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Intergovernmental Transfers and Fiscal Equalization in India: Trends, Challenges, and Reform Options

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Abstract

This paper examines the evolution, structure, and effectiveness of intergovernmental transfers and fiscal equalization mechanisms in India within a comparative federal framework. Drawing on a comprehensive analytical report prepared for the Sixteenth Finance Commission, the study evaluates the extent to which India's fiscal transfer system has addressed both vertical fiscal imbalances between the union and states and horizontal disparities across states. It analyzes long-term trends in revenue assignment, expenditure responsibilities, and the design of Finance Commission transfers, while assessing their equalization impact using descriptive and econometric evidence covering the Tenth to Fifteenth Finance Commissions. The findings suggest that while India's system has historically played a significant equalizing role—particularly during the Eleventh Finance Commission—its effectiveness has moderated over time due to evolving policy priorities, fiscal constraints, and institutional changes. Vertical imbalances remain substantial, with states continuing to account for a larger share of public expenditure relative to their revenue-raising capacity. Horizontal equalization has been achieved to varying degrees, with distribution formulas balancing equity, need, and efficiency, though often without a clearly defined equalization objective. The paper situates India's experience within international practices in countries such as Australia, Canada, Brazil, South Africa, and selected European systems. It highlights key lessons on the importance of defining equalization objectives, improving data systems, and adopting more transparent and norm-based approaches to measuring fiscal gaps. The analysis concludes with policy options for reform, including the potential transition toward a fiscal gap-based equalization system, improved incentive structures for revenue mobilization, and greater clarity in the design of intergovernmental transfer mechanisms.

Keywords: fiscal federalism, intergovernmental transfers, vertical fiscal imbalance, horizontal fiscal imbalance, fiscal equalization, finance commission, India

JEL Codes: H30, H71, H72, H77

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This paper is an abridged version of a technical report prepared for the Sixteenth Finance Commission of India. The full report, *Intergovernmental Transfers and Fiscal Equalization*, is available on the Sixteenth Finance Commission of India website: fincomindia.nic.in/commission-reports-sixteenth. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily reflect the views of the organizations with which the authors are affiliated, including the World Bank, its Board of Executive Directors, or the governments they represent.

I. 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 union[2] 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 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.

[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.

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 the paper is to consider whether the transfers of the Finance Commission have supported equalization over time. Section II 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. *Section III* 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, *Section IV* 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 paper 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.

II. Vertical Fiscal Imbalances

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 capacity[6] 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

[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).

[6] '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.

horizontal fiscal imbalances (HFIs). HFIs will be addressed in the next chapter.[7] 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'.[8] 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.[9] 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.[10] 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.[11] Few countries attempt to formalize what they mean by 'normal' tax effort or 'minimum' service provision.[12] 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 consideration when addressing VFIs is not the presence of transfers per se but rather the appropriate magnitude and composition of such transfers.[13]

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[7] 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.

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

[9] Aldasoro and Seiferling 2014.

[10] See Boadway and Tremblay 2005; Oates 2006; and Ruggeri and Howard 2001.

[11] Bahl and Bird 2018, 284.

[12] 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).

[13] 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.

VFI Definitions across Successive Finance Commissions

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.

Table 2.1. Definition of VFI over Various Finance Commissions (8th–15th Finance Commission)

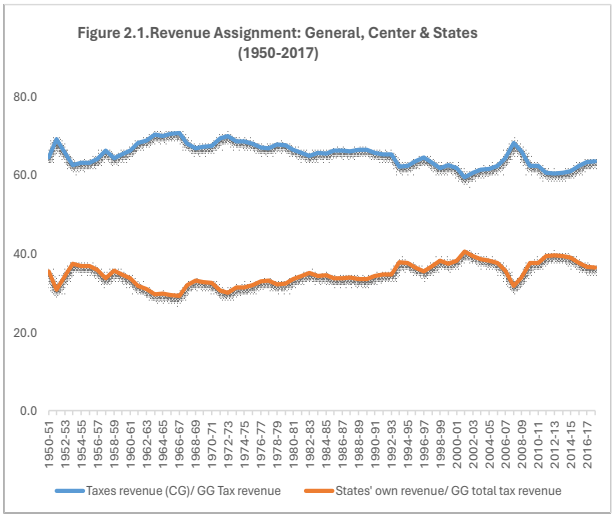
Finance Commission (Period)	Definition of VFI
8th Finance Commission (1984–1989)	VFI refers to the mismatch between the revenue-raising capacities and expenditure responsibilities of different levels of government. The central government typically has more revenue-raising powers, while the states have greater expenditure responsibilities.
9th 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.
10th 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. *The Commission recommended increasing the share of states in the divisible pool of central taxes to address this imbalance.*
11th 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. *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.*
12th 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.
13th 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. *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.*
14th 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. *The Commission recommended increasing the share of states in the divisible pool of central taxes to address this imbalance.*
15th 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.*

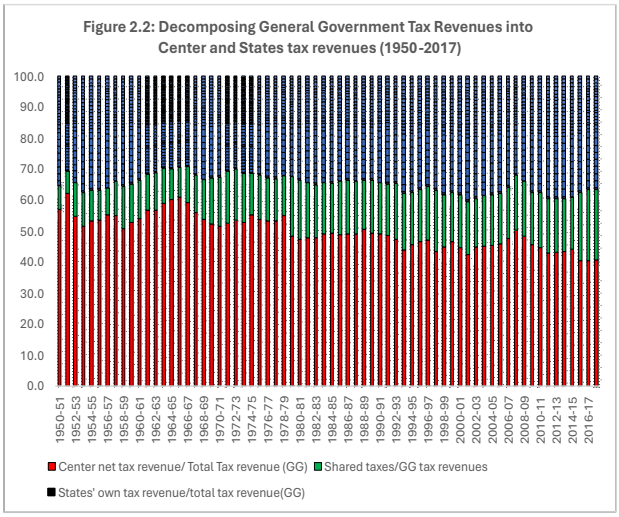
Source: Various Finance Commission Reports: -Fifteenth Finance Commission Report, Vol. I, (pg. 150); Fourteenth, Chapter 2 (pgs. 16–17); Thirteenth, Chapter 8; Twelfth, Chapter 2 (pgs., 9, 11,18); Eleventh, Chapter 2 (pg. 15); First Report of Ninth Finance Commission (pg. 3, section 1.11).

Note: VFI definition refers to normatively assessed expenditure responsibilities.

The Genesis and Policy Approaches to VFIs: An Overview[14]

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.[15]





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.

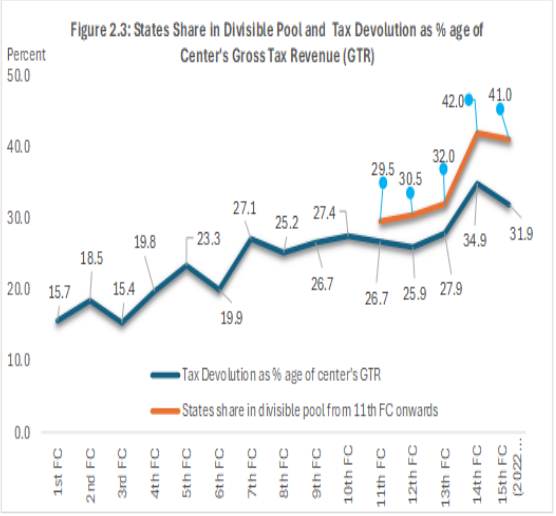
Despite this stability, over the long term, the data indicates that the states' share as percentage of the center's gross tax revenues has increased. Tax revenue devolved to states as a percentage of the gross tax revenue of the center increased from 15.7 percent during the First Finance Commission to

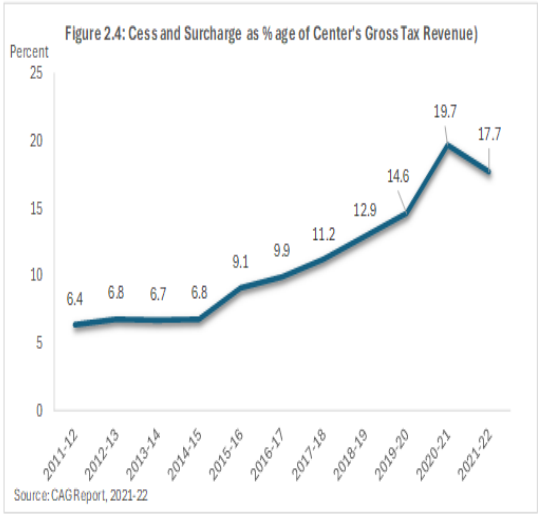
[14] The results and findings of this section are based on the available fiscal data provided in the Reserve Bank of India (RBI) State Finance Bulletin, Indian Public Finance Statistics. It is based on outcome data that is consistent over time. The findings are based on operational definitions rather 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.

[15] See details in Rangarajan and Srivastav (2011), Twelfth Finance Commission Report.

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 percent, increasing to 19.7 percent in 2020–21 and remained in double digits subsequently (Figure 2.4).

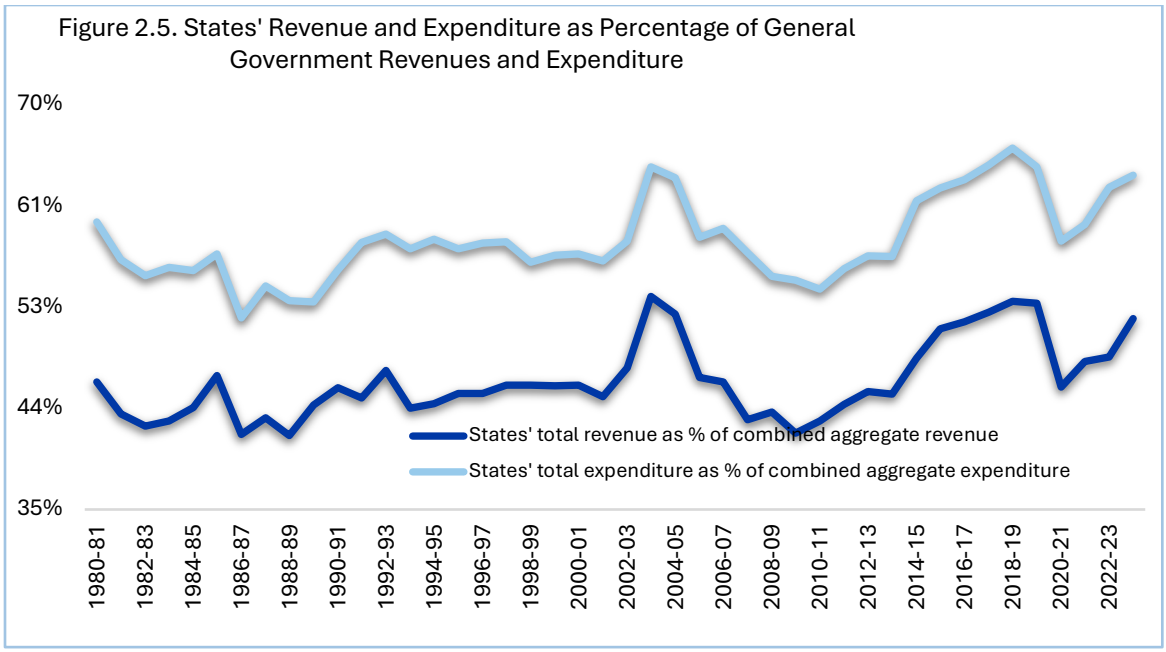




Source: Various Finance Commission Reports, Government of India (GoI) Budget Documents.

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.

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. *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).



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;[16] (iii) discretionary or conditional transfers;[17] and (iv) gross loans from the center.[18] 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

[16] 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.

[17] 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.

[18] 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.

called current transfers whereas the loans from the center[19] fall into the category of capital transfers.[20]

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] 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.

[20] 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.[21]

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.[22]

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.

Table 2.3. Vertical Shares under the Finance Commissions (1st–15th 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)	

[21] 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.

[22] Srivastava and Rao 2009.

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 (%)
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.

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.[23] 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).

[23] 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.	Data requirements: Accurate measurement requires detailed data on revenue capacity and expenditure needs, which may not always be available in countries. Subjectivity: Determining what constitutes a 'normal' revenue effort and a 'minimum' level of services can be subjective and vary across regions. Dynamic factors: Economic conditions and policy changes can affect both revenue capacity and expenditure needs, making the gap a moving target.
Operational VFI Definitions			
Eyraud and Lusinyan (2012) – traditional definition	Defined as the proportion of subnational government expenditure that is not financed through subnational government own revenues.	• 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.	• 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 affect 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 policy makers 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:

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

where,

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

$\widetilde{E}_i$ = 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

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

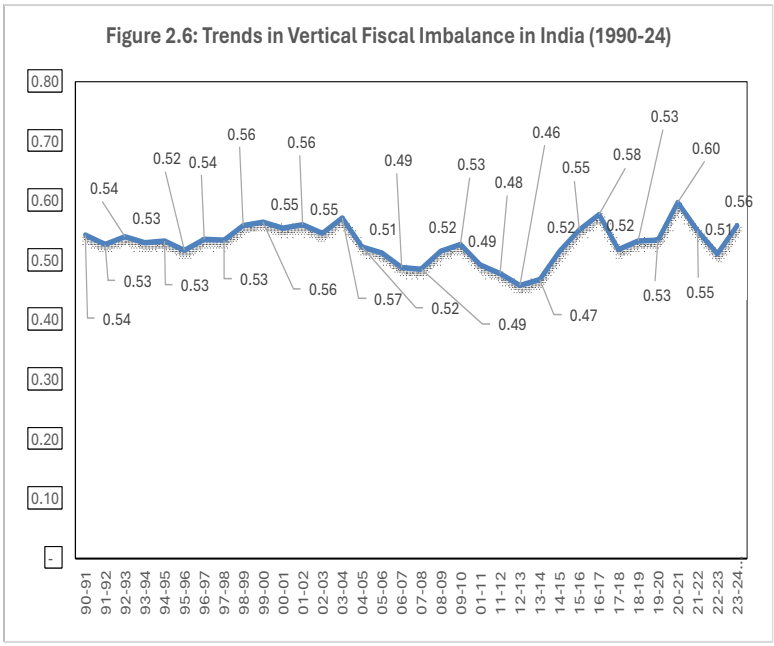
where the affordability parameter[24] is the percentage of the financing gap that the federal or central government commits to cover with the transfer system, and CR is the total amount of revenue raised by the central government from current sources.

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 <u>not</u> 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.

[24] 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).



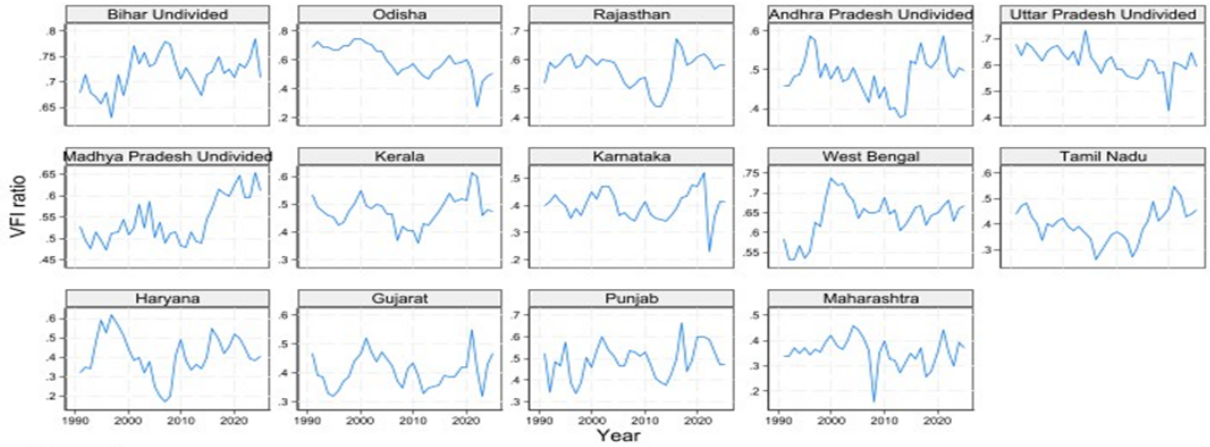
$$VFI = 1 - \left(\frac{\text{States' own revenue}}{\text{States' own expenditure}} \right)$$

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

Extending the same definition to examine state-wise[25] *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.

[25] 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.

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



In the mid-90s, Pinto and Zahir (2004a)[26] 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.[27] 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 FRBMA[28] 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

[26] Pinto, B., and F. Zahir. 2004. "India: Why Fiscal Adjustment Now?" World Bank Working Paper No. 3230.

[27] 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.

[28] 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.

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).[29]

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 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.[30]

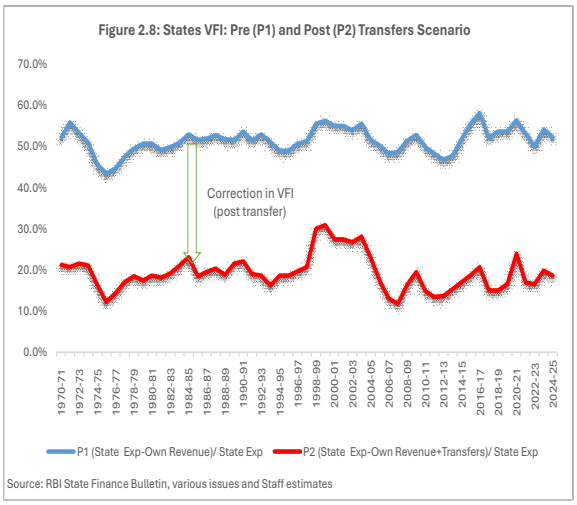
As with other measures, the P1 indicator suggests that more than half of state expenditures are not covered by states' own revenues. P2 indicates that while a large portion of the gap is covered by transfers, a considerable portion of expenditure remains unfinanced, and state governments borrowed or 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)

[29] 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.

[30] 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.

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.[31]



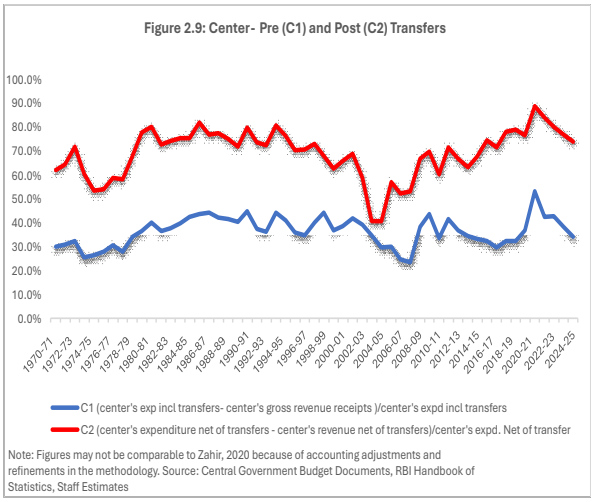


Table 2.5 shows these indicators broken down by year for the different Finance Commission periods and phases since the Sixth Finance Commission. The ratios help understand the degree of correction that occurs in the states through intergovernmental transfers and the resultant contraction in the central 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

[31] 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.

the Thirteenth Finance Commission period.[32] 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.[33] Implementation of the state goods and services tax (SGST) significantly contributed to this increase. Before 2016–17, the 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,[34] 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.

[32] 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.

[33] RBI (Reserve Bank of India). 2024. "Revenue Dynamics and Fiscal Capacity of Indian States", Chapter 3, pp. 28–34.

[34] 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.

Table 2.5. Vertical Fiscal Imbalances in India,[1] 6th–15th 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: [1] 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.

III. Horizontal Fiscal Imbalances and Fiscal Equalization

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.

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.[35] However, this frequently gets confused with efforts to help subnational governments attain similar levels of per capita income or to help promote lagging regions.

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:

1. *Need* – financial resources a state would need to deliver its assigned services. In India, this measure has been proxied by population and from the Tenth Finance Commission onward, by area.
2. *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.
3. *Efficiency* – measured as some form of fiscal efficiency such as tax effort and has been measured in different ways over the different Finance Commissions.
4. *Fiscal disability* – considered in recent Finance Commissions, reflecting the opportunity cost of not using a resource such as forests.

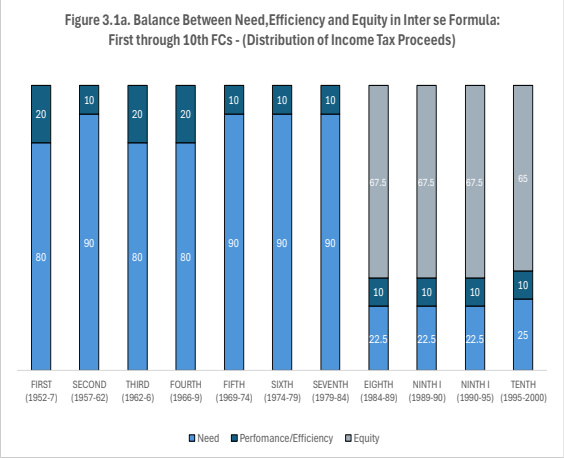
The first through the Seventh Finance Commissions (1952–84): During the first phase of central planning, the Finance Commissions relied on distribution criteria that were distinct for income tax and union excise duties. Income tax sharing was mandatory, while sharing excise duties was at the discretion of the center. Horizontal distribution proceeds from income and excise taxes across states were largely based on population[36] 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).[37] 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

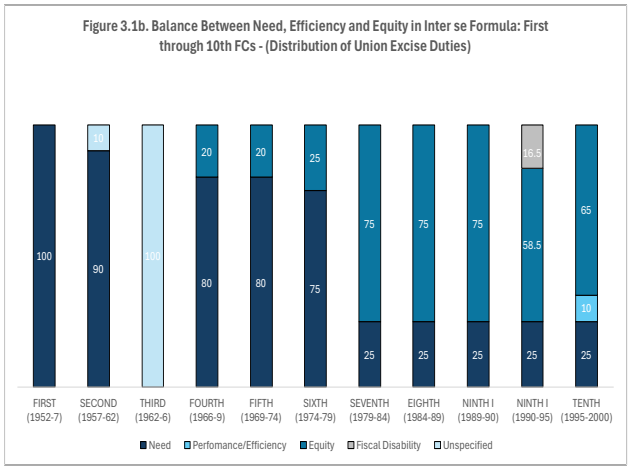
[35] Bahl and Bird (2018, 284). The literature reinforces that it is critical to clearly define the objective of what is being equalized for effective horizontal equalization systems.

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

[37] See Table 3.6 for the detailed formulas across the Finance Commissions.

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.





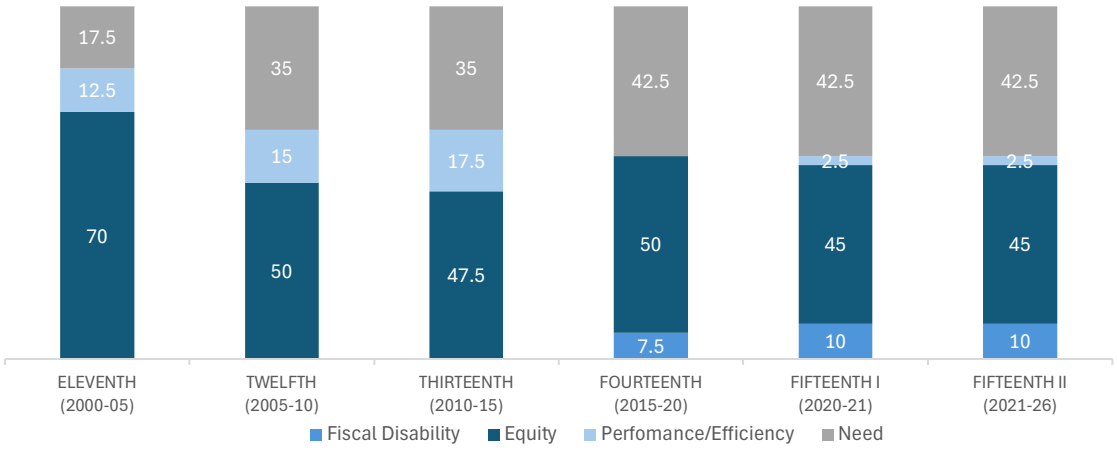
From the Eighth to the Tenth Finance Commissions (1984–2000)—a phase of addressing fiscal crisis and moving toward convergence—the formulas for inter se distribution of tax shares across states signal a significant shift from the prior phase. As seen in Figure 3.1a and 1b, the goal was to emphasize equity 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 Eighth 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 Eleventh 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 Eleventh 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 Thirteenth 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 Twelfth Finance Commission and fell to 47.5 percent under the Thirteenth Finance Commission.[38] Under the Twelfth Finance Commission, performance/efficiency focused on tax effort and fiscal discipline (7.5 percent weight each) and in the Thirteenth Finance Commission, efficiency focused on a fiscal discipline index with a weight of 17.5.[39]

Figure 3.2. Balance between Need, Efficiency, and Equity in Inter Se Formula: 11th through 15th Finance Commissions



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

[38] 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.

[39] 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 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 Fourteenth 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 Fifteenth 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.

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.

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).

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 Eleventh 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 Eighth 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).[40] 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: 8th–10th Finance Commission

Type of State	State	8th Finance Commission 1984–1989	9th Finance Commission 1990–1995	10th 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

[40] 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.

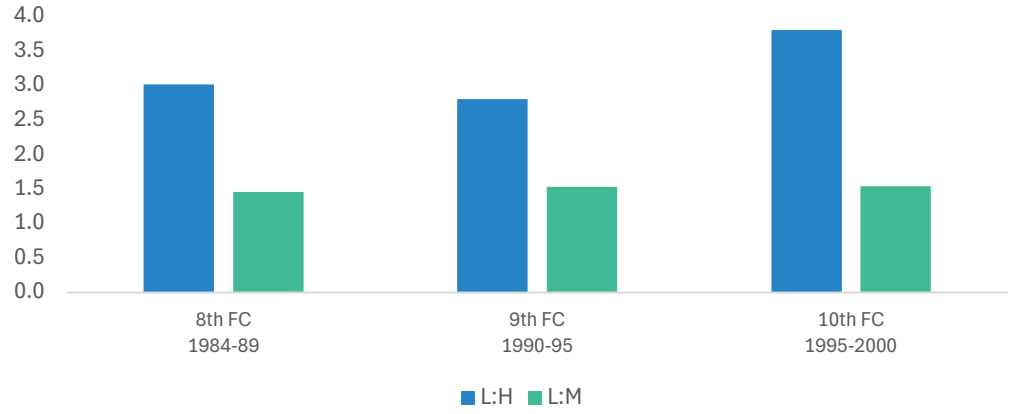
TOTAL		32.291	30.987	31.787
Low income	Bihar (Undivided)	12.08	12.314	12.861
Low income	Madhya Pradesh (Undivided)	8.378	8.000	8.290
Low income	Odisha	4.202	4.054	4.495
Low income	Rajasthan	4.545	4.773	5.551
Low income	Uttar Pradesh (Undivided)	17.907	18.326	17.811
TOTAL		47.112	47.467	49.008
Note: Special Category		4.978	4.634	6.334
GRAND TOTAL		100	100	100

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

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 8th–10th Finance Commissions: Income Tax

Low-income States: High-income States
Low-income States: Middle-income States



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,[41] which may explain the increase in shares to the lower-income states during this period.

[41] See Reddy and Reddy (2019, 84).

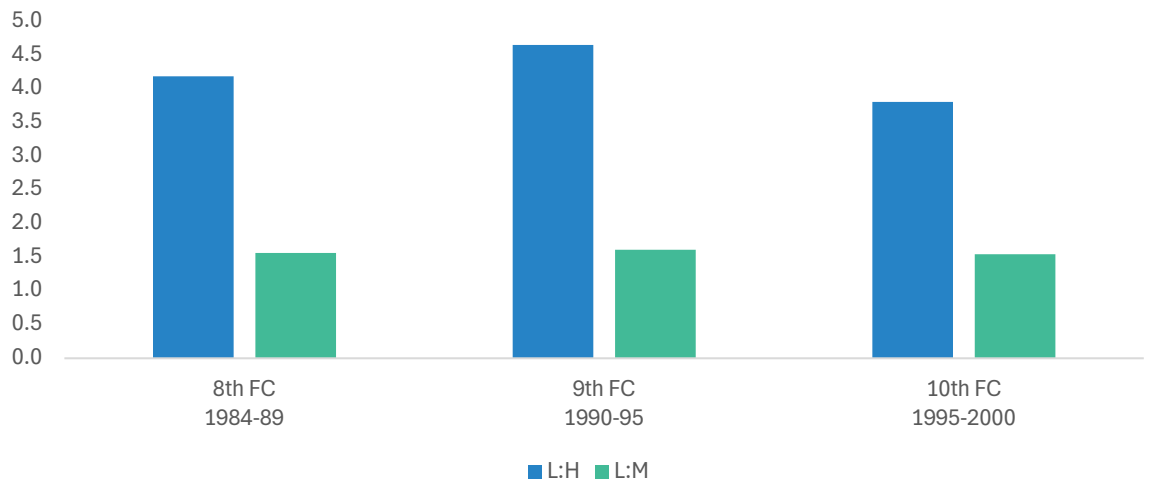
Table 3.2 State (Inter Se) Shares in Union Excise Duties: Eighth Finance Commission to Tenth Finance Commission

Type of State	State	8th Finance Commission 1984–1989	9th Finance Commission 1990–1995	10th 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: 8–10th Finance Commission Reports, Finance Commission India.

Figure 3.4. Ratios of Inter Se Shares 8th–10th Finance Commission: Union Excise Duty

Low-income States: High-income States (L:H)
Low-income States: Middle-income States (L:M)



Source: 8–10th 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 Fifteenth 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 Eleventh 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: 11th–15th Finance Commission

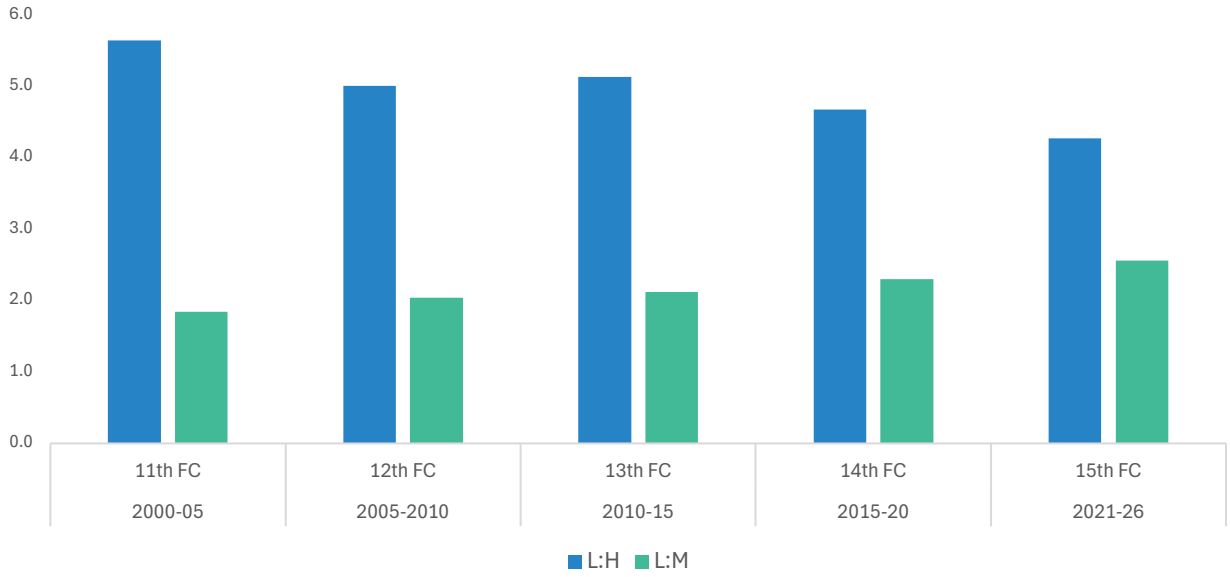
Type of State	State	11th Finance Commission 2000–2005	12th Finance Commission 2005–2010	13th Finance Commission 2010–2015	14th Finance Commission 2015–2020	15th Finance Commission 2021–2026
High Income	Gujarat	2.821	3.569	3.041	3.084	3.478
High Income	Haryana	0.944	1.075	1.048	1.084	1.093
High Income	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

Type of State	State	11th Finance Commission 2000–2005	12th Finance Commission 2005–2010	13th Finance Commission 2010–2015	14th Finance Commission 2015–2020	15th Finance Commission 2021–2026
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 11th–15th Finance Commission

Low-income States: High-income States
Low-income States: Middle-income States



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

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). Since 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

	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

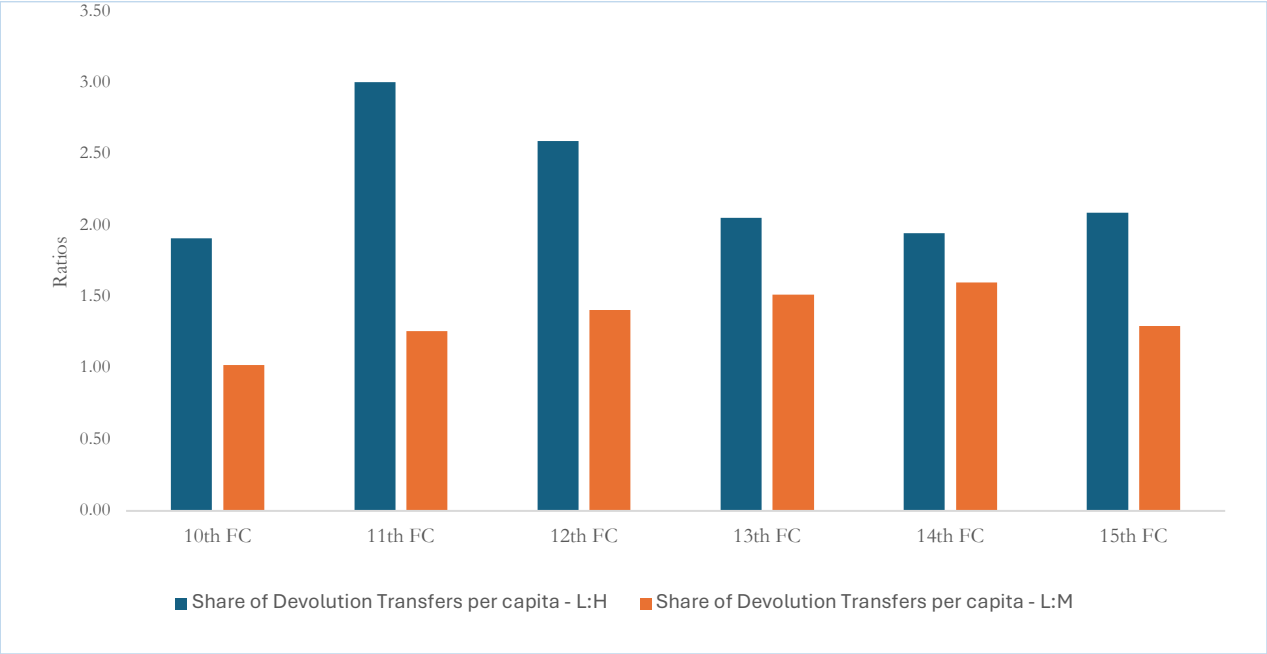
Source: Based on GSDP current prices (2011–2012), previous years 1993–1994, and 2004–2005 base as provided by Ministry of Statistics and Programme Implementation (MoSPI).

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 is 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

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



Source: RBI State Finance Bulletin, MoSPI, Staff Estimates

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: PFCF= Per capita FC transfers and PCDEV= Per capita 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 Thirteenth 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 2011population 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.

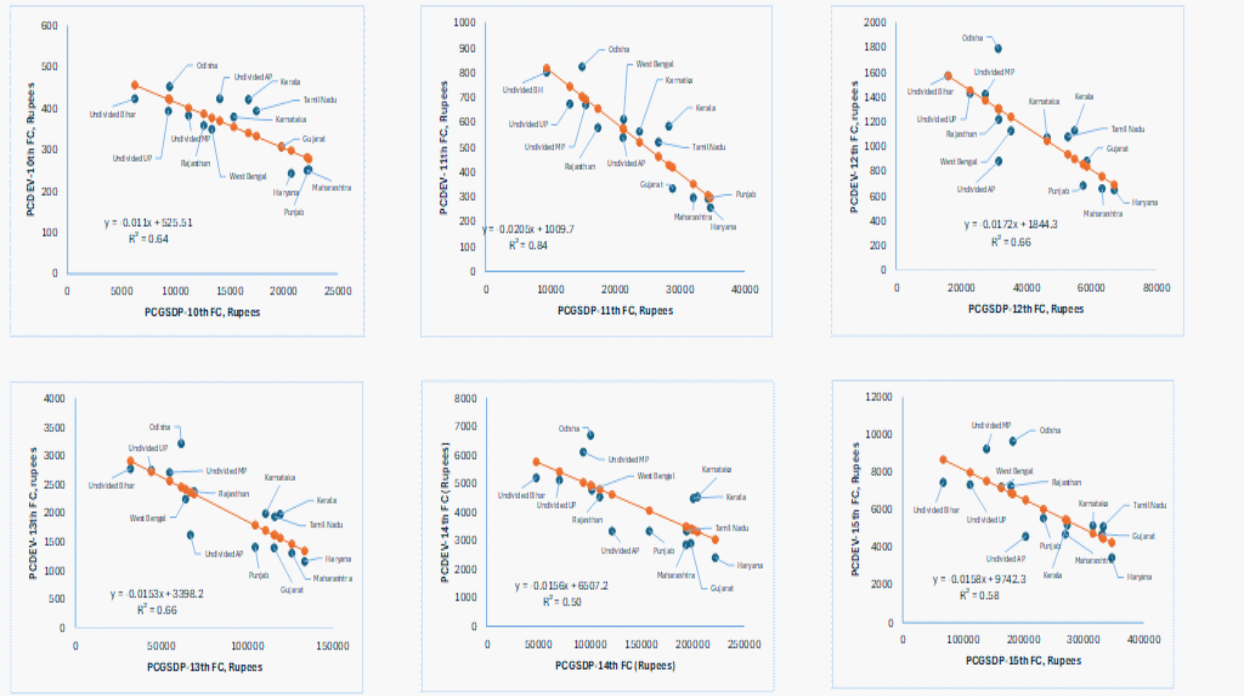
Regression Analysis

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 R^2 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 R^2 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



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

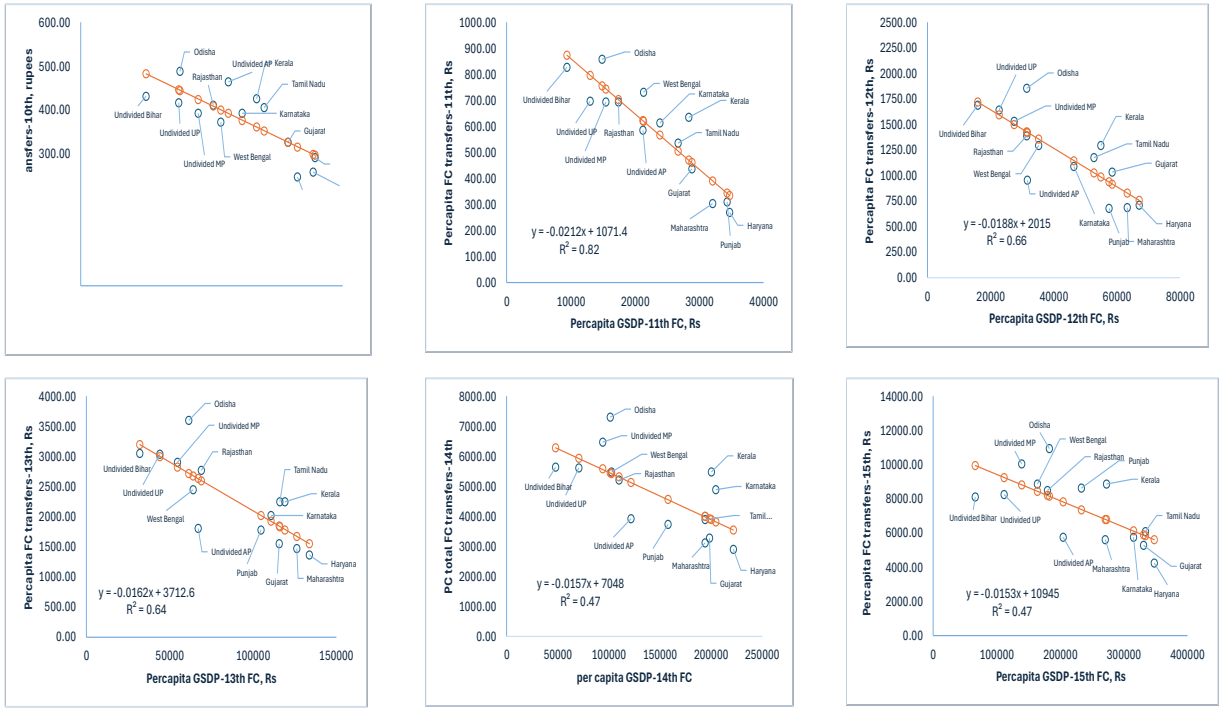
Criterion	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	Fifteenth
	2000-05	(2005-10)	(2010-15)	(2015-20)	(2020-2021)	(2021-26)
Population (1971)	10	25	25	27.5		
Population (2011)					15	15
Income Distance	62.5	50		50	45	45
Area adjusted	7.5	10	10	15	15	15
Infrastructure	7.5					
Tax effort	5	7.5				
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 Section II 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.[42]

[42] Srivastava and Rao 2010.

Figure3.8b. 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 Fifteenth Finance Commission brought back the sector-specific grants such as those for health, disaster risk management, and air quality grants to million-plus cities.

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 = μ + α_i + βX_it + λ_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 (HHI), 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 (HHI), 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 (HHI): -6265.9 *** (p=0.00) - Internal debt: 0.117 *** (p=0.00) - Development expenditure: 0.277 *** (p=0.00) - Per capita income: 0.014 *** (p=0.00) - Dependency ratio: 3455.1 *** (p=0.00) - Political affiliation: -1.51 * (p=0.06) - FRBM dummy: 298.61 * (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 tax collection. - 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.
Lakshamanasamy (2022)	STR/NSDP = β0 + β1·NSDPpc + β2·GRANTS/REV + β3·SCT/REV + β4·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 centre as ratio of total 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 centre as ratio of total revenue; SCT/REV: Share in central taxes as ratio of state revenue; REVEXP/NSDP: Revenue expenditure as ratio of NSDP	Coeffcients (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: χ^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

- $\mathbf{TaxEffort}_{it}$ state own tax revenue (excluding shared taxes) as a share of GSDP for state i in year t
- $\mathbf{Transfers}_{it}$: shared taxes and grants as a share of state GSDP
- $\mathbf{GSDP}_{it}$: per capita Gross State Domestic Product
- $\mathbf{Population}_{it}$: total state population
- $\mathbf{Urbanization}_{it}$: 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.[43]

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

- 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.

[43] 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.

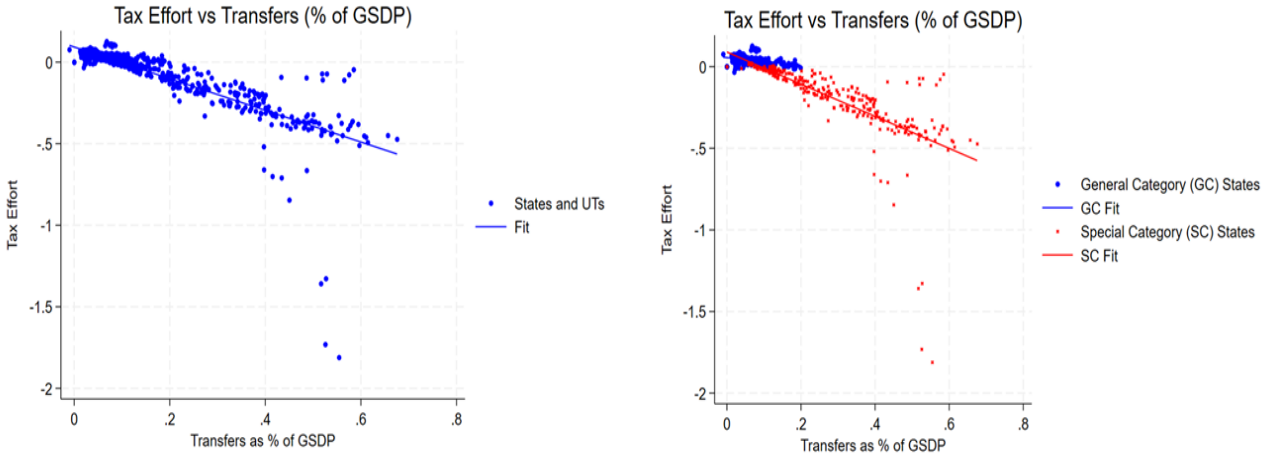
The results indicate that central transfers may have a negative relationship for tax mobilization, but this effect appears to be concentrated in SCS. For general category states, the relationship between transfers and tax effort is statistically insignificant. This distinction suggests that structural 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 corelated 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***	−1.174***	−1.314***	−1.306***	−0.244
		(0.372)	(0.381)	(0.376)	(0.386)	(0.209)
GSDP Per Capita	7.98e-08	2.46e-07**	2.60e-07**	2.57e-07	2.68e-07	2.00e-07
	(1.92e-07)	(1.00e-07)	(1.16e-07)	(1.50e-07)	(1.71e-07)	(1.57e-07)
Urbanization Rate				-0.000317	−0.000336	−0.000219
				(0.00153)	(0.00155)	(0.00141)
Population			−3.07e-10		−1.83e-10	
			(5.96e-10)		(6.18e-10)	
Transfers (% GSDP) × Special Category State						−1.156**
						(0.481)
Constant	−0.0896***	0.104*	0.114**	0.135**	0.141**	0.107*
	(0.0194)	(0.0533)	(0.0493)	(0.0626)	(0.0623)	(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.

IV. International Experience in Equalization

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.[44] 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. Table 4.1 sets out the basic parameters relating to equalization across different countries. these countries, which is then followed by sections on each country. 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 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

[44] 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.

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

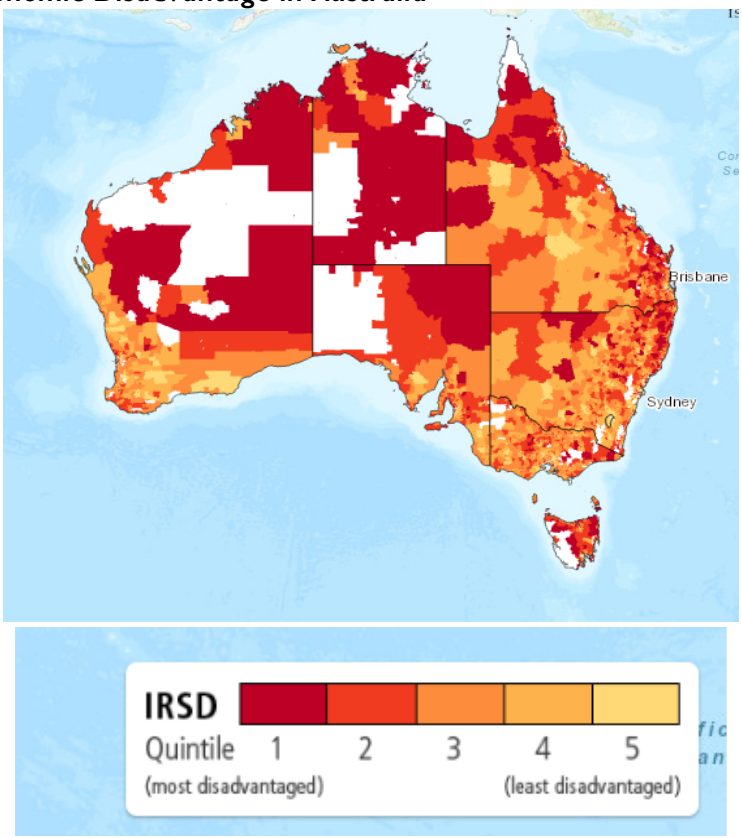
Source: Country background papers prepared for Sixteenth Finance Commission.

Country Experiences

Australia[45]

Australia's equalization system is one of the most comprehensive internationally. It is administered by the independent Commonwealth Grants Commission, which has operated since 1933 and assesses the relative fiscal capacities of the six states and two territories. The system aims to ensure that each state can provide a comparable standard of public services if it makes an average effort to raise revenue. A distinctive feature is its broad coverage: the assessment includes revenue-raising capacity, expenditure needs, and capital investment requirements, making Australia a classic example of a fiscal-gap approach to equalization. Funding is largely drawn from the GST pool, supplemented in recent years by additional federal contributions, and the outcomes are expressed through annual GST relativities. Figure 4.1 illustrates the extent of spatial socioeconomic disadvantage that underpins these equalization concerns.

Figure 4.1. Socioeconomic Disadvantage in Australia



Note: White areas uncalculated due to lack of population.

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

The Australian model shows the strengths and trade-offs of a technically rigorous equalization framework. Its major advantage is that it transparently links transfers to measurable differences in fiscal capacity, costs of service delivery, demographic pressures, geography, and even disaster-related burdens. As shown in Table 4.2, these assessments translate into materially different GST relativities and distributions across states, while Table 4.3 and Figure 4.2 show the breadth of the commission's methodology and the logic of assessed budgets per capita. At the same time, its complexity can make the process appear opaque to citizens and even to participating governments, underscoring the need for high-quality data, institutional independence, regular consultation, and annual updating.

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

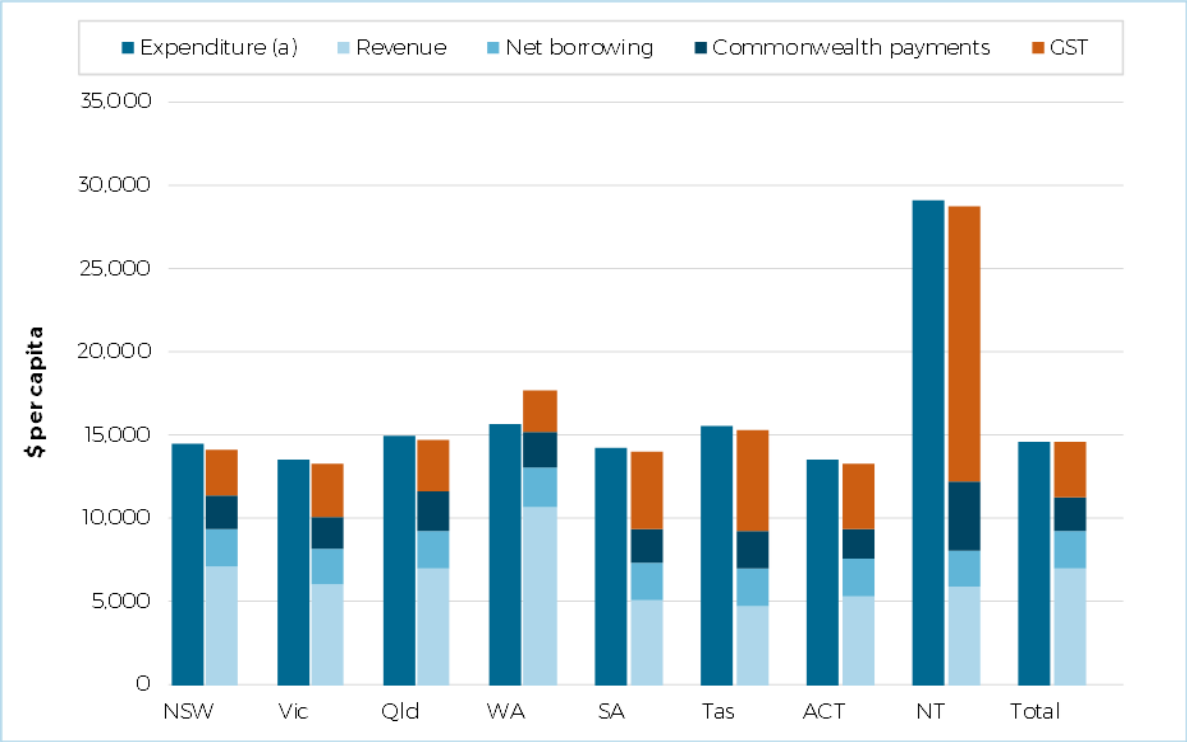
Source: Commonwealth Grants Commission, 2024. GST Revenue Sharing Relativities 2024 Update: GST Relativities for 2024–2025. 2024 Update | Commonwealth Grants Commission, page 17, table 1.1.

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. www.cgc.gov.au/publications/commissions-assessment-methodology

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.

Brazil[46]

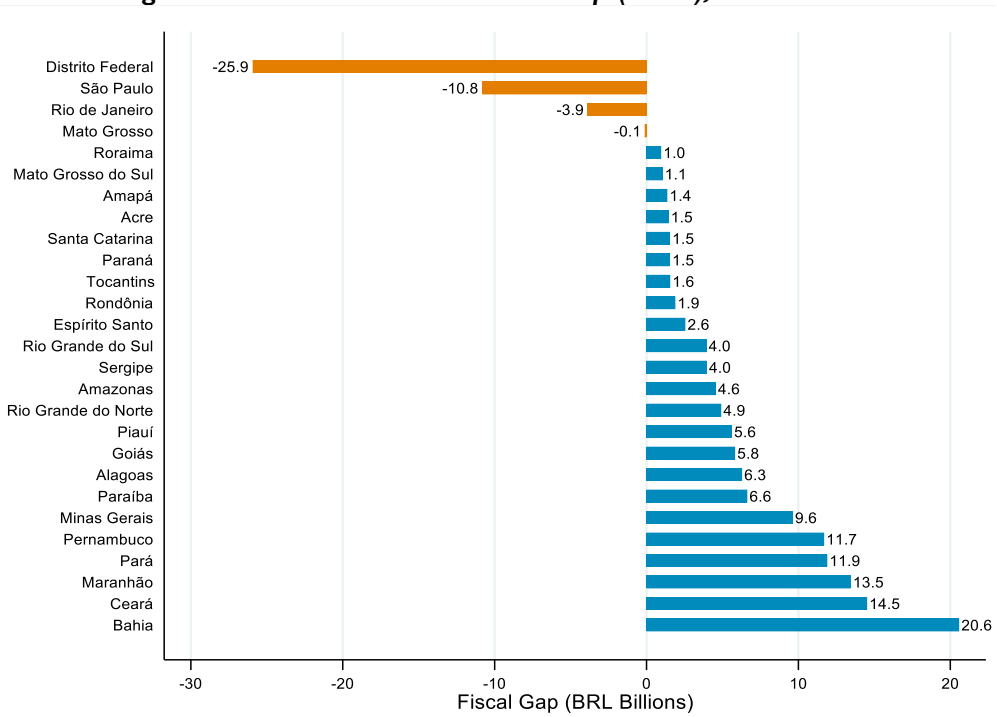
Brazil is a highly decentralized federation with 27 states and 5,570 municipalities, and its transfer system seeks to address both vertical and horizontal imbalances in a context of major regional disparities. The federal government raises most taxes, while states and municipalities rely heavily on transfers to finance expenditure, especially in health and education. Equalization is pursued through a combination of tax sharing, the state and municipal participation funds (FPE and FPM), and earmarked transfers such as those for education and health. In principle, these arrangements are designed to redistribute resources toward poorer regions using formula-based criteria linked to population and inverse income, but their practical effectiveness has been mixed. Figure 4.3 and Table 4.4 help illustrate both the size of Brazil's horizontal fiscal gaps and the broader structure of intergovernmental transfers.

Brazil's experience highlights the importance of keeping equalization formulas aligned with current realities. Although the FPE and FPM have redistributed resources to lagging regions, the long freezing of allocation coefficients and outdated population data have weakened their equalizing effect and, in some cases, worsened imbalances. This is visible in Figure 4.4 and Figure 4.5, which show how per capita FPE transfers and residual fiscal gaps do not always align cleanly with need, while Table 4.5 and Figure 4.6 indicate why the education transfer system FUNDEB is often seen as a more targeted and

[46] This section draws extensively on Tufani and Wetzel (2024).

effective equalization instrument. The broader lesson is that simple formulas can fail if data are not updated, objectives are unclear, or transfers are not linked closely enough to actual fiscal gaps and service delivery requirements.

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



Source: Based on World Bank (2022).

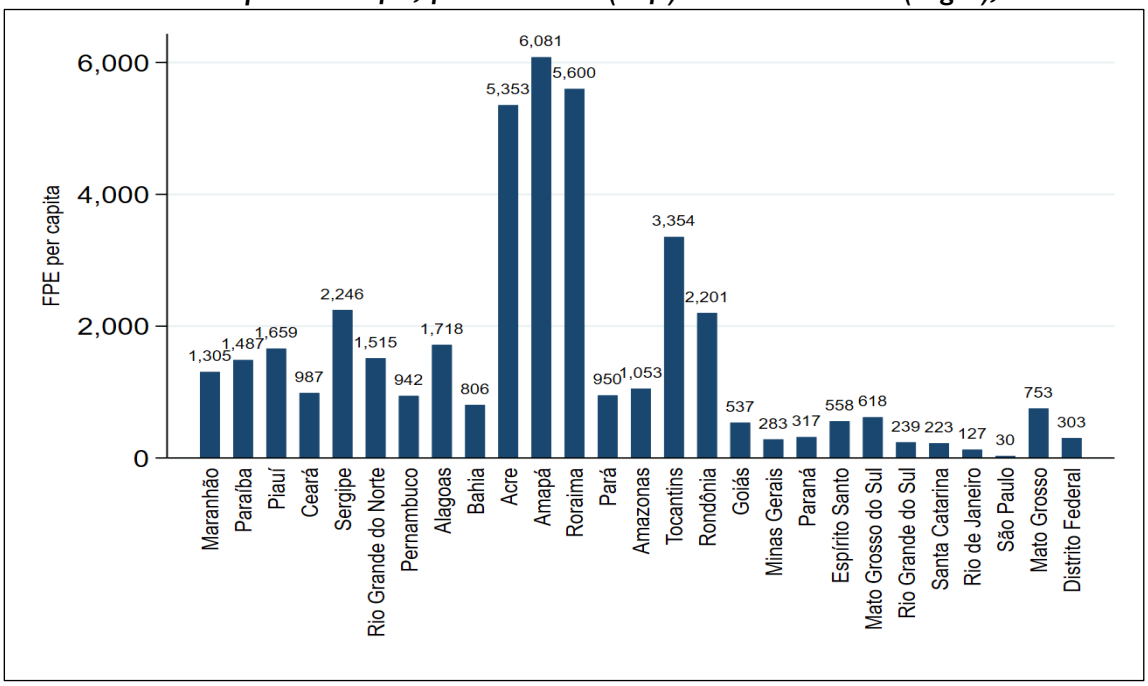
Note: The population factor (ranging between 0.012 and 0.07) and the inverse of per capita income, each weighted 50 percent. If a state's per capita income is more than 72 percent above the national average, its coefficient is reduced by the size of the identified 'surplus'. However, no state can receive 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%
		SUS (health)	1.01%	0.26%	0.75%	
	non-matching	Voluntary grants	0.46%	0.18%	0.28%	
		CIDE (transport)	0.00%			
TOTAL			7.92%	2.41%	3.48%	2.03%

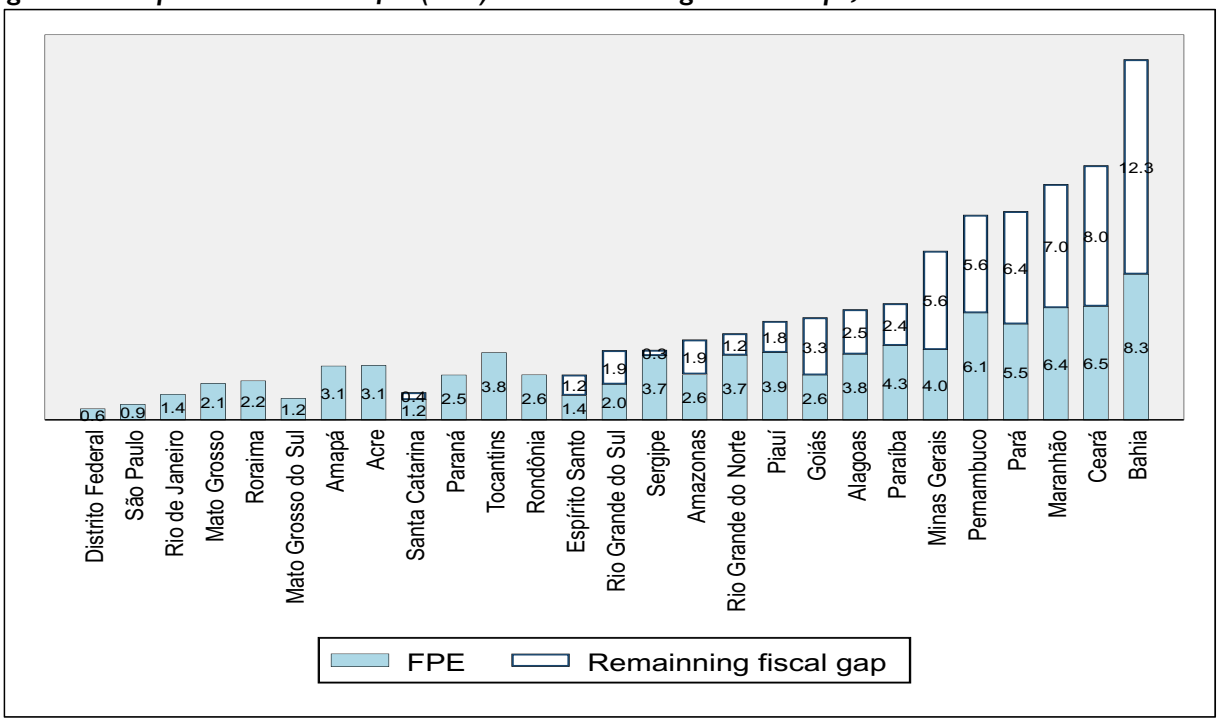
Source: Compiled from STN (Tresouro Transparente and Finbra.
Notes: FUNDEB is the system of funds for education, and SUS is the system of grants in health.

Figure 4.4. FPE Per Capita Transfer, from Poorest (Left) to Richest State (Right), 2022



Source: World Bank 2022.

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



Source: World Bank 2022.

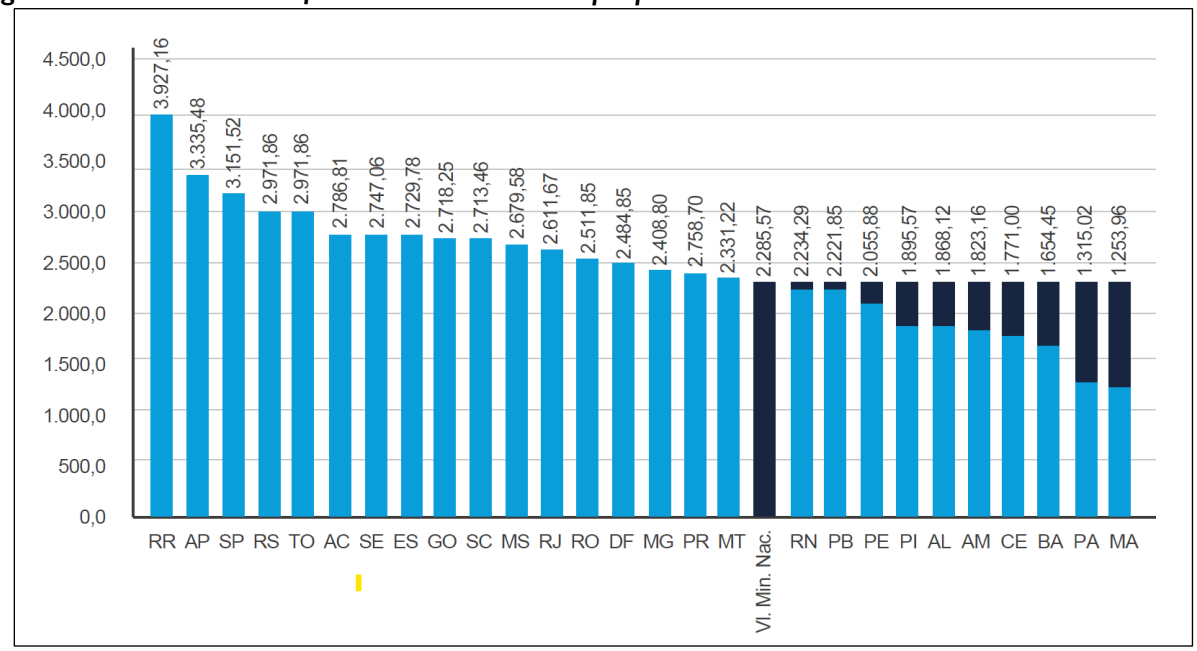
Note: States ordered in terms of fiscal gap, from smallest to largest.

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).

Figure 4.6. Distribution of Federal FUNDEB Top-up across States



Source: World Bank 2022.

Canada[47]

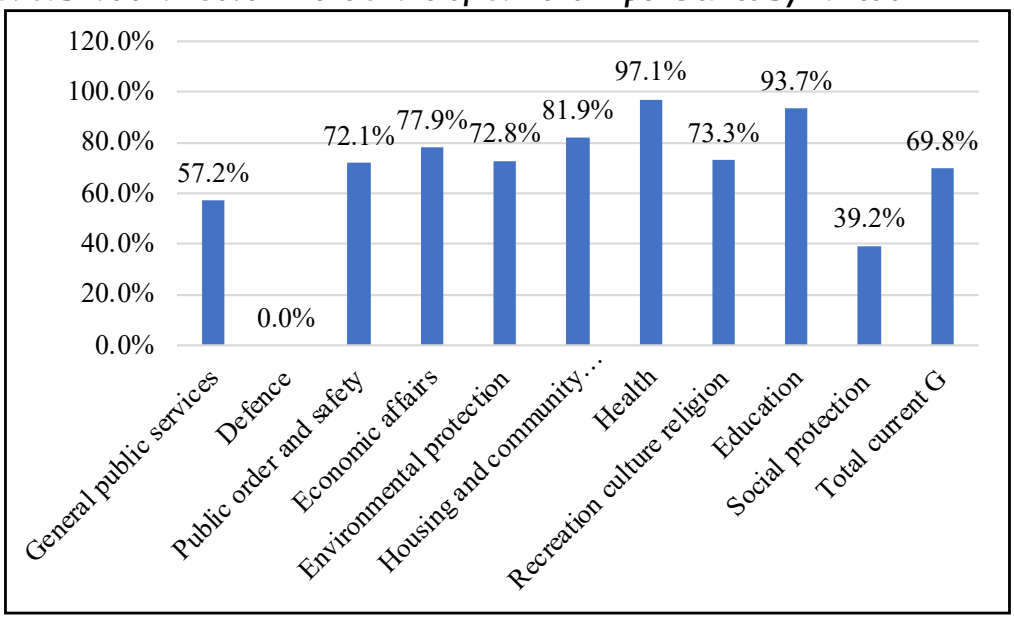
Canada's equalization system is one of the clearest examples of revenue-capacity equalization. In a federation of ten provinces and three territories, provinces carry major expenditure responsibilities—especially in health and education—while also enjoying substantial tax autonomy. Equalization payments, funded entirely by the federal government, are designed to ensure that provinces with weaker revenue bases can provide reasonably comparable public services at reasonably comparable tax rates. The system uses a Representative Tax System approach across major tax bases, including personal income, business, consumption, property, and part of natural resource revenues, but it does not directly account for expenditure needs or service delivery costs. The accompanying formula graphics and Figures 4.8 and 4.9 illustrate both the mechanics and the current distributional outcomes of this approach.

The Canadian model is widely regarded as effective in equalizing fiscal capacity because it uses regularly updated data, a transparent formula, and a clear distinction between equalization and other

[47] This section and its data are based upon Vaillancourt and Joanis (2024).

transfers such as health and social grants. Its main strength is precision on the revenue side: provinces with below-standard fiscal capacity receive payments up to a benchmark, while richer provinces simply do not receive equalization. As Figure 4.8 suggests, however, institutional design choices such as the fixed pool can shape aggregate outcomes, while Figure 4.9 highlights which provinces receive equalization in the current cycle. Canada therefore offers a strong example of how to equalize revenue potential, but also shows the limits of a system that does not explicitly measure the cost of providing comparable services.

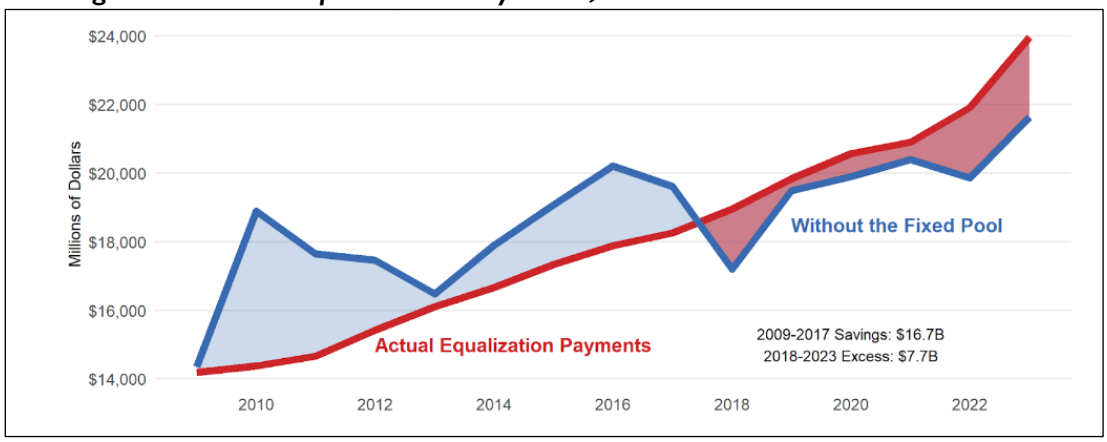
Figure 4.7. Subnational Government Share of Current Expenditures by Function



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.

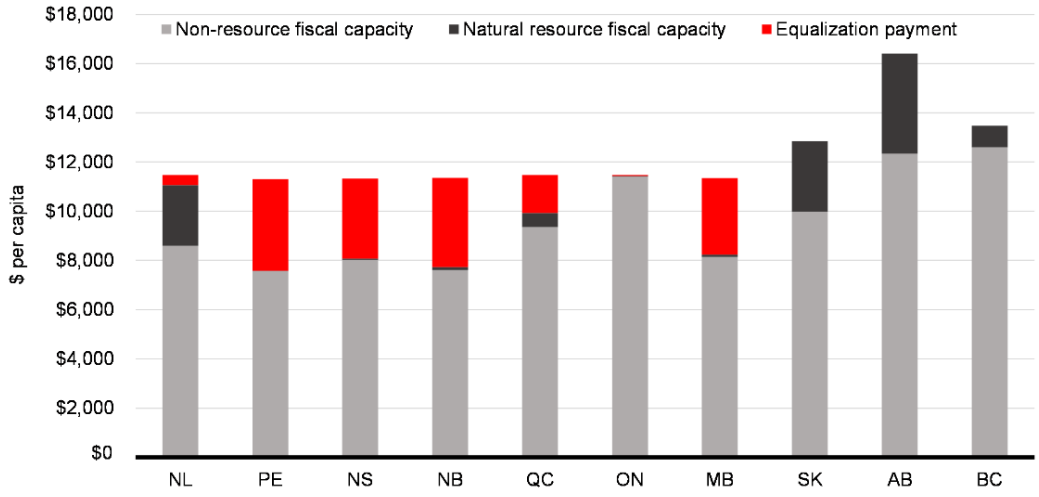
$$\text{Equalization Right Province j} = \left[\left(\text{Fiscal Capacity Standard Per Capita} - \text{Fiscal Capacity Province j Per Capita} \right) * \text{Average Tax Rate} \right] * \text{Population Province j}$$

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



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

Figure 4.9. Canadian Equalization, 2024–2025



South Africa[48]

South Africa combines decentralized service delivery with highly centralized revenue collection. Provinces and municipalities are constitutionally recognized spheres of government, but the national government retains dominant control over taxation, expenditure ceilings, and service-delivery standards. Provinces depend overwhelmingly on transfers to finance education, health, and related social services, while local governments rely more on user charges and property taxes. The core equalization instrument is the equitable share system, through which nationally raised resources are distributed vertically across spheres of government and then horizontally across provinces and municipalities using formula-based criteria. Figures 4.10a and 4.10b illustrate the broader revenue and expenditure architecture within which this transfer system operates, while Figure 4.11 shows the composition of the national budget.

[48] This section is based on Sachs (2024).

South Africa's experience shows how a weighted population-based formula can support redistribution even in a fiscally centralized system. The provincial equitable share places the greatest weight on education and health indicators and is updated annually using official data, allowing transfers to follow population movements and changing service demand across provinces. Figure 4.12 sets out the main components of the provincial equitable share formula, while Figure 4.13 shows how transfers compare with provincial GDP and population shares. At the same time, the system is less effective at strengthening accountability or incentivizing better performance because provinces have limited revenue autonomy and much of the control over norms, standards, and funding envelopes remains at the center.

Figure 4.10a

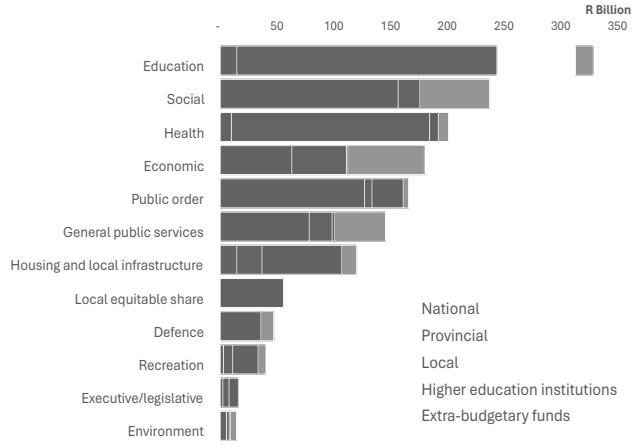
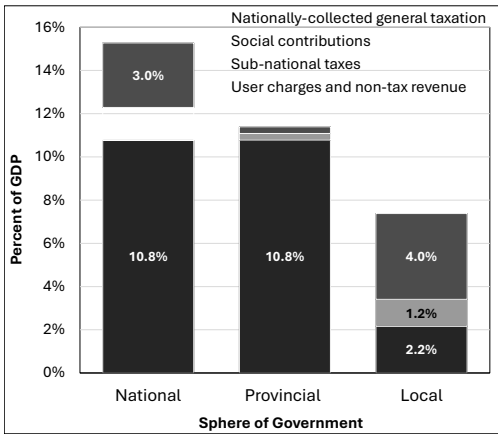
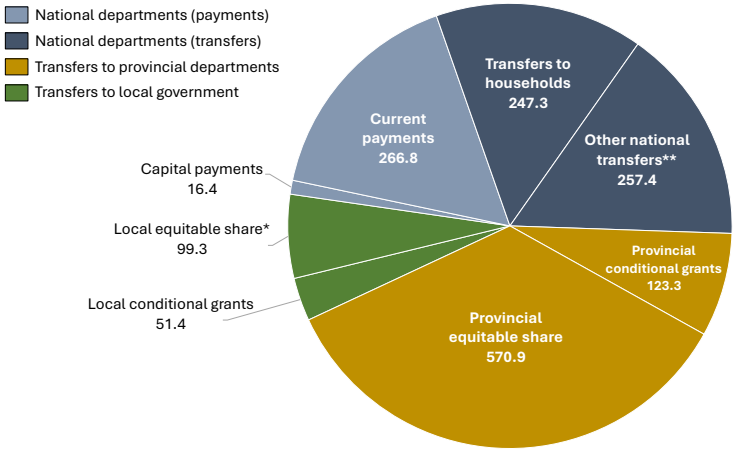


Figure 4.10b



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).

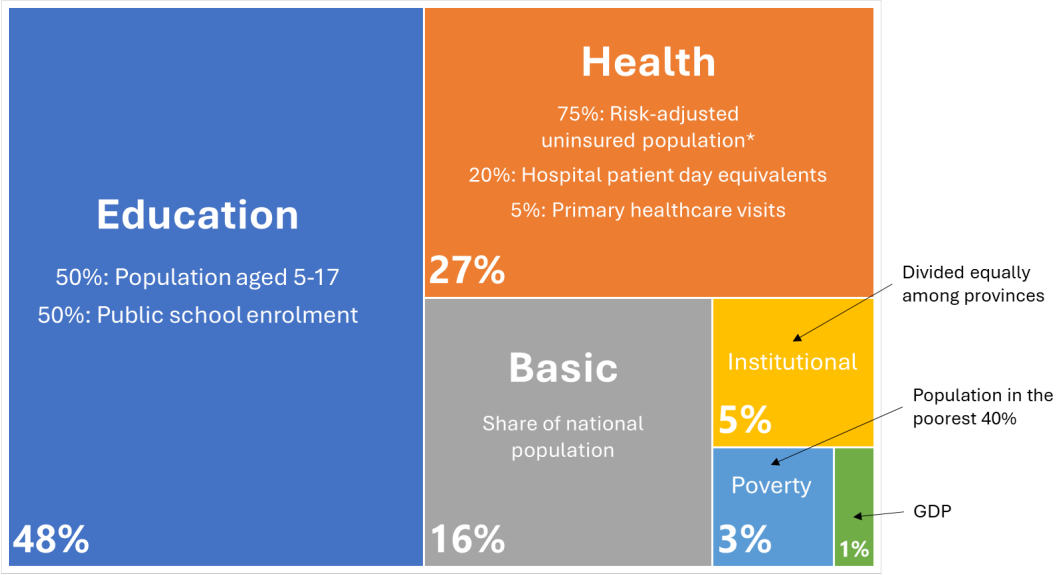
Figure 4.11. National Budget in South Africa, 2022/23, ZAR, billions



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).

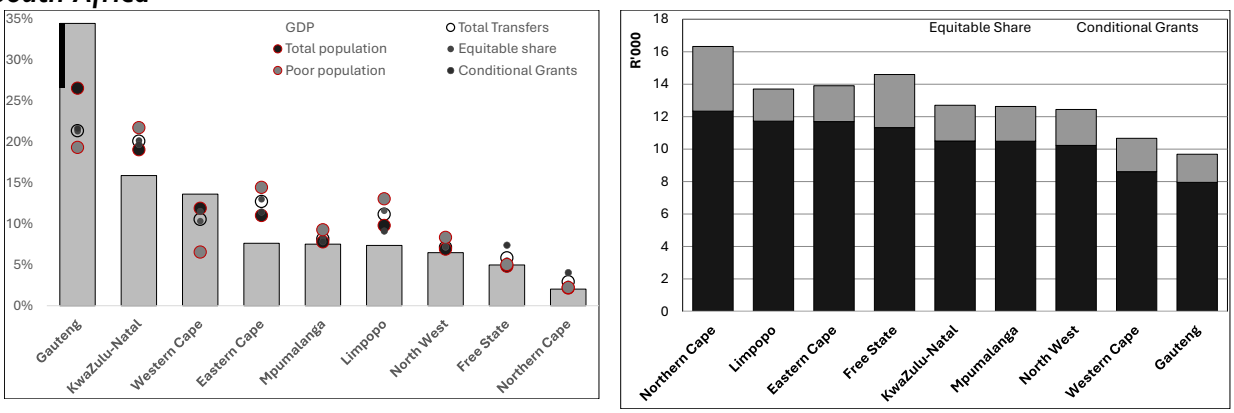
Figure 4.12. Components of the Provincial Equitable Share Formula in South Africa



* 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%)

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

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.

Europe[49]

European countries provide a wide range of approaches to intergovernmental transfers, but most share two broad features: efforts to strengthen subnational revenue autonomy and explicit mechanisms to address horizontal disparities. Many countries combine exclusive taxes for regional governments with shared taxes such as VAT, PIT, or CIT, often allocated on a derivation basis to reduce vertical imbalances while preserving incentives for local economic development. To address horizontal gaps, most European systems rely on some form of fiscal-gap logic that compares revenue

[49] This section draws on Martinez-Vazquez (2024).

capacity and expenditure needs, even though the specific formulas, institutions, and degrees of redistribution differ across countries such as Germany, Italy, Spain, Sweden, and the Netherlands.

The European experience suggests that effective equalization depends on clearly separating devolution from redistribution, maintaining good-quality and frequently updated data, and grounding transfers in measurable indicators of fiscal capacity and service needs. Some countries emphasize bottom-up costing of expenditure needs, while others use regression-based or standardized approaches, but the common lesson is that equalization works best when it is transparent, data-driven, and embedded in a broader framework of subnational accountability. Europe therefore offers not a single model, but a menu of institutional options showing how countries can combine tax autonomy, revenue sharing, and equalization to support both cohesion and efficiency.

V. 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 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.[50] 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.[51]
- *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

[50] 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.

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

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 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[52] *was around five times that to high-income states 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.

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

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.

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