT) are shared across all three levels of government largely on a derivation basis.⁸⁹ In Italy, VAT is shared with the ordinary regions once a prescribed amount for the health equalization system is considered. In Spain, VAT (50 percent) and excise taxes (58 percent) are shared with the common regime regional governments and they are allocated according to their share in average final consumption. A portion of PIT and VAT are also shared with local governments.

87 Among the distinctive features in Germany's system is that the federal level sets bases and rates (with the approval by the Bundesrat (Senate) and the states are mostly responsible for collecting federal, state, and joint taxes.

88 See Martinez-Vazquez (2024) for a discussion of Italy's complex system of tax assignments to the regions.

89 See Martinez-Vazquez (2024) for details on the sharing rates for countries discussed in this paragraph.

Table 4.6. Comparative Experience Across European Countries

	France	Germany	Italy	Netherlands	Norway	Spain	Sweden	Switzerland
Structure	13 Regional Councils; 101 Departments (5 overseas); 35,416 Municipalities	16 Federal States (Länder); 11,000 municipalities; 3 city states (Berlin, Bremen, Hamburg)	15 Ordinary/common regions; 5 special regions-each special region has a different system	12 provinces, 342 municipalities; 21 water districts; 6 overseas counties and territories	19 counties, 428 municipalities	17 regional governments (Autonomous Communities), 15 in general regime and 2 charter/special regions	21 regions and 290 municipalities	26 cantons; 2130 communes
Addressing vertical imbalances								
i) By increasing subnational revenue autonomy		Tax autonomy supported by assignment of some taxes to specific levels: Federal-excises, insurance contracts; State: inheritance tax and excise on beer, property transactions; Local: trade tax and property tax	Constitution does not list or assign own taxes for each level of gov't principle of tax coordination; Ordinary regions have "devolved taxes" -tax on business activity and "autonomous own taxes" (landfills). Similar structure for municipalities plus tourist tax			Cede th taxes include PIT, tax on net wealth, inheritance and gift tax-tax divided into central government and regional government schedule (50% each). Regions can increase or reduce rates, apply credits. Environmental taxes. Local level has property tax, local business tax, vehicles tax		
ii) tax sharing	No tax sharing. National and local tax systems completely separate	VAT, PIT and CIT shared among all three levels	Regional surtax on PIT and VAT (after correction according to health equalization formula)			VAT and excise taxes. Also revenue sharing with large local government's (75,000+) and capital cities		
Addressing horizontal imbalances (State/Provincial Level)	General Grant for Current Expenditures (DGF). Supervised and allocated by the Local Finance Committee. Two components: (i) fixed grant (90 percent of funding) to all municipalities based on population; (ii) development grant with three sub-components: 1) Urban Solidarity Grant; 2) Rural Solidarity Grant; intermunicipal cooperation. 3) Grant to support. Also united grant in compensation for certain expenditures transferred by center.	Equalizes per capita revenue disparities across states. Since 2020, redistribution through VAT allocation through surcharges and deductions, surcharges and deductions fills up 63 percent of fiscal gap of poorer states. States with above average VAT revenues are contributors (implicit Robin Hood scheme). Standard of equalization is to 99.75% of the average per capita revenues of all states.	For common regions: Goal is to ensure basic level of benefits relating to civil and social entitlements. Two stage mechanism envisaged. 1st stage, fiscal gap approach Standard revenue includes devolved regional taxes, revenue sharing from regional surtax and regional share of VAT. Standard needs calculated according to standard costs for essential level of services. Second stage, equalization for non-essential functions as determined by region. 75 percent of gap closed. Delays in implementing full model (definition and calculation of standard costs).	General Purpose Grant Scheme. Equalizes revenue capacity and expenditure needs. Expenditure needs estimated based on long list of factors approximating cost differences.	Fiscal Gap approach. Based on fiscal capacity and expenditure needs. Expenditure needs based on a bottom up approach by costing standard services.	Variant of fiscal gap approach- calculating expenditure needs and fiscal capacity with a "Robin Hood" component. Expenditure needs for fundamental services calculated annually to reflect demand and cost factors to give adjusted population". Also calculation of non-fundamental services based on difference between historical amount granted for total expenditure needs and needs for fundamental public services. Fiscal capacity calculated as potential revenue collection with average level of fiscal effort. Transfers allocated in sub-funds. Fund for Fundamental Public services: difference b/w expenditures needs and 75% of calculated fiscal capacity. Global Sufficiency Fund: difference between non-essential expenditures and 25% of calculated fiscal capacity. Competitiveness Fund to avoid that richer regions end up with excessively less revenues than their fiscal capacity	Fiscal gap approach equalizing separately fiscal capacity and expenditure needs. Fiscal capacity estimated using a representative tax system based on tax rates utilized in past years. Expenditure needs calculated using sectoral expenditure regression models.	Two separate components to support fiscal capacity equalization and expenditure needs equalization. Fiscal capacity equalization ensures that each canton reaches 86.5% of the country's average tax potential. Fiscal capacity estimated using a representative tax system methodology. Expenditure needs, allocated considering geographic factors, socio-economic factors, and urban agglomeration.

With respect to bridging horizontal gaps, most European countries practice some version of the fiscal gap approach with the aim of equalizing revenue capacity and expenditures needs.

However, as would be expected, each country pursues its own approach based on its history and needs to balance a variety of economic and national cohesion factors. For many years, Germany used a 'Robin Hood' system, with redistribution among states and wealthier states paying into the system and poorer states receiving resources. A new system was adopted in 2020 which equalized per capita revenue capacities across states. The redistribution now takes place by the vertical VAT allocation to states by means of surcharges and deductions and there is an increase in funding that is also federally funded. The schedule to determine VAT surcharges is linear, filling up for poorer states (or skimming for richer states) to 63 percent of the fiscal gap. States with above-average per capita VAT revenues are still effectively contributing to the equalization scheme via VAT deductions (in what is now an implicit 'Robin Hood' scheme.)

Apart from France, most other countries in Europe draw on some variant of the fiscal gap approach. Revenue capacity is typically calculated either as the difference from the national average or by using a Representative Tax System for making the calculation. Table 4.6 also highlights the different

approaches to determining expenditure needs, from bottom-up costing as in Italy, the Netherlands, and Norway, to regression-based models used in Sweden.

Key lessons. While each system has its own complexities, a few common factors stand out across European systems. First, a specific **focus on revenue capacity helps governments understand where the economy is doing well or not and where particular efforts may be needed to improve administrative capacity for collecting taxes.** The calculation of revenue capacity provides important information that can help improve policies and results. Second, **drawing on detailed information regarding expenditure needs can also help the government understand where and how resources are well-used as opposed to not achieving their goals,** whether in education, health, or provision of other services at the subnational level. This is also important information for knowing how to improve programs and making them more efficient and better targeted. Finally, a key insight is that the approach to **equalization systems in the European context relies on readily available and quality data, collected on a regular basis.** The importance of this data as an input to the systems for allocating resources and effectively providing services cannot be underestimated.

Bibliography

Ahluwalia, Montek S. "Economic Reforms in India Since 1991: Has Gradualism Worked?" *Journal of Economic Perspectives* 16, no. 3 (2002a): 67-88.

Ahluwalia, Montek S. "India's Vulnerability to External Crisis: An Assessment." In *Macroeconomics and Monetary Policy: Issues for a Reforming Economy*, 183-214. 2002b.

Aldasoro, Iñaki, and Michael M. Seiferling. 2014. *Vertical Fiscal Imbalances and the Accumulation of Government Debt*. International Monetary Fund.

Alm, James, and Jorge Martinez-Vazquez. "On The Use of Budgetary Norms as a Tool for Fiscal Management." *Public Finance & Management* 2, no. 3 (2002).

Alm, James, and Jorge Martinez-Vazquez. "Institutions, Paradigms, and Tax Evasion in Developing and Transition Countries." In *Public Finance in Developing and Transitional Countries: Essays in Honor of Richard Bird*, edited by Jorge Martinez-Vazquez and James Alm, 146-178. Cheltenham, UK; Northampton, MA: Edward Elgar Publishing, 2003.

Anderson, George. 2009. *Fiscal Federalism: A Comparative Introduction*. Oxford University Press.

Badaik, S. 2017. "Impact of Fiscal Responsibility Legislations on State Finances in India." *Theoretical & Applied Economics* 24 (3).

Bahl, Roy, and Richard M. Bird. 2018. *Fiscal Decentralization and Local Finance in Developing Countries*. Edward Elgar Publishing.

Bahl, Roy, and Sally Wallace. "Intergovernmental Transfers: The Vertical Sharing Dimension." In *Fiscal Equalization: Challenges in the Design of Intergovernmental Transfers*, 205-249. Boston, MA: Springer US, 2007.

Bahl Jr, Roy W. 2020. "The Architecture of Intergovernmental Transfers: Principles and Practice in Low- and Middle-Income Countries." In *Intergovernmental Transfers in Federations*, 7-29. Edward Elgar Publishing.

Bhanumurthy, N. R., S. Bose, and S. Satija. 2019. "Fiscal Policy, Devolution, and Indian Economy." Working Paper No. 19/287.

Boadway, Robin, and Jean-François Tremblay. 2006. "A Theory of Fiscal Imbalance." *FinanzArchiv/Public Finance Analysis*: 1-27.

Buiter, Willem H., and Urjit R. Patel. 2010. "Fiscal Rules in India: Are They Effective?" Working Paper No. w15934, National Bureau of Economic Research.

Chakraborty, Pinaki. 2023. "Post-Covid Fiscal Recovery in India: Uncertainty, Growth, and Fiscal Prudence." In *India's Contemporary Macroeconomic Themes: Looking Beyond 2020*, 73-85. Singapore: Springer Nature Singapore.

Chakraborty, Pinaki. 2024. "Key Challenges Before the Sixteenth Finance Commission." *Forum for State Studies*, Kerala.

Chelliah, Raja J. 2005. "Malady of Continuing Fiscal Imbalance." *Economic and Political Weekly*, 3399-3404.

Dardanelli, Paolo, John Kincaid, Alan Fenna, André Kaiser, Alain Lecours, and A. K. Singh. 2015. "Conceptualizing, Measuring, and Mapping Dynamic De/Centralization in Federations." Paper presented at the 111th Annual Meeting of the American Political Science Association, San Francisco, September 3-6.

Eccleston, Richard, Richard Krever, and Helen Smith. 2017. "Fiscal Federalism in the Twenty-First Century." In *The Future of Federalism*, 15–46. Edward Elgar Publishing.

Eighth Finance Commission Report. Government of India.

Eleventh Finance Commission Report. Government of India.

Eyraud, Luc, and Lusine Lusinyan. "Vertical Fiscal Imbalances and Fiscal Performance in Advanced Economies." *Carnegie-Rochester-NYU Conference Series on Public Policy*, 2012.

Eyraud, Luc, and Lusine Lusinyan. "Vertical Fiscal Imbalances and Fiscal Performance in Advanced Economies." *Journal of Monetary Economics* 60, no. 5 (2013): 571-587.

Fifteenth Finance Commission Report. Government of India.

Fourteenth Finance Commission Report. Government of India.

Friedrich, Hayek. 1945. "The Use of Knowledge in Society." *American Economic Review* 35 (4): 519–36.

Government of India. "Union Government Budget, 2025–26."

Government of India, Ministry of Finance. "Union Government Budget, 1970–71, 1972–73...1995–96, 2000–2020." *Ministry of Finance Website Archives*.

Government of India, Ministry of Finance. "Indian Public Finance Statistics, 2017–18."

Gupta, C. D., and S. Mazumdar. 2017. "'Fiscal Federalism' in India Since 1991: Infirmities of Sound Finance Paradigm." *Economic and Political Weekly*: 55–60.

Hagen, Jürgen von, and Barry Eichengreen. 1996. "Federalism, Fiscal Restraints, and European Monetary Union." *American Economic Review* 86 (2): 134–38.

Hemming, Richard, Neven Mates, and Barry Potter. "Structure of Government." *Fiscal Federalism*: 527.

Herperger, D. 1991. *Distribution of Powers and Functions in Federal Systems*. Ottawa: Ministry of Supply and Services.

Jha, A. N. 2021. "Continuity with Change: Approach of the Fifteenth Finance Commission." *Economic and Political Weekly* 56 (33).

Kelkar, Vijay. 2019. "Towards India's New Fiscal Federalism." *Journal of Quantitative Economics* 17: 237–48.

Kumar, Sumit, and Baljit Kaur. "Intergovernmental Fiscal Transfers and Tax Collection of Indian States: Estimation from Panel Data Models." *Acta Universitatis Sapientiae, Economics and Business* 11, no. 1 (2023): 258-271.

Lakshmanasamy, T. "The Effect of Central Financial Transfers on Tax Efforts of State in India: A Panel Data Analysis." *Journal of International Money, Banking and Finance* 3, no. 1 (2022): 51-68.

Martinez-Vazquez, Jorge. 2020. "Emerging Trends in Fiscal Transfer Systems in Selected Federations: Implications for India." In *Intergovernmental Transfers in Federations*, 275–94. Edward Elgar Publishing.

Martinez-Vazquez, Jorge. 2024. "Intergovernmental Transfers Systems in the EU with a Special Focus on Equalization: Lessons for India." *Background Paper for XVIth Finance Commission & World Bank Conference, "International Experience in Fiscal Transfers," New Delhi, November 12, 2024*.

McCarten, W. J. 2001. "The Challenge of Fiscal Discipline in the Indian States." In *Decentralization and Hard Budget Constraints*, edited by Jonathan Rodden, Gunnar Eskeland, and Jennie Litvack, 249–286. Cambridge, MA: MIT Press.

Mendes, Marcos, Ricardo Miranda, and F. Blanco. 2008. *Transferências Intergovernamentais no Brasil: Diagnóstico e Proposta de Reforma*. Consultoria Legislativa do Senado Federal, Brasília.

Ministry of Statistics & Programme Implementation, National Accounts Division. *Gross State Domestic Product and GDP Data from 1950–2024*.

Mohan, R., and D. Shyjan. 2009. "Tax Devolution and Grant Distribution to States in India: Analysis and Roadmap for Alternatives." Working Paper 419, Centre for Development Studies, Kerala, India.

Mohammad, Zahir. 1972. *Public Expenditure and Income Distribution in India*. Associated Publishing House.

Muralidharan, Karthik. 2024. *Accelerating India's Development: A State-Led Roadmap for Effective Governance*. Penguin Random House India Private Limited.

Oates, Wallace E. 2006. "On the Theory and Practice of Fiscal Decentralization."

Panagariya, A., P. Chakraborty, and M. Govinda Rao. 2014. *State Level Reforms, Growth, and Development in Indian States*. Vol. 3. Oxford University Press.

Pattnaik, R. K. 2019. "Indian Fiscal Federalism: A Study of Factors Affecting Resource Position of the State Governments." *Journal of Social and Economic Development* 21 (2): 191–211.

Pinto, Brian, and Farah Zahir. 2004a. "India: Why Fiscal Adjustment Now." Policy Research Working Paper WPS 3230. Washington: World Bank (March).

Pinto, Brian, and Farah Zahir. 2004b. "Why Fiscal Adjustment Now." *Economic and Political Weekly*, 1039–48.

Pinto, Brian, Farah Zahir, and Gaobo Pang. 2006. "From Rising Debt to Rising Growth in India: Microeconomic Dominance?" In *India - Inclusive Growth and Service Delivery: Building on India's Success*, Development Policy Review, The World Bank, Washington D.C.

Pinto, Brian, Farah Zahir, and Gaobo Pang. 2007. "Fiscal Policy for Growth in India." In *Job Creation and Poverty Reduction in India - Towards Rapid and Sustained Growth*, edited by Sadiq Ahmed. SAGE Publications India Pvt. Ltd, New Delhi, India.

Qian, Yingyi, and Barry R. Weingast. 1997. "Federalism as a Commitment to Preserving Market Incentives." *Journal of Economic Perspectives* 11 (4): 83–92.

Rajaraman, Indira. 2018. "Continuity and Change in Indian Fiscal Federalism." In *Understanding Contemporary Indian Federalism*, 66–84. Routledge.

Rangarajan, Chakravarthy, and D. K. Srivastava. 2008. "Reforming India's Fiscal Transfer System: Resolving Vertical and Horizontal Imbalances." *Economic and Political Weekly*: 47-60.

Rangarajan, C. 2006. "Fiscal Federalism: Some Current Concerns." In *India in a Globalizing World: Some Aspects of Macroeconomy, Agriculture and Poverty*, edited by R. Radhakrishna, S. K. Rao, S. Mahendra Dev, and K. Subbarao, 115–23. Academic Foundation with Centre for Economic and Social Studies.

Rangarajan, C., and D. K. Srivastava. 2011. "Federalism and Fiscal Transfers in India." OUP Catalogue.

Rangarajan, Chakravarthy, and Abha Prasad. 2012. "Managing State Debt and Ensuring Solvency: The Indian Experience." World Bank Policy Research Working Paper 6039.

Rangarajan, C., and D. K. Srivastava. 2024. "Federalism and Fiscal Transfers in India."

Rao, M. Govinda. 2015. "Political Economy of Government Finance in India." *India Review* 14 (1): 58-72.

- Rao, M. Govinda. 2017. *Central Transfers to States in India: Rewarding Performance while Ensuring Equity*. Final report submitted to NITI Aayog.
- Rao, M. Govinda. 2019. "Redesigning the Fiscal Transfer System in India." *Economic and Political Weekly* 54 (31): 52–60.
- Rao, M. G., and N. Singh. 2007. "The Political Economy of India's Fiscal Federal System and Its Reform." *Publius: The Journal of Federalism* 37 (1): 26–44.
- Reddy, Y. V., and G. R. Reddy. 2018. *Indian Fiscal Federalism*. Oxford University Press.
- Report of the Technical Group on Population Projections. November 2019. Ministry of Health and Family Welfare, Government of India.
- Reserve Bank of India. 2011. *Study of State Budgets 2010–2011*. Mumbai.
- Reserve Bank of India. 2023. *Handbook of Statistics 2022–23*. Mumbai.
- Reserve Bank of India. 2023. *Study of State Budgets 2022–2023*. Mumbai.
- Reserve Bank of India. 2024. *Study of State Budgets 2023–2024*. Mumbai.
- Rollings, Jonathan. 2024. "Australia's Approach to Fiscal Equalization." Background Paper for XVIth Finance Commission & World Bank Conference, "International Experience in Fiscal Transfers," New Delhi, November 12, 2024.
- Ruggeri, G. C., and R. Howard. 2001. *On the Concept and Measurement of Vertical Fiscal Imbalances*. Regina, SK: Saskatchewan Institute of Public Policy.
- Sachs, Michael. 2024. "Intergovernmental Transfers in South Africa." Background Paper for XVIth Finance Commission & World Bank Conference, "International Experience in Fiscal Transfers," New Delhi, November 12, 2024.
- Seventh Finance Commission Report. Government of India.
- Sharma, Chanchal Kumar, and Wilfried Swenden. 2018. "Continuity and Change in Contemporary Indian Federalism." In *Understanding Contemporary Indian Federalism*, 1–13. Routledge.
- Sharma, M. R. 2023. "Locating Contemporary Indian Federalism: Contextualizing the Trends of Centralization with Changing Dynamics." *South Asian Survey* 30 (1): 45–71.
- Singh, N. 2017. "Holding India Together: The Role of Institutions of Federalism." SSRN. <https://ssrn.com/abstract=3037263>.
- Singh, N. K. 2020. "Fiscal Federalism in India." *OECD Fiscal Federalism Studies Local Public Finance and Capacity Building in Asia: Issues and Challenges*, 193.
- Sixth Finance Commission Report. Government of India.
- Srivastava, D. K., and B. Rao. 2009. "Review of Trends in Fiscal Transfers in India." Madras School of Economics.
- Tenth Finance Commission Report. Government of India.
- Tillin, L. 2019. *Indian Federalism*. Oxford University Press.
- Tillin, Louise. 2021. "Building a National Economy: Origins of Centralized Federalism in India." *Publius: The Journal of Federalism* 51 (2): 161–85.

Tripathi, P. K., and T. N. Grigoriadis. 2023. "State Capacity & the Soft Budget Constraint: Fiscal Federalism, Indian Style." *Asia and the Global Economy* 3 (2): 100058.

Tufani, Claudia Mayara, and Deborah Wetzel. 2024. "Addressing Equalization Through Fiscal Transfers in Brazil." Background Paper for XVIth Finance Commission & World Bank Conference, "International Experience in Fiscal Transfers," New Delhi, November 12, 2024.

Vaillancourt, François, and Marcelin Joanis. 2024. "Nature and Impact of Canadian Federal-Provincial Transfers: Report for the 16th Indian Finance Commission." Background Paper for XVIth Finance Commission & World Bank Conference, "International Experience in Fiscal Transfers," New Delhi, November 12, 2024.

Watts, Ronald L. 2008. *Comparing Federal Systems*. 3rd ed. Montreal & Kingston: McGill-Queen's University Press.

Weingast, Barry R. 1995. "The Economic Role of Political Institutions: Market-Preserving Federalism and Economic Development." *The Journal of Law, Economics, and Organization* 11 (1): 1-31.

World Bank. 2022. *Diagnostic and Reform Options for the System of Intergovernmental Fiscal Transfers to Brazilian States*. Washington, DC: World Bank.

Wray, L. Randall. 2019. "Indian Fiscal Federalism at the Crossroads: Some Reflections." Working Paper No. 937.

Yilmaz, Serdar, and Farah Zahir, eds. 2020. *Intergovernmental Transfers in Federations*. Edward Elgar Publishing.

Zahir, Farah. 2020. "Evolving Role of the Finance Commissions in India in the Last 25 Years." In *Intergovernmental Transfers in Federations*, 248-74. Edward Elgar Publishing.

