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Subsidies in India: Bridging the Data Gaps

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Abstract

This paper looks at reported subsidy spending in India, in light of ongoing central initiatives to build transparency and accessibility of information related to financial operations and decisions of public expenditure. Subsidies have become a prominent policy tool for public resource allocation in India. However, without a clear definition and reporting of 'subsidy', the term tends to be loosely used to encompass many schemes and programs of the Union and state governments, including the recent rise in 'freebies', which need to be clearly differentiated. Moreover, many forms of financing through special securities and extra-budgetary resources have been used to finance subsidy spending, making it difficult to comprehensively define and measure subsidy expenditure in the budget and other annual accounts. These issues relate to the existence of data gaps in India's fiscal reporting and accounts, which are a critical area of concern due to the large financial implications of subsidy expenditures. This paper identifies how subsidy spending has been accounted in India and explains the resultant data gaps that render such fiscal data inconsistent and incomparable across levels of government. The paper seeks to understand whether the present reporting of subsidy spending in the finance accounts and budget documents provide clear and comprehensive information about budget allocations, revenue sources, expenditures, and other related financial matters. It then proposes steps in the way forward to improve their transparency.

Keywords: data gaps, subsidy, transparency, fiscal reporting, Public Financial Management

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1. Introduction

Public Financial Management (PFM) deals with how governments collect, allocate, spend, and account for public resources throughout the budget cycle. It should encompass well-defined systems to produce information, processes, and rules that can help support fiscal policymaking. The Fifteenth Finance Commission (FFC) highlighted four overarching objectives of PFM that are needed to bring India in line with international standards – aggregate fiscal discipline, strategic budgeting and planning, operational efficiency, and accountability and transparency (FFC 2020). This paper focuses on the fourth objective – accountability and transparency – within the context of India's subsidy spending. Gupta and James (2023) had highlighted the data gaps pertaining to off-budget borrowings in India. Owing to their ambiguous definition and significant share in total expenditure, the measurement of subsidies merits a similar exercise.

1.1 India's Fiscal Trends

To give perspective to India's fiscal space relative to its spending needs, it is useful to review how India's fiscal trends have evolved. India's fiscal space has typically remained constrained due to high revenue expenditure, persistent fiscal deficits, lower-than-expected revenue growth, and structural rigidities in public finances. While well-identified capital expenditure is crucial for building productivity and long-term economic growth, the fiscal balance remains very tight due to the continuing need to meet significant mandatory spending and growing social welfare programs – many of which benefit the recipient alone, rather than society as a whole.

The central and state governments have faced difficulties adhering to the original Fiscal Responsibility and Budget Management (FRBM) Act and the respective state fiscal responsibility laws targets due to various economic shocks, including the global financial crisis (GFC) and the COVID-19 pandemic.

Over time, the FRBM rules have been adjusted to provide more flexibility, particularly through mechanisms like the escape clause and differentiated borrowing limits for states. The original timeline to achieve a 3% fiscal deficit target has now been extended, at least to FY26, with a gradual path of fiscal consolidation taking effect, especially at the central government level. Figures 1 and 2 show the reported central and state fiscal deficits and debt as a percentage of GDP. For both the centre and the states, their debt positions have remained well above the originally targeted 60% of gross domestic product (GDP).

The Ministry of Finance (MoF) defines central government debt as the sum of liabilities from the Consolidated Fund of India[1] and the public account, and financial obligations of government-controlled entities or Public Sector Undertakings (PSU), some of which are financed through extra-budgetary resources (EBRs). Since FY23, government-reported EBRs have been included in the Union's liabilities. Therefore, the data before FY23 understates the true extent of debt. Achieving the

original FRBM targets would require structural reforms, improved revenue collection, better prioritisation of spending, and more efficient public financial management, to build space for the capital expenditure required to meet the country's growing infrastructure and development needs.

Figure 1: Union's Deficit Indicators as % of GDP

Source: Reserve Bank of India (RBI)

States' recorded borrowings have generally been above 20% of GDP. However, if their extra-budgetary resources are also considered, their debt is even higher[2]. Commendably, MoF recently[3] identified the extent of such borrowings from states, and applied it to determine more accurately the total borrowings of states, required for administration of Article 293 (3) of India's Constitution which governs the extent of borrowing by state governments.

Since FY01, the combined total spending of the Union and states has averaged about 30% of GDP. States' share in total expenditure has gone up in recent years, with increased tax devolution by successive Finance Commissions. States' development expenditure has also consistently surpassed that of the Union (Figure 3). Broadly, development expenditure constitutes social and economic services, including agriculture, education, health, etc. Expenditure on general services like administration and defence is considered as non-development expenditure.

Figure 2: States' Average Deficit Indicators as % of GDP

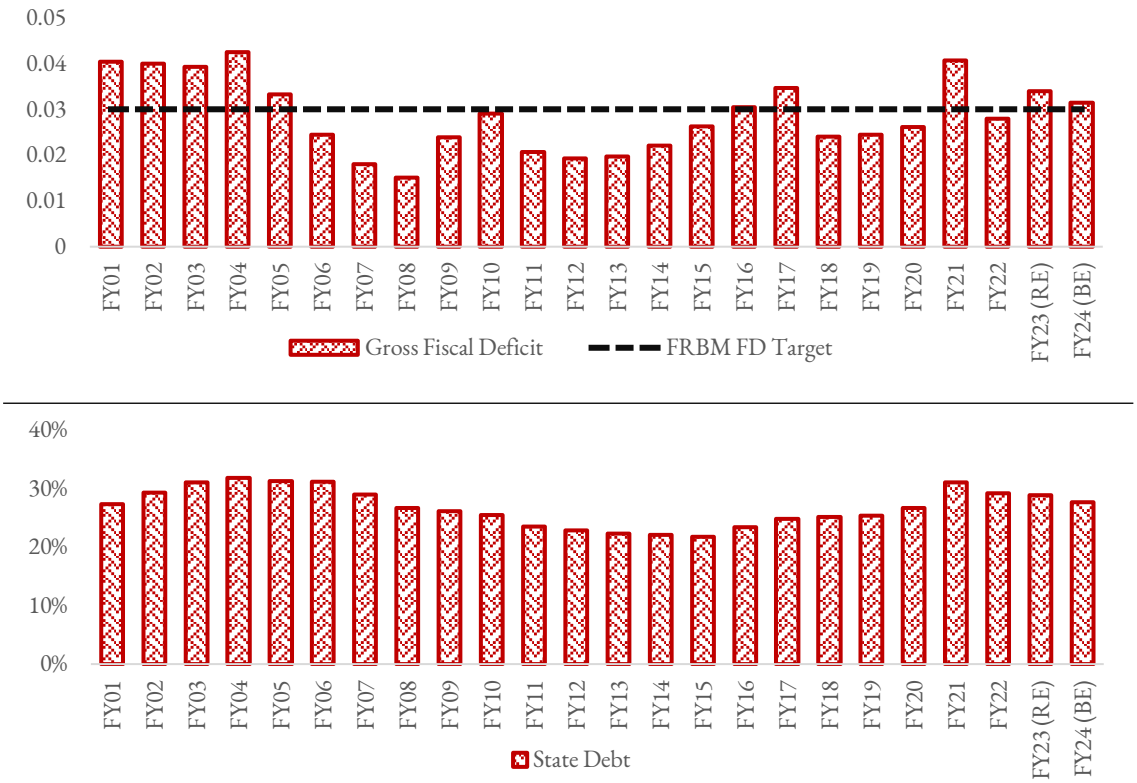
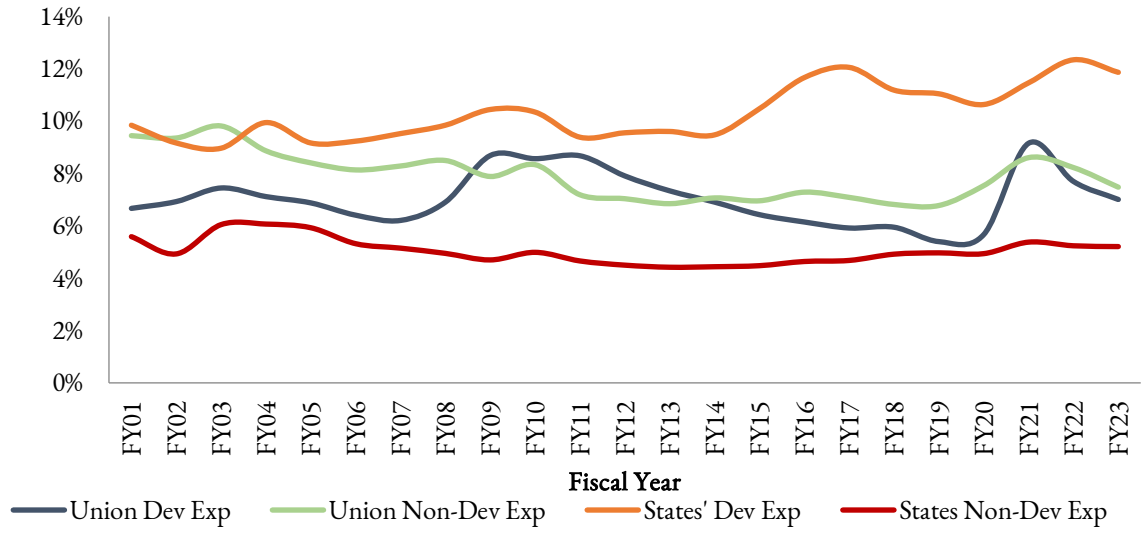


Figure 3: Union and States' Developmental and Non-developmental Expenditure (as % of GDP)



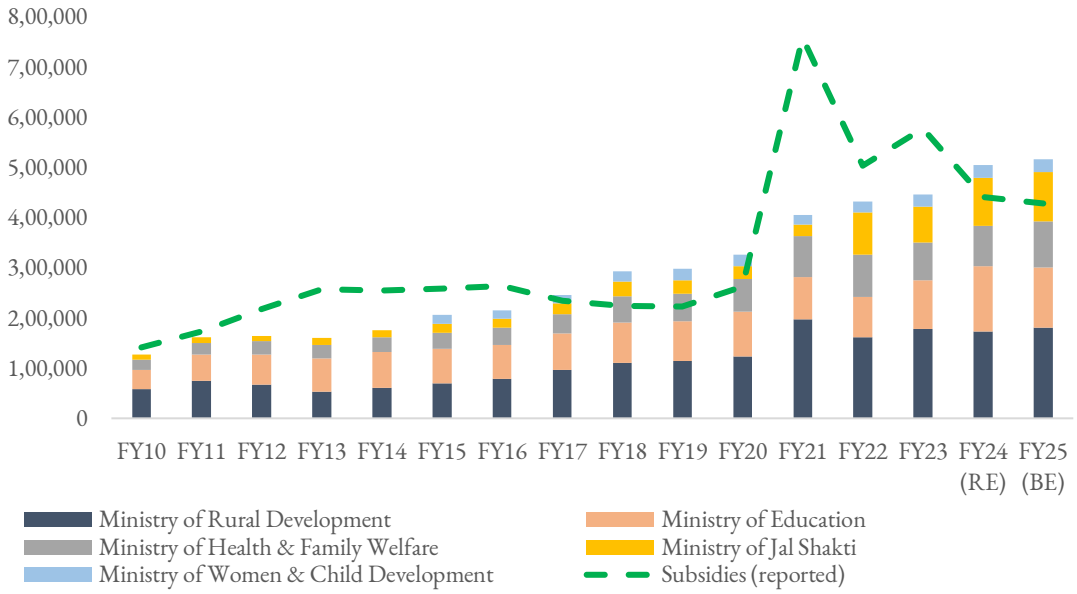
1.2 Welfare Expenditure

Within reported development expenditure, total spending on social services and subsidy spending under economic services (broadly reflecting welfare-related spending) of all states and the Union,

when combined, amounted to 9.25% of GDP. The Union government spends significantly on social welfare through ministries such as Education, Health and Family Welfare, Rural Development, Jal Shakti, and Women and Child Development. These ministries oversee some of India's most prominent and widely recognised programs, such as the National Education Mission, National Health Mission, Pradhan Mantri Awas Yojana (Rural), and Mahatma Gandhi National Rural Employment Guarantee Scheme. Notably, the total expenditure on subsidies has far surpassed the combined spending on these central schemes and the other expenditures by their respective ministries (Figure 4).

Of these, the Government of India (GoI) incurs the highest expenditure on the Ministry of Rural Development and especially, the rural-agrarian sector. Thangraj and Gulati (2024) highlight that the Union's total expenditure on this sector is budgeted at Rs. 6,20,000 crore (approximately 1.98% of the GDP) in FY25. However, well over half of this expenditure is just on subsidies– primarily, food and fertiliser.

Figure 4: Union's Expenditure on Select Social Sector Ministries v/s Actual Subsidy Expenditure (in Rs. crore)



Source: Union Budgets, Government of India (GoI)

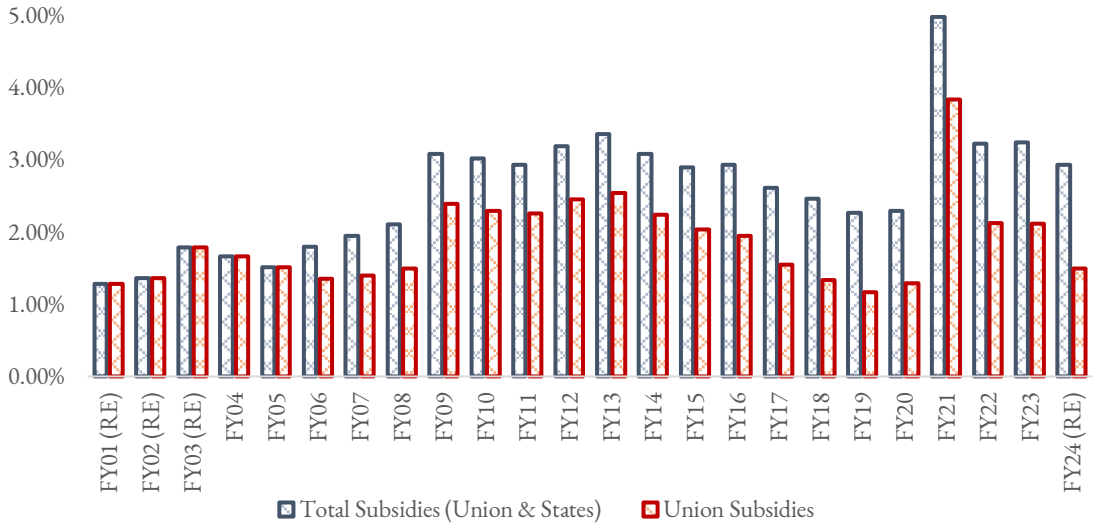
Notes: The Union's Ministry-wise expenditure includes both revenue and capital expenditure.

1.3 Subsidy Expenditure

Typically, subsidies are used as the first policy choice when the government believes a commodity or service must be provided to those who cannot afford it at the market price, or when market mechanisms do not assure socially desirable consumption. Aggregate central and state subsidies in India are reported to have been more than 3% of national GDP in FY23, of which 2% was contributed

by the Union and the remainder by all the states combined (Figure 5). Box 1 compares India's subsidy spending with other G20 countries.

Figure 5: India's Subsidies as % of National GDP



Source: Union Budgets, GoI; State Finance Accounts, Comptroller and Auditor General of India (CAG)

As global experience demonstrates, the rise in public debt, combined with the urgency of the climate agenda, is putting pressure on public finances and raising the imperative to carefully prioritise public spending. This makes it important to examine the fiscal accounting of subsidies and the quality of data in budgets and financial statements that report subsidy spending.

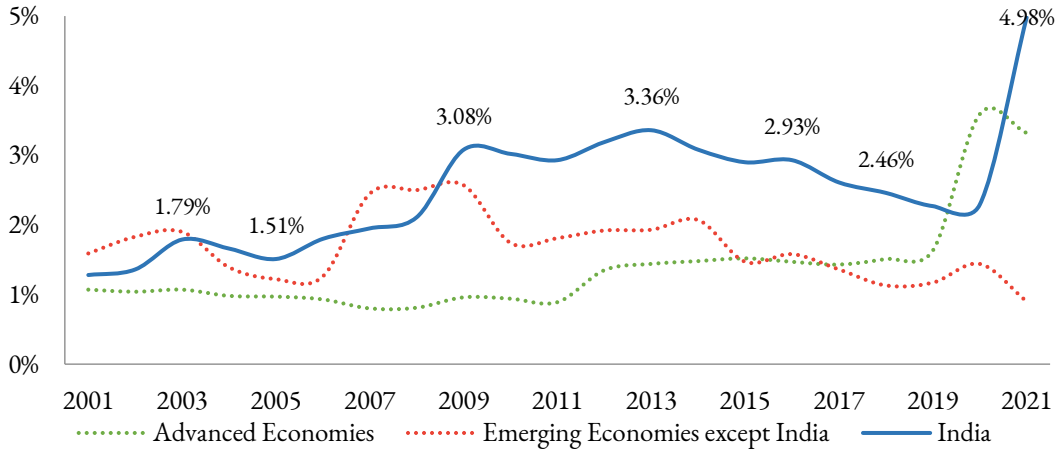
However, the many definitions of 'subsidy'[4] pose challenges for their consequent identification, classification and measurement. Most recently, the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act 2016 defined subsidy "as any form of aid, support, grant, subvention, or appropriation, in cash or kind." GoI annually publishes Statement 7 - 'Subsidies and subsidy-related expenses' in the Expenditure Profile of the Union Budget. However, the subsidies listed in this budgetary category do not fully align with the Aadhaar Act's definition. For example, PM-KISAN is a form of cash support, but is not listed as a subsidy. Because strict identification of each government scheme or programme would be complicated, we have limited ourselves in this paper to the most contemporary and widely discussed subsidy and subsidy-equivalent programmes.

Additionally, budgets and related financial statements typically reflect only a fraction of the magnitude of subsidisation that occurs in a country at a point in time (Schwartz, Hugounenq, and Clements 1995). Governments often leverage other sources of financing towards subsidisation which may appear in statements other than that of explicit subsidies. Budgets also often do not show the full fiscal impact of current subsidy programmes, as some of their expenses may have been deferred. Because these other sources of financing subsidies are not explicitly listed as subsidy payments, fiscal allocations under-report the actual expenditure on subsidies. These other means of financing subsidies are discussed in this paper and are reflected in the analysis, as far as data permits.

Box 1: India's subsidies vis-a-vis other countries

To understand where India stands globally, Figure 6 compares India's subsidy expenditure with that of the G20 over the period 2006-2021. India's subsidy spending is relatively high compared to many other emerging markets, particularly in areas like food and fertilisers, and rose close to 5% of GDP in 2021. While other emerging markets also provide subsidies, there has been a trend towards reducing them in favour of more targeted and efficient social protection programs. India has begun similar reforms.

Figure 6: Subsidies Expense, % of GDP for G20 countries, 2001-2021



Source: Government Finance Statistics (GFS), Expense, International Monetary Fund (IMF); Union Budgets, GoI; CAG; RBI

Notes:

1. Advanced economies include Australia, Canada, France, Germany, Italy, Japan, Korea, the United Kingdom, and the United States. Emerging economies comprise Argentina, Brazil, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, and Turkiye. Due to data unavailability, China, the European Union, and the African Union are not included in the above graph.
2. As per the IMF's Government Finance Statistics (GFS), subsidies are defined as "current unrequited transfers that government units make to enterprises on the basis of the level of their production activities or the quantities or values of the goods or services they produce, sell, export, or import" (IMF 2014, 131).
3. As per the IMF, the general government includes the central, state, and local governments and social security funds for international comparability.

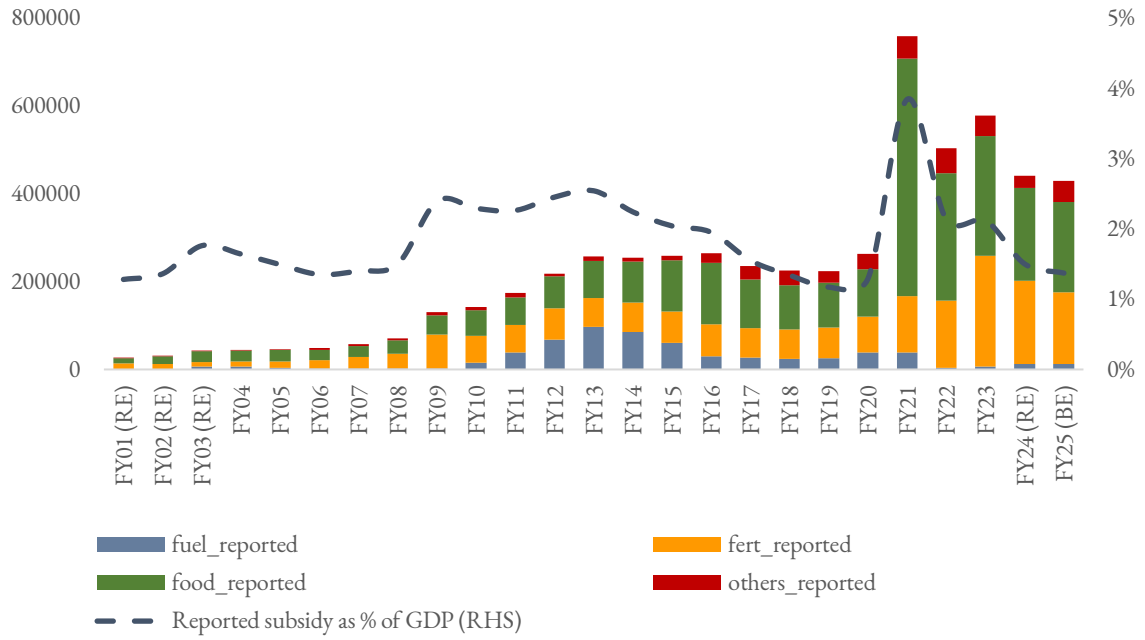
This paper thus attempts to understand the fiscal quantum of India's subsidy programmes, and the quality of data available in this regard. Sections II and III elaborate on subsidy spending by the Union and state governments – their reported numbers, the data gaps, our methodology to arrive at the actual numbers, and our assessment of actual subsidy spending. We also look into the most subsidised commodities in India, and the data discrepancies we found. The final section summarises the data gaps discovered during this research, and presents a way forward towards the use of good quality fiscal expenditure data in decision-making.

2. Union Subsidy Expenditure

The Central government has historically subsidised the economic sector (mainly, agriculture, energy and industry) through a myriad of subsidies borne by the Consolidated Fund of India. It lists food, fuel, fertiliser, interest and all other subsidies it provides in Statement 7 of the Union budget, hereafter referred to as the 'reported subsidy' of the Union.

Looking back to the evolution of subsidies in India, in its first full-year budget for FY1949, the Union government set aside Rs. 136 crore for total expenditure and, of this, about 14% was allocated to food subsidies (Department of Economic Affairs (DEA), n.d.). Fertiliser subsidies were introduced in 1977, and fuel or petroleum subsidies were explicitly listed in the budget only from FY03 onwards.

Figure 7: Composition of Union's Reported Subsidy Expenditure (in Rs. crore)



Source: Union Budgets, GoI

The Union's reported subsidy expenditure has increased manifold over the past 25 years, as seen in Figure 7. Its trend is summarised below:

- Between FY01-FY08, the Union's reported fiscal spending on subsidies was well below 2% of GDP. The GFC, and the oil price shock that preceded it, significantly raised GoI's subsidy bill in FY09. The consequent price deregulation of diesel, the introduction of direct benefit transfer to liquified petroleum gas (LPG) consumers, and the sharp decrease in crude oil prices in FY15 led to a dip in fuel subsidy (Department of Economic Affairs (DEA) 2015). As a percentage of GDP, Union subsidy spending, as reported, decreased from 2% in FY15 to a little over 1% in FY20.

- Subsequently, reported subsidy expenditure as a percentage of GDP jumped in FY21. This mainly resulted from the takeover of National Small Savings Fund (NSSF) loan obligations[5] of the Food Corporation of India (FCI) for financing food subsidy by the Union. Before FY21, NSSF loans were a form of off-budget borrowing by the FCI, were not consolidated with the reported subsidy data and, hence, did not accurately reflect GoI's full expenditure on food subsidy and its impact on the fiscal deficit.
- The COVID-19 pandemic prompted GoI to increase subsidies to ease cost of living pressures on citizens between 2019-2022. Most notably, the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) provided (free) extra food grain to beneficiaries, which led to the doubling of the quantum of food grains subsidised (Department of Food and Public Distribution (DFPD), n.d.). While these were subsequently brought down in FY22, more recently, GOI has extended the provision of free food under the PMGKAY for an additional five years.
- The geopolitical conflicts between Russia and Ukraine, and the supply disruptions and global macroeconomic uncertainties which followed, resulted in a further increase in subsidy spending to limit the pass-through of higher import prices.
- Subsidies are expected to reduce by about 24% in FY24, from the previous year, driven by the stabilisation of key commodity prices (IMF 2023). GoI is also optimistic that global fertiliser nutrient prices will remain stable in FY25, and food and fuel subsidies will not see any new scheme-based spending (Mukherjee 2024). In this case, the composition of subsidy spending should remain almost the same as in FY24.

The Union also administers credit support and interest subsidy schemes, freight subsidies, and sugar production subsidies, among others. Spending on interest subsidies is budgeted to be as much as Rs. 30,000 crore in FY25. Much of such subsidies have been directed at the agriculture sector, especially the Modified Interest Subvention Scheme, which provides short-term credit to farmers. These are cumulatively reflected as 'Other Subsidies' in our data. Food, fertilisers, and fuel (the 3Fs)[6] are the three most important forms of subsidy expenditure by the Union– and constitute 85% of reported total subsidy expenditure (Figure A1 in the Annexure). These are discussed in more detail in subsequent sections.

2.2 Union's Data Gaps

The reported subsidy spending of the Union does not include other means of financing subsidies – deferred payments/carry forward liabilities, extra-budgetary resources (EBRs), and special securities – and other subsidy-related spending, for example, Production-linked Incentive (PLI) schemes. These are subsequently added to the reported subsidy figures to develop a more accurate estimate of Union

subsidy spending (Table A1). In our analysis, and to the extent possible, we have included subsidy expenditure in the fiscal year when it accrued.

2.2.1 Other Means of Financing Subsidies

(i) Deferred Payments

GoI has often deferred subsidy payments to fertiliser manufacturers, Oil Marketing Companies (OMC), and the FCI when the actual subsidy disbursed in a year exceeded budgetary allocations. Global price fluctuations, supply-chain disruptions, and domestic uncertainties (for example, the COVID-19 pandemic) have resulted in sudden subsidy payments that were not provided during budget-setting. In such cases, the government has typically run into arrears or accumulated carry-forward liabilities to be paid in subsequent budget outlays.

In the case of fuel subsidies, "Compensation to Oil Companies for under-recoveries on account of sale of sensitive petroleum products" was included in the calculation of fuel subsidy between FY10-FY157. In FY23, GoI paid Rs. 22,000 crores as a one-time grant to PSU OMCs for under-recoveries8 to compensate for their previous revenue shortfalls. This expenditure, although met from the budget, was not included in the official Statement 7. This reflects an inconsistency in the calculation of subsidy and constitutes a data gap. We include the FY23 payment for under-recoveries in our actual estimates.

The Standing Committee on Chemicals and Fertilisers (2020) spotlighted insufficient budget allocations as the main cause of delayed settlement of subsidy bills, and recommended a one-time additional budget allocation to clear pending dues. By end-FY19, more than Rs. 43,000 crore had been accumulated in dues to the fertiliser industry by the Union (CAG 2022, 24). CAG observed that the revised estimate for FY21 made provisions for clearing carry-forward liability in that year. These are, therefore, already accounted for in the reported subsidy figures. However, they do not correctly reflect the year in which actual subsidy spending was incurred.

(ii) Extra Budgetary Resources

EBRs of Public Sector Enterprises (PSE) are "borrowings which are not reflected in the budget, even though budgetary resources will have to be used for their repayment either in the current or future period" (Gupta and James 2023, 5). For example, PSEs like the FCI rely fully on the government to meet their liabilities as they have no other sources of income. Such EBRs have been used to finance food subsidies in the past, and have been leveraged for fertiliser subsidisation as well.

To meet excess food subsidy requirements over and above budgetary allocations, the Union extended NSSF loans to the FCI through the Public Account[9]. In FY21, this off-budget borrowing was discontinued, and the cumulative liability of more than Rs. 425,000 crore was brought on-

budget. To correctly reflect this NSSF liability in the year to which it accrues, we have spread this cumulative liability across the years (FY17 to FY21) in which they were raised. Additionally, the FCI also borrows from other sources, such as through cash credit limits and ways and means advances, to cover food subsidy expenditures[10] (FCI, n.d.). At the end of July 2024, these borrowings stood at Rs. 63,000 crore. We have added them to the estimate of the current FY to reflect the food subsidy expenditure of the Union in FY25, thereby considering them as on-budget subsidies (although they were probably used to finance subsidies in previous years).

GoI has also arranged Special Banking Arrangement (SBA) loans from Public Sector Banks for fertiliser producers to meet unpaid subsidy bills, with GOI absorbing their interest liability (Standing Committee on Chemicals & Fertilisers 2020). In this context, a 2022 CAG Report states that information on such SBA loans, that were used for meeting fertiliser producers' claims, were not furnished for audit, thereby reflecting their status as EBR. Because these EBRs were raised to finance subsidy expenditure, they certainly need to be added to the reported subsidy figures. However, in this case, data non-availability has restricted us from doing so.

(iii) Special Securities

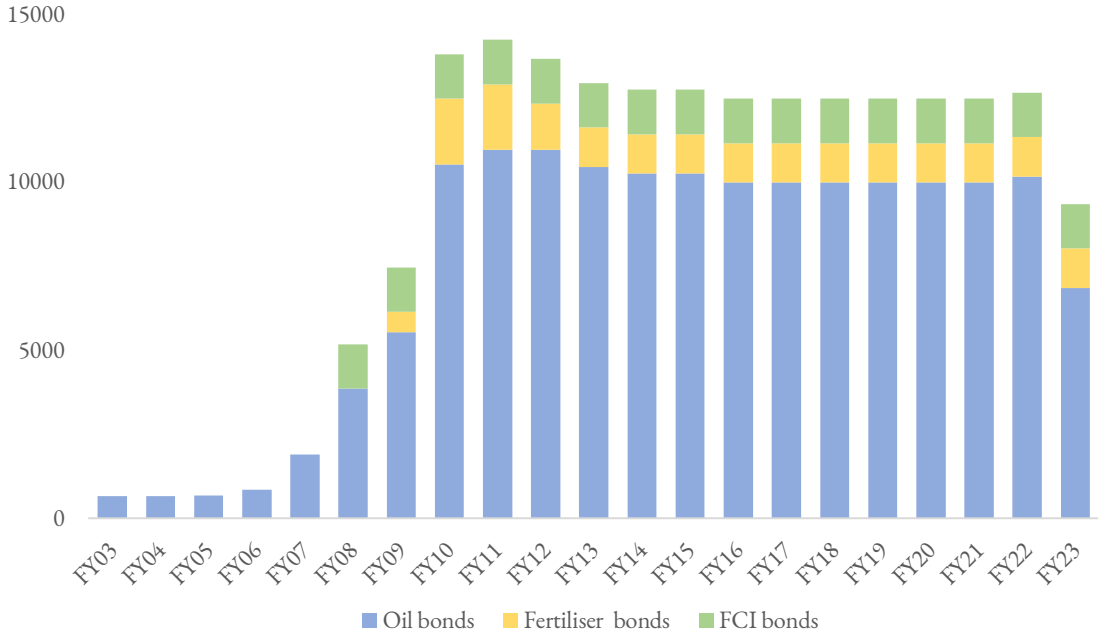
In addition to the subsidy paid in cash, GoI also finances subsidy bills by issuing special securities or bonds to OMCs, FCI, and fertiliser companies. These instruments compensate providers, manufacturers, and distributors of subsidised goods when budget allocations fall short of the subsidy burden. They are a form of dated government securities – long-term market instruments issued at face value[11] (RBI 2020).

Data on principal is only available from FY08 onwards in the Union Budgets. Therefore, we only have the cumulative outstanding principal (Rs. 81,638 crore through 17 bonds) as of FY08, and cannot ascertain precisely when each bond was raised. As such, we have added the outstanding principal as of FY08 to the reported subsidy for the same year.

Between FY09 and FY10, eight new bonds worth more than Rs. 100,000 crore were issued, which led to a proportional increase in the outstanding principal of GoI (Figure A2). This principal raised in FY09 and FY10 should be added to the reported subsidy of the budget in those years, to reflect the true extent of subsidisation. We, therefore, add the principal raised from FY09 onwards to the reported subsidy of respective years to estimate actual subsidy spending.

Alongside these, GoI made interest payments on these special securities. It can be inferred that interest payments must have seen a declining trend from FY23 as bonds mature[12], as can be seen in Figure 8. These interest payments, like the principal raised by issuing bonds, are not reflected in the reported subsidy of the Union Budget. Interest payments, in essence, reflect the cost of deferring subsidy payments to the future. Excluding the value of the bonds and their interest payments from the total subsidy underestimates GoI's actual expenditure on subsidies.

Figure 8: Interest Paid of Special Securities Issued in lieu of Cash Subsidy (in Rs. crore)



Source: Finance Accounts, CGA

2.2.2 Other Subsidy-Related Expenditure

The Union introduced PLI schemes beginning in FY22 to catalyse private investments in key sectors. PLIs offer financial incentives or subsidies to eligible manufacturers in specific sectors. Although PLI spending has been slow to be implemented and disbursed (and is still a fraction of other subsidies), those under the Ministry of Electronics and Information Technology and the Ministry of Heavy Industries have seen a larger increase since FY23. At present, nine ministries administer 13 schemes for various sectors, with a cumulative budgeted expenditure of over Rs. 14,000 crore in FY25. While just a fraction of GDP, this has increased manifold from just Rs. 10 crore in FY22. PLIs are listed under Central Sector Schemes' spending in the budget and excluded from Statement 7. However, because PLI schemes are, in essence, subsidies to manufacturers of certain goods, they should be included in the Centre's subsidy expenditure. We have, therefore, included them in the 'Others' category.

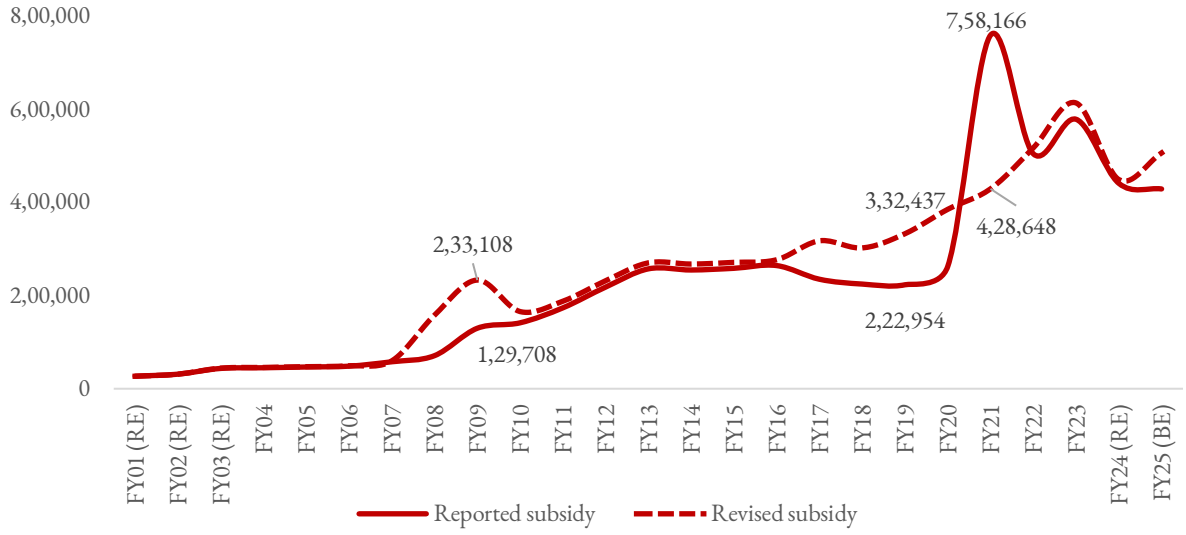
2.3 Union's Estimated Total Subsidy

Table 1: Formula for Calculating Actual Subsidy of the Union

Actual Subsidy	=	Reported Subsidy (as per Statement 7)	+	Principal raised through bonds	+	Interest payments on bonds	+	Other related spending	+	Deferred liability	+	EBRs	+	Other borrowing liabilities
Fuel	=	Reported	+	Principal raised	+	Interest payments	+			Under-recoveries of OMCs in FY23				
Fertiliser	=	Reported (inclusive of carry forward liability in FY21)	+	Principal raised	+	Interest payments								
Food	=	Reported	+	Principal raised	+	Interest payments	+				(-)	NSSF loan takeover in FY21	+	NSSF loan takeover of FY21 spread across FY17 to FY21 + FCI's other borrowing liabilities (as of 30.07.2024)
Others	=	Reported (inclusive of interest and other subsidies)	+					PLI schemes' expenditure						

The actual subsidy, inclusive of the reported figures, includes deferred payments or carry-forward liabilities, EBRs and special securities or 'bonds issued in place of cash subsidy', and other borrowing liabilities (Table 1), as far as data availability and compatibility allow. Actual subsidy figures are, therefore, greater than the reported subsidy. Figures 9 and 10 present the changes in reported and actual subsidies.

Figure 9: Union's Reported Subsidy v/s Actual Subsidy (in Rs. crore)



Source: Union Budgets, GoI; CAG; FCI

Figure 10: Union's Reported Subsidy v/s Actual Subsidy (as % of GDP)

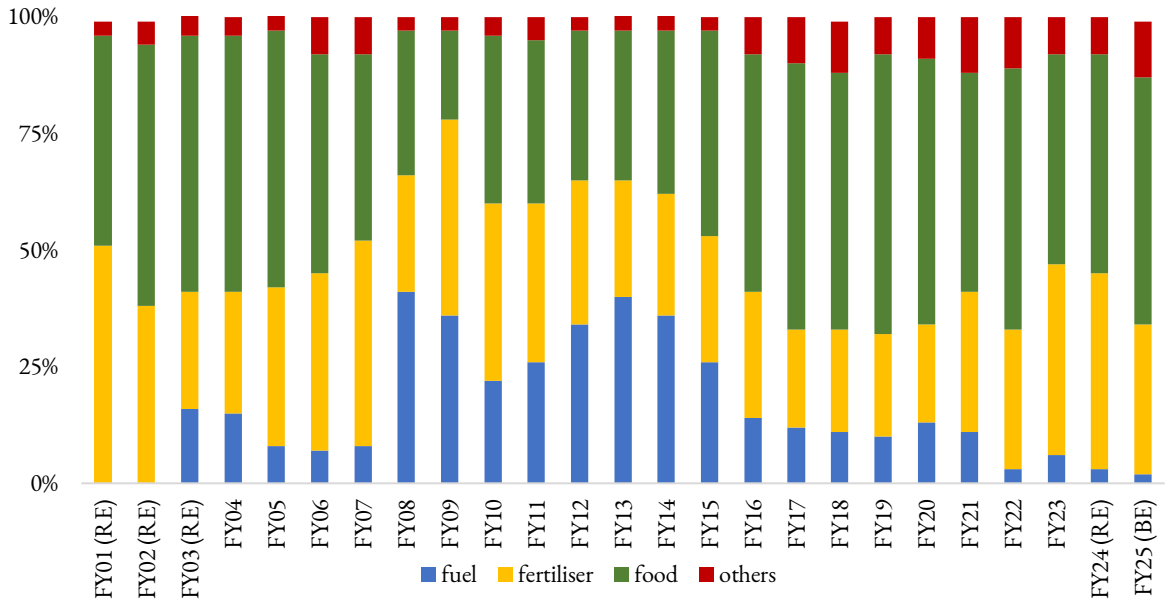
Source: Union Budgets, GoI; CAG; FCI; RBI

The main differences between the reported and estimated actual subsidy of GoI during the period reviewed are as follows:

- Between FY01-FY07, the actual subsidy conforms closely to the reported subsidy– the minor underestimation of subsidy is primarily due to the addition of interest paid on fuel bonds. During this period, special securities were also raised by the Union. However, the data on principal liability for these years are unavailable. Hence, the actual figures before FY08 are likely underestimated.
- The cumulative principal liability raised on these securities until FY07 has been added to FY08. Therefore, the actual subsidy of FY08 is overestimated in our calculations, since these bonds were raised before that year.
- Between FY09-FY10, the actual subsidy was more on account of the bonds raised by the Union to finance additional subsidies. Actual subsidy expenditure as a percentage of GDP reached its peak of more than 4% in FY09. In the following six years, reported subsidy expenditure was undervalued, due to the exclusion of servicing of interest on oil, food and fertiliser bonds.
- The reported subsidy for FY21 decreased due to the reallocation of NSSF loans to the years they were originally issued. This significantly lowered the FY21 figures while increasing those for prior years. We, therefore, see an increasing trend in total subsidy (until FY23). Contrary to the reported figures, the actual subsidy did not decrease during FY21-FY22, instead it increased by over Rs. 87,000 crore.

- In the current fiscal year i.e. FY25, GoI has budgeted Rs. 428,423 crore for subsidy expenditure. Additionally, the Union has budgeted Rs. 14,183 crore to be spent on PLI schemes. Moreover, the FCI has an ongoing borrowing liability of Rs. 63,078 crore. If GoI were to pay off all liabilities of FCI in the current year, all these cumulatively would amount to a total subsidy expenditure of Rs. 505,684 crore, 18% more than budgeted.

Figure 11: Composition of Union's Actual Subsidy Expenditure



Source: Union Budgets, GoI

Figure 11 reflects the composition of the actual Union subsidy, with the following highlights:

- Reported subsidy figures significantly underestimate the actual fuel subsidy. For example, the government reported only about Rs. 2,800 crore as fuel subsidy expenditure in FY09, and deferred payment of as much as Rs. 76,000 crore to the future by issuing bonds. Consequently, the fuel subsidy accounted for 36% of the total subsidy in FY09 upon revision, compared to just 2% in the initially reported figure.
- Due to spreading of the NSSF loans from FY21 to the years in which they were actually raised, the share of actual food subsidy reduces in comparison to the reported. Food subsidy's share decreased from 71% of total subsidy (reported) to 47% (actual) in FY21.
- Adding PLIs to reported subsidy figures increases GoI's subsidy expenditure on 'Others' by 30% in both FY24 and FY25. The average share of 'Others' on the total actual subsidy expenditure remains unchanged.

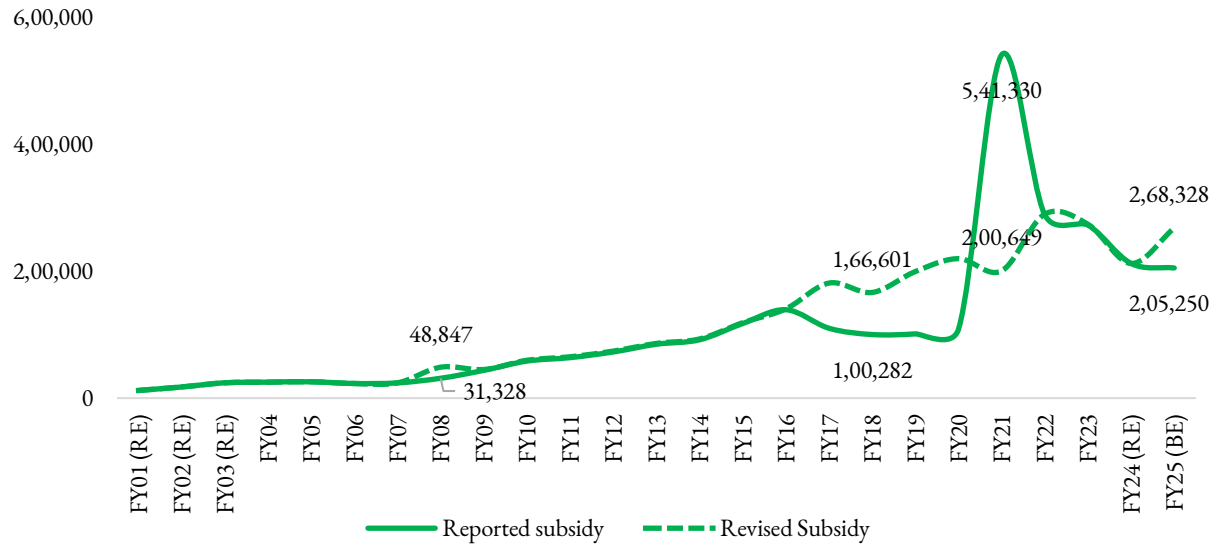
Food, fertilisers, and fuel, therefore, comprise the most crucial commodities for which the Union has to ensure adequate provisioning and subsidisation, and their burden can alter GoI's fiscal bandwidth significantly. These are discussed briefly in the following section.

It should be noted that the actual data presented here is likely understated since many subsidy-equivalent schemes have not been included, as pointed out earlier. If financial support schemes like PM-KISAN and Pradhan Mantri Awas Yojana (PMAY), among others, were to be accounted as subsidies as per the definition in the Aadhaar Act, the estimated total subsidy spending would increase significantly. However, as explained earlier, these have not been categorised as subsidies in this paper and have been shown as part of other welfare related spending in Figure 4 above.

2.3.1 Union's Food Subsidy

Food subsidies in India have been used for the dual purpose of protecting farmers against market price fluctuations of their produce and providing[13] food grains at negligible or free of cost to those who cannot afford them. It is, therefore, a producer and a consumer subsidy. Farmers are offered an MSP at which the government procures the produce, which is then distributed to the consumers at a Central Issue Price (CIP). The difference between the MSP and the CIP is termed a subsidy.

Figure 12: Food: Union's Reported Subsidy v/s Actual Subsidy (Union) (in Rs. crore)



Source: Union Budgets, GoI; CAG; FCI

Note: The data for FY25 also includes FCI's other borrowing liabilities.

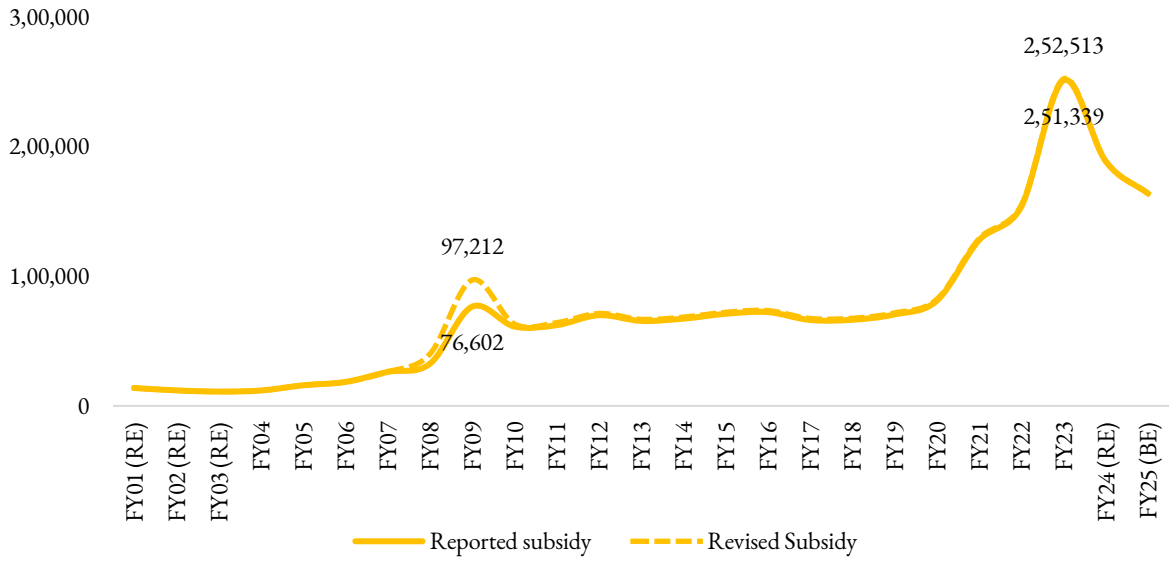
The centre's actual food subsidy bill stood at a little over 1% of GDP in FY23 (Figure 12). Additionally, the Union also incurred expenditure on facilitating grain movement and other logistical support such as storage and godowns. Spending on food subsidies is, therefore, understated. A

comprehensive analysis of spending on food subsidies needs to include these costs. Till FY21, central sector schemes of around Rs. 9,500 crore supported the Public Distribution System (PDS) and foodgrain management[14]. Most importantly, states are spending over and above the Union's expenditure on food subsidies. Together, this makes overall state involvement in agriculture a significant public enterprise, with little impact on improving the productivity and incomes in the sector. The expenditure by states on food subsidies is discussed in the next section.

2.3.2 Union's Fertilisers Subsidy

The Union Government's Department of Fertilisers (DoF) subsidises fertilisers for both agricultural and industrial use through two key schemes: Urea subsidy[15] and Nutrient-based subsidy (NBS) for phosphate and potash (P&K)[16] fertilisers. Both subsidies are producer-based i.e. GoI directs them to manufacturers/importers of fertilisers. Figure 13 shows the reported and actual subsidy on fertilisers, and there is little difference between them. The only major difference occurred in FY09 when special securities worth Rs. 20,000 crore were issued to fertiliser companies. Between FY11-20, actual fertiliser subsidy expenditure was relatively stable. After that, it consistently increased till 2023.

Figure 13: Fertilisers: Union's Reported Subsidy v/s Actual Subsidy (in Rs. crore)



Source: Union Budgets, GoI; CAG

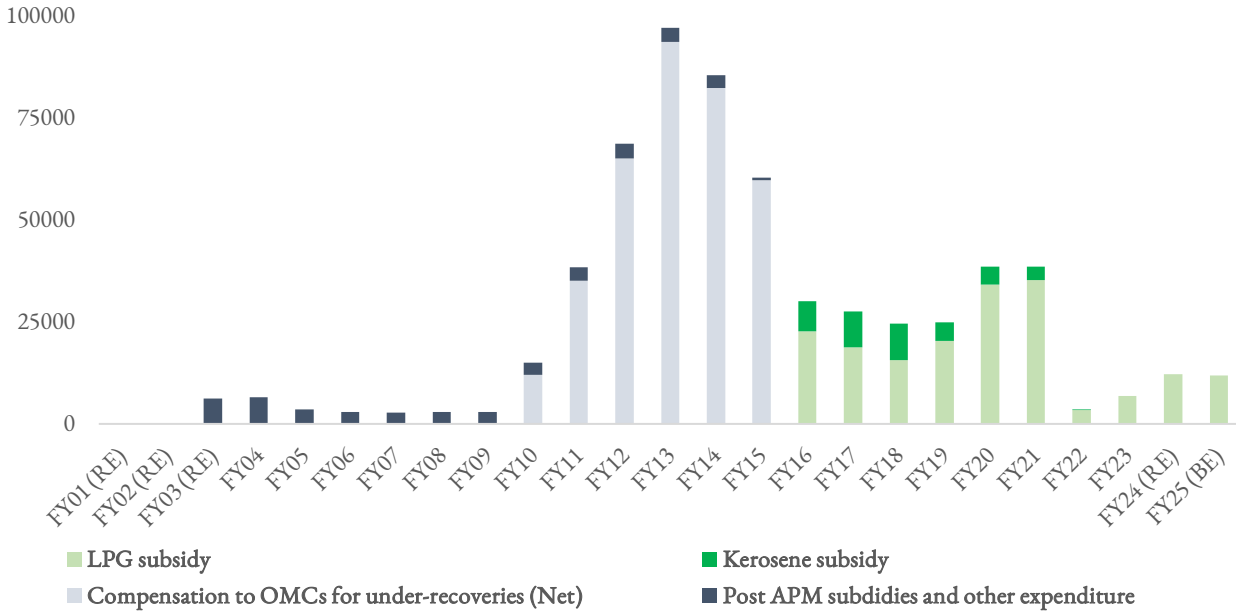
Box 2: Change in accounting heads for fertiliser subsidy

Until 2010, fertiliser subsidies, comprising P&K fertilisers and urea, were accounted under "Agriculture and Allied Activities" of Economic Services in the finance accounts. It must be noted that urea is also widely used to produce dyes, pigments, plywood, and adhesives. In 2010, urea subsidies came to be accounted under "Industry and Minerals" as subsidies provided to industrial units (Pathak et al., 2024; CGA, 2023). This led to an underestimation of the share of fertiliser subsidies in GoI's agricultural spending. However, urea is not used only by industries. A large portion of it, called agricultural-grade urea, is used by farmers. Such inconsistencies in calculations lead to incorrect estimations of subsidies going to agriculture. Moreover, changes in accounting heads are not transparently available in the finance accounts, making it more challenging to accurately assess subsidy expenditure.

2.3.3 Union's Fuel Subsidy

What is reported as fuel subsidy has changed every few years, making fuel subsidy data difficult to comprehend unless carefully triangulated through different documents. Before FY03, GoI maintained cross-subsidised prices for certain users, by commensurately taxing another set of users. This was called the Administered Pricing Mechanism (APM). As seen in Figure 14, between FY03-09, fuel subsidy included 'post APM subsidies and other expenditure'.

Figure 14: Breakdown of Union's Reported Fuel Subsidy Spending (in Rs. crore)

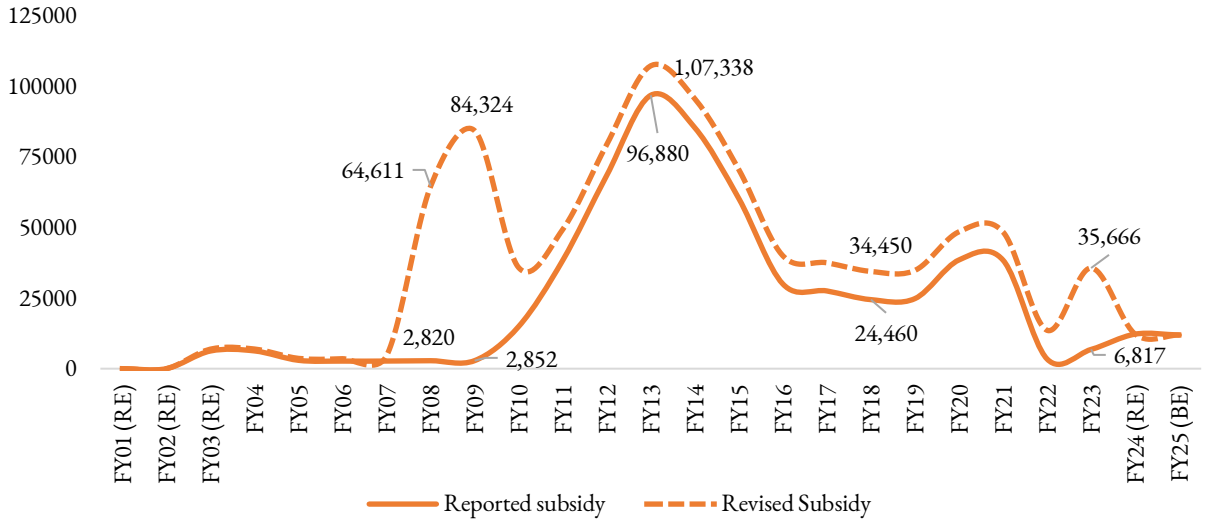


Source: Union Budgets, GoI

In Figure 14, under-recoveries are seen FY10 onwards. The compensation to OMCs for under-recoveries was also being paid in the earlier years by the government. However, these were met with equal 'deposits by the OMCs' to GoI, leaving the net payment from the Union to OMCs to be zero till FY10.

Later, fuel subsidies came to include both 'post APM subsidies' and under-recoveries. In FY13, GoI removed subsidies on diesel. Subsidy spending on fuel then decreased substantially by FY16, supported by international oil prices declines. Fuel subsidy now comprised only LPG[17] and kerosene. Kerosene subsidy was gradually decreased till FY22 and discontinued in subsequent budgets. LPG has, thus, been the main fuel subsidy[18] since FY16.

Figure 15: Fuel: Union's Reported Subsidy v/s Actual Subsidy (in Rs .crore)



Source: Union Budgets, GoI; CAG

Figure 15 reflects the actual fuel subsidy expenditure of the Union vis-a-vis what is reported. Between FY03-07, the actual fuel subsidy was underestimated on account of interest payments[19] on oil bonds. Data availability restricts us from estimating special securities between FY03-FY08. In FY09, while the cash subsidy as reported by the Union was Rs. 2,800 crore, bonds worth Rs. 76,000 crore were issued in lieu of cash subsidy. The issuance of oil bonds was discontinued in FY10, and subsidies were provided thereafter through direct budgetary allocations (DEA 2015). FY22 marked a sharp fall in reported fuel subsidy, with both Pratyaksh Hanstantrit Labh (PAHAL) and Pradhan Mantri Ujjwala Yojana (PMUY) seeing sharp reductions in expenditure. Reported subsidy, nevertheless, underestimated actual subsidy in FY22 on account of interest payments on special securities used to finance them.

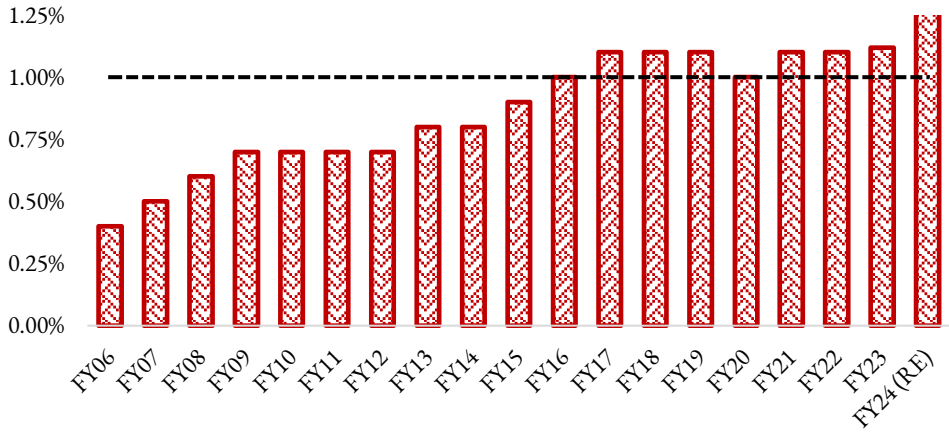
3. States' Subsidy Expenditure

In addition to the many subsidies the Union government provides, the state governments also routinely employ subsidies to improve accessibility and affordability of 'essential' goods and services. States provide details of their subsidy spending in Appendix II: Comparative Expenditure on Subsidy of the State Finance Accounts, hereafter referred to as subsidy statements. States primarily allocate subsidies to 'agriculture and allied activities' (including food, storage, warehousing and crop husbandry, and irrigation among others), and power. Subsidies are also incurred on rural development and the industrial sector. Because the development needs of each state vary vastly, their subsidy spending patterns are also substantially different.

3.1 States' Reported Subsidy

Figure 16 shows the total subsidy expenditure of the states (as reported) has been consistently increasing since the early 2000s (Figure 16). In FY23, the total spending of all states on subsidies was more than 1% of India's GDP, broadly equivalent to 8.6% of overall state revenue expenditure and 5.6% of overall state spending.

Figure 16: State Subsidy Spending as a % of National GDP



Source: State Finance Accounts, CAG; RBI; CGA

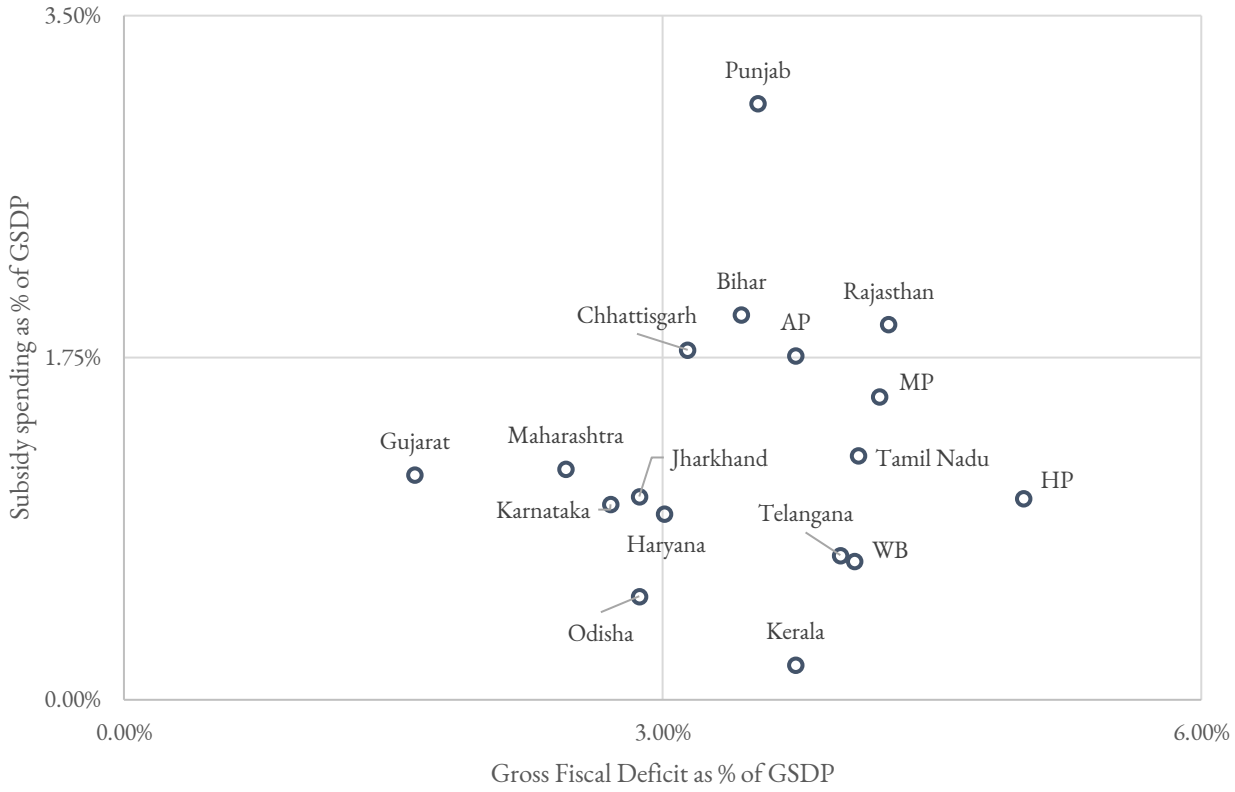
In this paper, we have reviewed the subsidy statements of 18 states[20]. Figure 17 shows the subsidy expenditure of these states relative to their fiscal deficits (as a percentage of their GSDP).

States in the top-right quadrant have fiscal deficits exceeding the FRBM target of 3% and also have relatively high subsidy spending as a percentage of GSDP. The bottom right quadrant contains states with high fiscal deficit, but relatively lower subsidies. Lastly, the bottom left quadrant depicts states with relatively low subsidy spending and fiscal deficits under 3% of GSDP.

Figure 18 highlights subsidy trends for select states from each quadrant. These are also the top spenders on subsidies, as a percentage of GSDP, in FY23. The subsidy expenditure for all the states for FY06-FY23 can be seen in Table A2.

- In the top right quadrant, both Punjab and Bihar maintained fiscal deficits of around 3.5% of GSDP in FY23. While Punjab's subsidy spending exceeded 3%, Bihar's was close to 2%. Both states have seen rising subsidy trends since the pandemic.
- Rajasthan, Andhra Pradesh, and Chhattisgarh also fall in this quadrant, each spending upwards of 1.5% of GSDP on subsidies. Rajasthan saw an increase in subsidies during FY22 and FY23. Chhattisgarh's subsidies peaked at 3.33% in FY20, the highest for any state between FY06 and FY23. For Andhra Pradesh, data post-bifurcation (FY15 onwards) shows a sharp upward trend in subsidies.
- In the second group, characterised by high fiscal deficits and low subsidy spending, Tamil Nadu kept its subsidies between 1-1.5% of GSDP from FY06 to FY23. Madhya Pradesh saw an increasing trend in subsidies until FY18, after which it declined.
- From the bottom left quadrant, Gujarat recorded low subsidy spending and fiscal deficits, maintaining subsidies at around 1% of GSDP throughout. Jharkhand's subsidy expenditure witnessed a sharp increase in FY19, from almost none until FY15. Maharashtra's spending on subsidies has seen a moderate increase but has remained within 0.5-1.5% of GSDP.
- To analyse the states' subsidy expenditure relative to their incomes, we refer to per capita income data from Sanyal and Arora (2024). High-income states usually have a greater fiscal capacity to provide subsidies, although with less need relative to their income status. As such, the highest-income states including Kerala, Tamil Nadu, Telangana, Gujarat, Haryana, and Karnataka, provided the least subsidies in FY23. In contrast, lower-income states like Bihar and Chhattisgarh allocated a larger share of their GSDP to subsidies. Interestingly, other lower-income states, like Jharkhand and West Bengal, spent comparatively less. Middle-income states like Punjab and Andhra Pradesh provided higher subsidies compared to others.

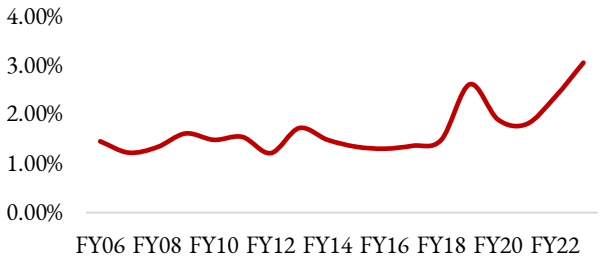
Figure 17: States' Subsidy Spending and Gross Fiscal Deficit as % of GSDP in FY23



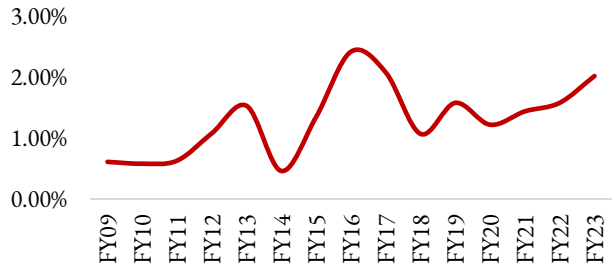
Source: State Finance Accounts, CAG; RBI; Economic Survey of Maharashtra 2023-24
Note: Data on subsidy spending of West Bengal is from RBI.

The breakdown of subsidies of these states and others will be discussed in more detail in the following subsections. Before this, it is important to address the data issues that affect the accounting of states' subsidies.

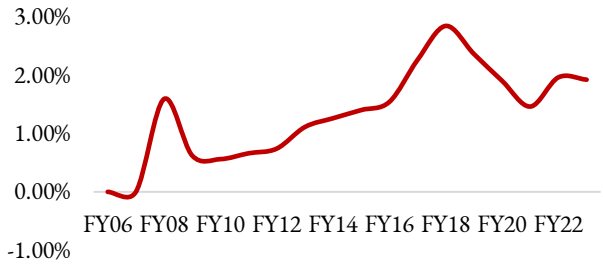
Punjab



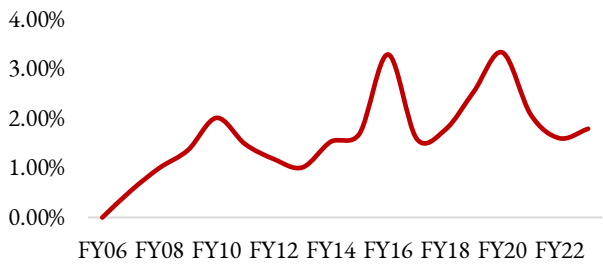
Bihar



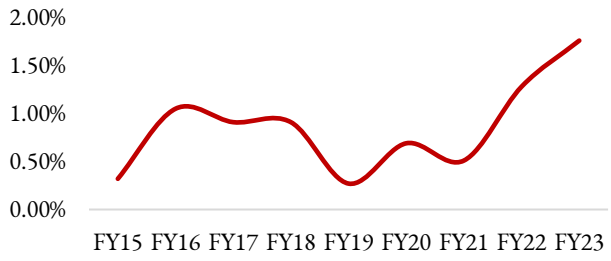
Rajasthan



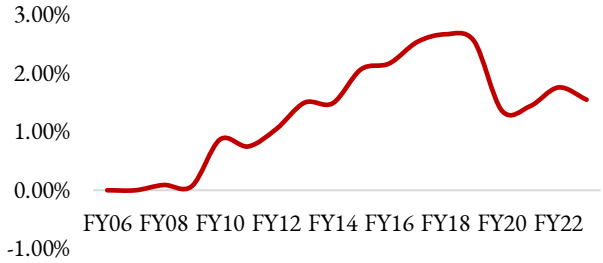
Chhattisgarh



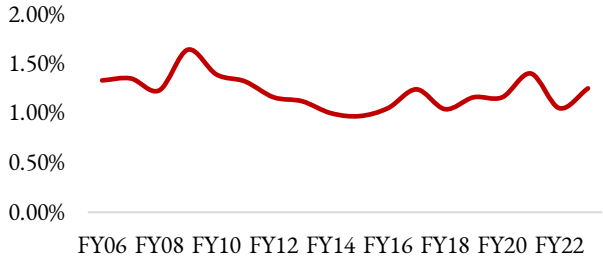
Andhra Pradesh



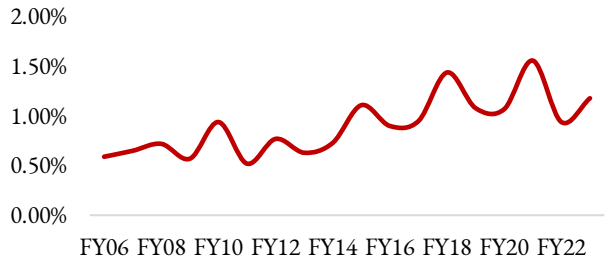
Madhya Pradesh



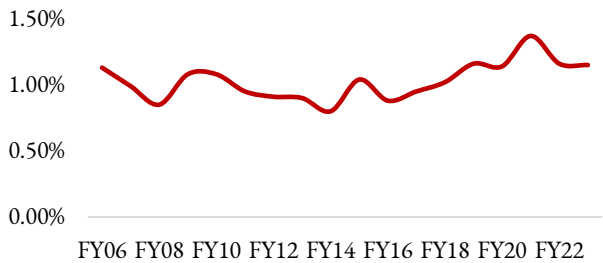
Tamil Nadu



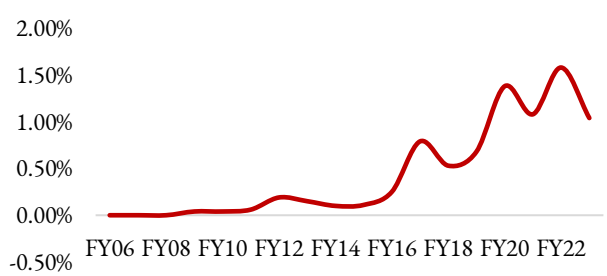
Maharashtra



Gujarat



Jharkhand



3.2 States' Data Gaps

Similar to the Union, state governments also use other financial means, typically from extra budgetary sources, to supplement their spending aside from what they report in budgets and financial statements. These have been used to finance a variety of spending patterns, including on subsidies and, more generally, on other welfare-related and capital expenditures. The data on such extra budgetary sources are, however, difficult to consistently obtain and, hence, our estimates of actual subsidy spending by states is under-estimated,

Additionally, different government entities and reports use varying definitions of what constitutes a subsidy. Some subsidies are in the form of direct transfers, while others are in-kind, implicit, or tax-based, making it difficult to quantify them comprehensively. As a result, state governments also classify their expenses as subsidies differently. This renders subsidy statements incomparable across states and over the years.

The following section describes the data gaps in the accounting of subsidies by states.

3.2.1 Other Means of Financing Subsidies

(i) Deferred Payments

Many state governments delay payments for subsidies or defer costs, making it difficult to get a real-time picture of total subsidy spending. For example, the largest fraction of the power distribution sector's revenue constitutes receivables from state governments – a significant part of which remain unpaid (Devaguptapu & Tongia 2020). As per the Power Finance Corporation's (PFC) reports on the Performance of Power Utilities, unpaid subsidies for all states taken together were the highest in FY21 at over Rs. 21,000 crore, possibly incurred as states tried to redirect their tight finances towards pandemic management. Adding all unpaid state subsidies over the period FY10-FY21 totals Rs. 74,000 crore.

Unpaid and deferred subsidies are, therefore, a key factor in explaining the deteriorating financial health of the power distribution sector in India (ibid). In the two years after FY21, state governments paid off subsidy arrears worth Rs. 27,000 crore (Devaguptapu 2024). These unpaid subsidies are not included in our actual subsidy estimates, as we found significant discrepancies in the data provided by PFC and states' respective subsidy statements. Thus, the data from the PFC could not be added to the data from state finance accounts. This data gap is discussed further in the later section on power.

(ii) EBRs

Government-backed entities and PSEs receive financial support from states in the form of equity, loans, grants, and subsidies. Some of this funding is channelled via extra-budgetary means. Subsidies

may also be provided off-budget, through these entities, without being directly reflected in the government's budget. For example, losses incurred by public utilities, such as state electricity boards, equate to subsidies although they do not appear in official budget documents. State PFCs use funds from state governments for subsidy payments, covering losses, and fulfilling capital and operational needs, with a significant portion directed towards subsidies. In FY21, various state PFCs received at least Rs. 40,000 crore in the form of EBRs (Gupta and James 2023).

In another case, Andhra Pradesh's reported total expenditure on subsidies was close to Rs. 5,000 crore in FY21, about half a percent of GSDP. However, in the same year, the extra-budgetary burden of the state was 9% of its GSDP. Of this, the majority was spent on the State Food Civil Supplies Corporation and its Power Finance Corporation (Gupta and James 2023). Thus, if EBRs used by states to finance subsidy schemes were to be included like it has been done for the Union, actual subsidy expenditure would be far higher. However, given their varying use by states and the lack of information around them, it is difficult to determine the purpose of extra-budgetary financing of an entity, i.e. whether it is for subsidies, operational costs, or capital infusion. Therefore, extra-budgetary financing of subsidies is excluded in the discussion that follows.

3.2.2 Other Subsidy-Related Expenditure

Aside from the non-reporting of deferred payments and EBRs, states' classification of subsidy spending is incongruent with established accounting rules. In the absence of a well-defined definition for 'subsidy', while some states include items such as freebies, financial incentives and implicit subsidies in their subsidy statements, others do not.

(i) Financial & Tax Incentives

Some sectors, like infrastructure, receive indirect subsidies through lower interest rates, tax breaks, or access to cheap land. These are often not captured comprehensively in subsidy data. CAG's 2024 State Accounts Audit Report for Karnataka reveals that the state extended additional financial assistance and incentives as subsidies, beyond what was reported in the subsidy statement. In FY23, these unreported subsidies exceeded Rs. 3,000 crore, raising the total from Rs. 22,000 crore to over Rs. 25,000 crore. Notably, such comprehensive audit reports are not available for all states.

In FY23, Gujarat provided fuel subsidies to fishermen in the form of tax rebates. Tax exemptions, rebates, and deductions often function as subsidies (e.g., lower tax rates for certain industries or sectors). However, aside from Gujarat, tax expenditures are not always fully captured or accounted for in subsidy calculations of other states.

(ii) Freebies

Many states spend heavily on freebies, such as distributing free laptops, gas cylinders, and bicycles, along with providing financial aid to women, farmers, and unemployed youth. For example, 9% of

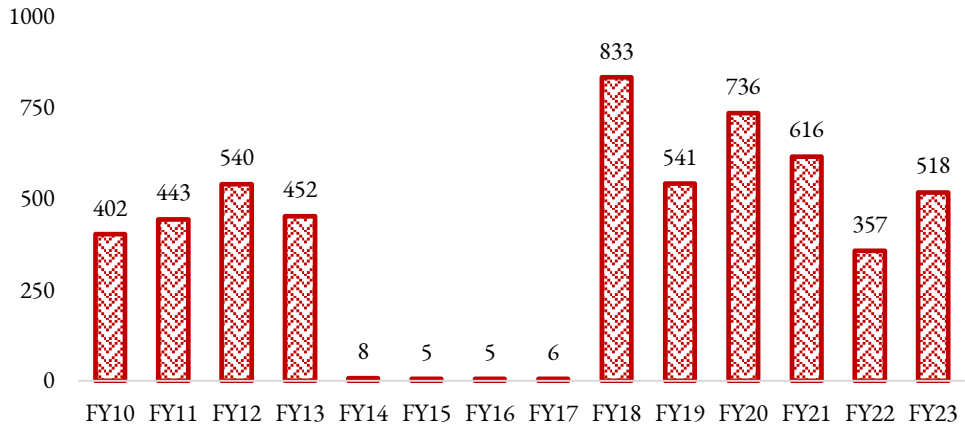
Tamil Nadu's total subsidy spending in FY23 was on the provision of free bus travel for women in the state under the Vidiyal Payanam Scheme. It is noteworthy that this expense more than doubled from the previous year in FY23 – only one of the many instances of the increased prevalence of 'freebies'. However, not all states list these kinds of financial or in-kind support as subsidies in the finance accounts. A free bus ride scheme has also been implemented in Punjab since FY21; while this is not reported in Punjab's subsidy statements, the Rs. 65 crore spent on distributing free textbooks to school students in FY22 and FY23 each, is included in Punjab's subsidy calculation.

Identifying each government scheme, programme and financial incentive which is in the form of a subsidy, across states and over the years, would require a clear and uniform criterion. Moreover, it is unclear where to identify these other related expenditures in the financial statements. Thus, as these schemes are not consistently available, we have limited our data to the published subsidy statements. If other related schemes were included, the actual state subsidies would be significantly higher.

(iii) Implicit Subsidies

Financial statements and budgets only present information on subsidies paid out explicitly. However, implicit subsidies remain hidden, and their costs are unrecovered in the provision of other private social/economic goods. Because these subsidies remain beyond the purview of budgets and finance accounts, their use can remain unchecked. States also do not provide any data on implicit subsidies, with Odisha as an exception. Figure 19 shows the implicit subsidy expenditure of Odisha between FY10-FY23.

Figure 19: Odisha's Reported Implicit Subsidy Expenditure (in Rs. crore)



Source: State Finance Accounts, CAG

However, Odisha does not provide any other details except the totals, and there seems to be no pattern in the reported implicit subsidy spending by Odisha. Aside from possibly indicating inconsistent accounting and categorisation of implicit subsidy, the reported data provides no information on the nature of this implicit subsidy spending. It is important to note the sudden

increase in implicit subsidy spending between FY17-FY18, and that in FY18, this expenditure was as much as one-third of the explicit subsidy expenditure. Such large figures warrant a detailed analysis, and therefore must be carefully measured, disaggregated, and reported. Thus, to comparably assess implicit subsidy spending across all states, a clear definition and uniform and transparent accounting procedures must be developed.

3.2.3 Incomparable Subsidy Statements

States' subsidy statements also follow varying formats[21], resulting in data gaps which disallow comparisons between states:

- States provide information under varying column headings (refer to Note 2 in the Annexure). For example, Madhya Pradesh does not give the scheme name under the description. Hence, we do know where the expenditure was incurred (agriculture, fisheries, food, etc), but the details of the nature of the expenditure remain unknown.
- As per Rule 26(d) of the Government Accounting Rules, 1990[22], "*the order in which the Major and Minor Head shall appear in all the account records shall be such as prescribed by the Central Government*" (CGA 1990). However, in Gujarat and Maharashtra's subsidy statements, major heads follow no order, leading to one major head spread across the subsidy statement and the expenditure under it not presented in a consolidated manner. In Gujarat, the major head '2401-Crop Husbandry' falls under the Agriculture, Tribal Development, and Social Justice Department. Such variations in format make it difficult to assess and consolidate the totals of each major head or department.
- Different states sometimes classify the same scheme under varying major heads. For instance, while most states categorised the cooking oil subsidy as a 'food subsidy,' some labelled it as a 'subsidy for women's development.' Similarly, power subsidies are listed differently across states. Major head '2801' is typically assigned for revenue expenditure on power. While Karnataka accounted for its power subsidy solely under this head, Punjab recorded it under '2801 - Power', '2401 - Crop Husbandry', and '2852 - Industries.'

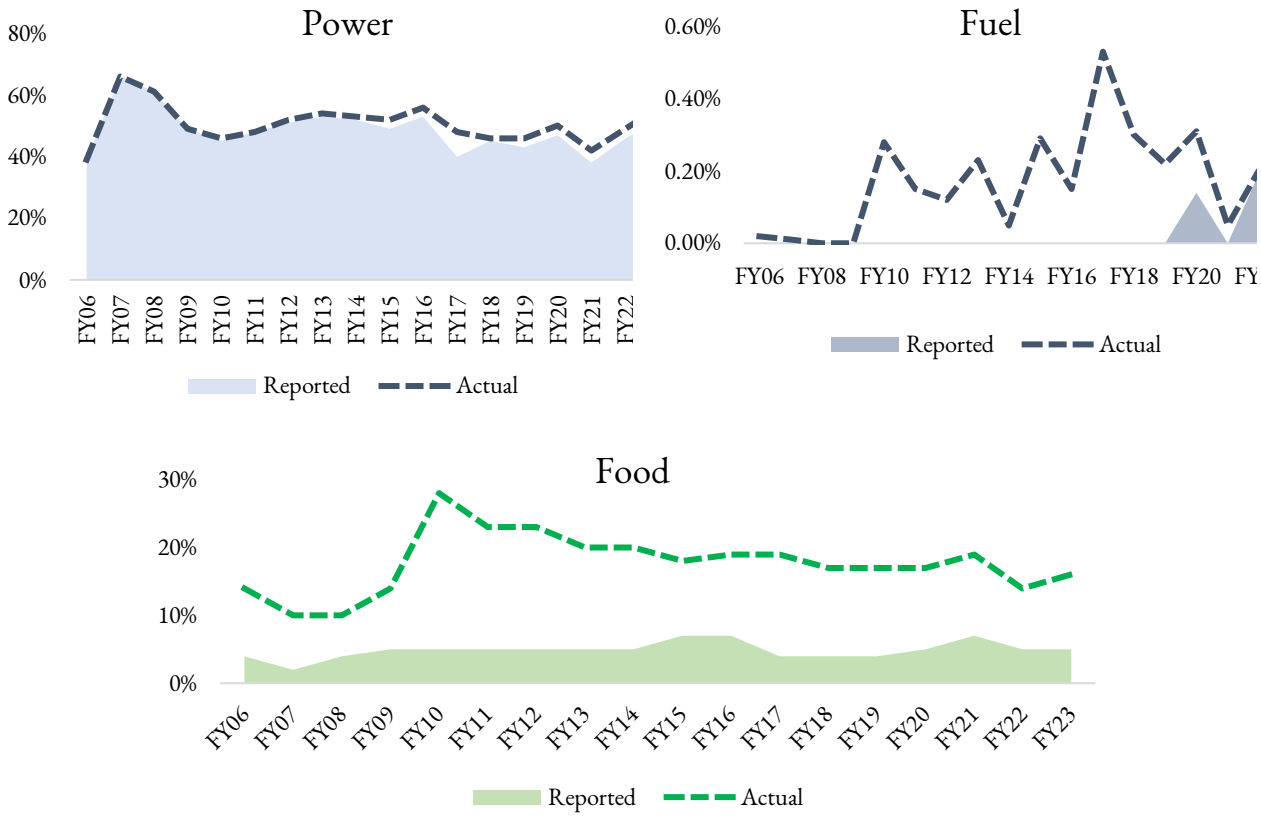
Rule 29 of the Government Accounting Rules requires that "the classification of transactions in Government accounts, shall have closer reference to the function, programme and activity of the Government and the object of the revenue or expenditure, rather than the department in which the revenue or expenditure occurs" (CGA 1990). Accordingly, to accurately assess total subsidy expenditures on food, fuel, and power, we consolidated subsidies by item. This required assessing each entry in the subsidy statement and classifying it under food, power, petroleum, new and renewable energy, or others.

For example, a subsidy under the designated major head for food subsidies '2408' is considered a reported food subsidy. Our actual food subsidy includes additional food subsidy schemes which are classified under major heads other than '2408'. A similar exercise was done for power, petroleum and new and renewable energy subsidies of the above-mentioned 18 states.

3.3 States' Actual Subsidy

Following this exercise, the actual subsidy expenditure of 18 states on food, power, and fuel is calculated. Figure 20 shows the difference between the states' reported expenditure on the three items compared with their actual expenditure. It can be seen that the actual food subsidy of the states is much higher than the reported food subsidy. In FY23, food subsidies were reported to be cumulatively over Rs. 12,000 crore for the 18 states. However, the actual food subsidy was higher by at least Rs. 25,000 crore. This pattern is visible across the years, reflecting that wide variations exist in the calculation of food subsidy spending of states. Additionally, states have not reported spending on fuel subsidies. However, some states do spend on kerosene subsidies, resulting in the difference between actual and reported subsidies.

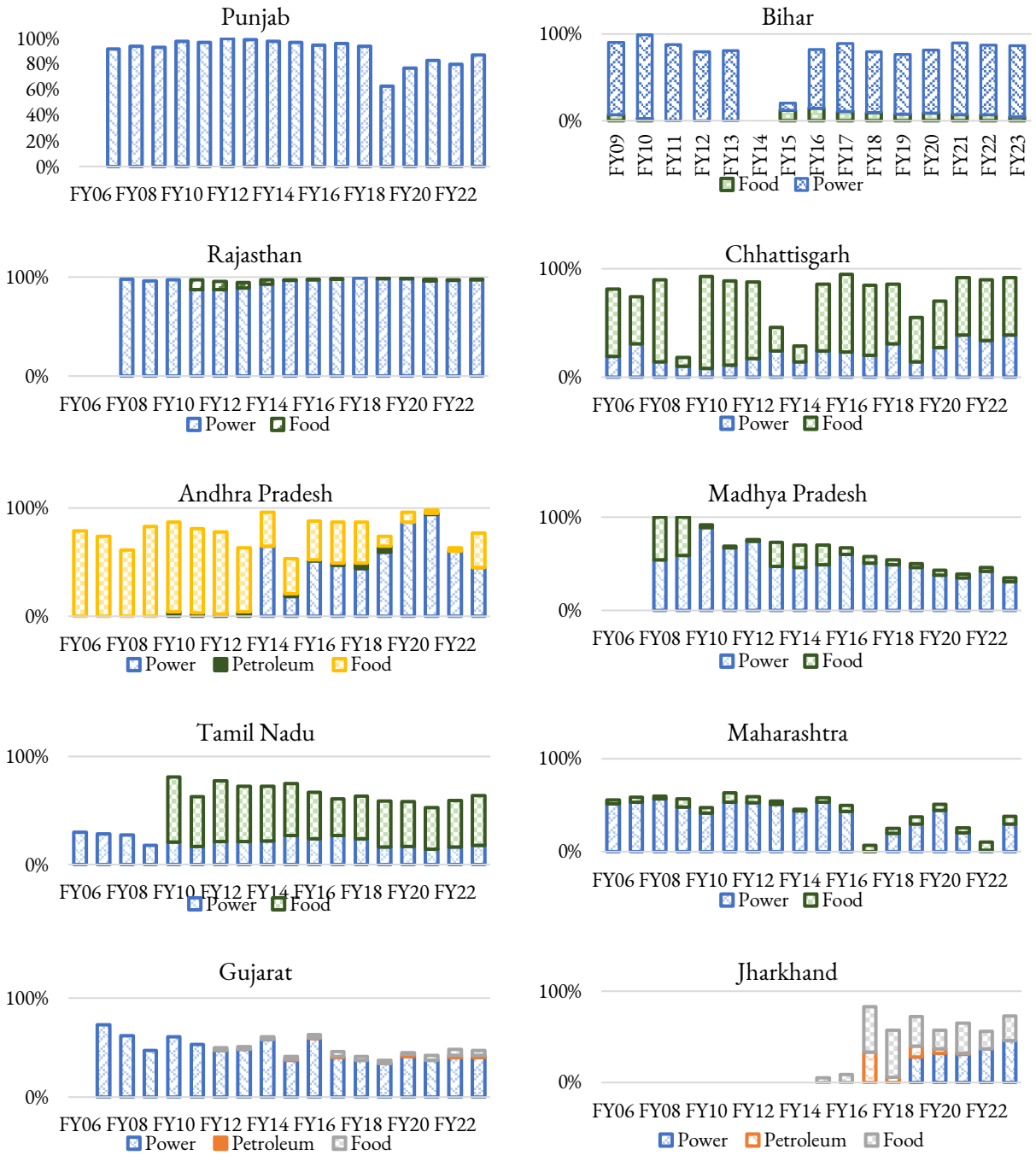
Figure 20: Key Select State Subsidies on Power, Petroleum and Food (% of Total Subsidies)



Source: State Finance Accounts, CAG

Food and power comprise the most subsidised items by states. Figure 21 shows the breakdown of subsidy expenditure of the states discussed previously.

Figure 21: Breakdown of State Subsidies (as % of Total State Subsidy)



Source: State Finance Accounts, CAG

Punjab, Bihar, Rajasthan, Chhattisgarh and Andhra Pradesh, the relatively high fiscal deficit and high subsidy spending states, all spend more than 75% of their total subsidies on just power and food.

- As much as 87% (nearly Rs. 18,000 crore) of **Punjab**'s subsidy expenditure was on power in FY23. Half of this constituted power subsidy to farmers, and the rest was on rural electrification. Punjab does not report any spending on food subsidies. However, the state does heavily support its agriculture sector through subsidies. In FY19, at least 32% of Punjab's total subsidy spending was for debt relief to farmers. Aside from the agriculture sector, the state provides subsidies to the industrial sector, and for the promotion of solar energy.
- **Bihar** allocated almost all of its power subsidy spending, comprising 83% of the total, to Bihar State Power (Holding) Company Ltd. (BSPHCL) in FY23. In FY22 and FY23, 80% of its food subsidy spending was on the doorstep delivery of food grains. In FY23, the state incurred 7% of its total subsidy expenditure on the industries sector and over 3% on agriculture. About one-third of this agriculture subsidy spending was for the promotion of organic farming.
- **Rajasthan** has historically spent more than 96% of its total subsidy expenditure on power– in FY23, it spent more than Rs. 25,000 crore on power subsidy, the highest among all 18 states. The state spends minimally on food subsidies; in FY23, it spent under Rs. 70 crore on food subsidies under the Antyodaya Families Anna Yojana. The rest was spent on agriculture, mainly micro irrigation schemes such as the Pradhan Mantri Krishi Sinchayee Yojana and PM KUSUM.
- Nearly 40% of the total spending of **Chhattisgarh** in FY23 was to subsidise power in the form of free electricity to agriculture, waiving electricity fees of domestic consumers, and subsidising single-bulb connections. More than half of the total power subsidy went to farmers in both FY22 and FY23. In FY23, Chhattisgarh spent more than half of its total subsidy on food; of this, the majority was spent on the Chief Minister's Food Assistance Scheme and as payment to the State Cooperative Marketing Federation for meeting losses in food grain procurement. Aside from the food and power subsidy, Chhattisgarh spent 6% of its total spending in FY23 on supporting farmers – just under half of which comprised an interest subsidy to farmers.
- **Andhra Pradesh**'s power subsidy, like that of Chhattisgarh, made up over 40% of the total spending in FY23. The state has historically spent heavily on power subsidies. The case of erstwhile Andhra Pradesh is noteworthy. Power subsidies were reported to be more than Rs. 6,500 crore in FY14, as opposed to zero in the previous year. However, it is noted that the state was already incurring an expenditure of Rs. 6,300 crore on power subsidies in FY13 (PTI 2013), which was not reflected in its subsidy statement. Therefore, the apparent increase in FY14 can be attributed to a change in accounting practices rather than the addition of a new

subsidy. In Andhra Pradesh, food subsidies decreased significantly until FY23. Thereafter, it surged from 3% of the state's total subsidies in FY22 to 33% in FY23.

Madhya Pradesh and Tamil Nadu are two of the relatively high fiscal deficit and low subsidy spending states – both allocate about two-thirds of their total subsidy spending on food and power.

- **Madhya Pradesh** has reduced its power subsidy since FY16, which was 60% of total state subsidies. It was brought down to 31% in FY23, of which one-third was for farmers. In addition to the power subsidy, as much as 35% of the total subsidy was provided to agriculture in FY23. Its food subsidy reached its peak in FY15 at a little over Rs. 2,000 crore. Since then, the state's food subsidy share in total subsidy spending has also consistently declined.
- **Tamil Nadu**'s power subsidy, on the other hand, has stayed a little under 20% of the total subsidy spending since FY19. Almost all of its power subsidy in FY23 was for domestic consumers. The state spent close to half of its total subsidies in FY23 on food, amounting to more than Rs. 13,000 crore. It paid significant production incentive subsidies to paddy and sugarcane farmers.

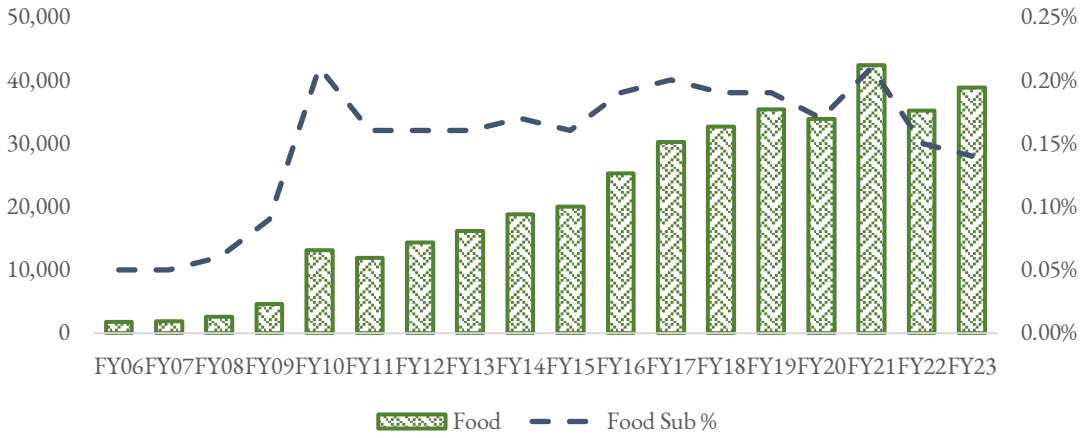
Of the relatively low fiscal deficit and low subsidy spending states, Maharashtra, Gujarat and Jharkhand have spent just around half of their total spending on food and power. A large portion of their total subsidy spending has been directed towards loan waivers for farmers, to the industrial sector and for rural development.

- **Maharashtra**'s power subsidy majorly targets three categories of consumers – industries, agriculture, and textile and power looms. In FY23, the state spent Rs. 13,000 crore, 30% of its total subsidies, on power. The state's food subsidy expenditure has risen consistently, and was close to Rs. 4,000 crore in FY23, 9% of the total state subsidy spending– a small portion of which was for the Rs. 10 Thali Scheme. Notably, Maharashtra spends substantively on relieving the debt burden of farmers through interest subsidy under the Pradhan Mantri Crop Insurance Scheme and the Mahatma Jyotirao Shetkari Karj Mukti Yojana. These two schemes alone comprised over 18% of total subsidy spending in FY23. Additionally, 14% of its total subsidy spending went towards incentive schemes for the industrial sector in FY23.
- Power subsidies have steadily declined as a share of **Gujarat**'s total subsidy spending– they accounted for 40% in FY23. The share of food subsidies is low and is recorded under 'food security' without any other details. Like Maharashtra, Gujarat has also provided interest relief schemes for farmers.
- In **Jharkhand**, power subsidies were recorded in its subsidy statement only in FY19 onwards. The state spent about 46% of its total subsidy on power in FY23. Of its food subsidy spending

in FY23, at least 17% was on the 'food grain distribution scheme for poor persons not covered under NFSA' and 45% on the Priority Household Scheme. Additionally, Jharkhand spent over Rs. 300 crore on loan waiver schemes for farmers and about Rs. 260 crore on 'distribution of dhoti sarees to Below-Poverty-Line families' in FY23.

3.3.1 Food

Figure 22: States' Subsidy Spending on Food (total of 18 states)



Source: State Finance Accounts, CAG; Union Budgets, GoI

In addition to the over Rs. 270,000 crores spent by the Union on food subsidy in FY23, 18 major states cumulatively spent about Rs. 40,000 crore. The states' numbers are large enough to bring them to the forefront of the discourse when evaluating the efficiency of food subsidies. Figure 22 shows the increasing trend of states' actual food subsidy spending. It peaked in FY21, as states initiated schemes to relieve the cost of living pressures during the pandemic. Combined state food subsidy spending stood at 0.21% of GDP.

- The four states where a significant portion of food subsidy expenditure is concentrated are West Bengal, Tamil Nadu, Maharashtra, and Chhattisgarh. **West Bengal**, through its Food and Civil Supplies Department, consistently allocates funds to two key schemes: rice subsidy for above and below-poverty-line families, and transport subsidy for distributing rice and wheat. In FY21, West Bengal alone accounted for over Rs. 12,000 crore of the Rs. 42,000 crore total food subsidy across all states.
- **Kerala** allocated nearly 85% of its total subsidies to food in FY23, primarily focusing on paddy procurement through the Kerala State Civil Supplies Corporation (KSCSC), ration subsidies, and grants to KSCSC. The grant was significantly increased in FY21, raising Kerala's food subsidy share to 90% of its total subsidy expenditure.

- In FY23, of the total state subsidies of **Odisha**, one-fourth were spent on the Annapurna Scheme to provide food security to senior citizens. Around half of this was reserved for special component plans for scheduled castes and tribal areas. In FY21 and FY22, food subsidy was more than 40% of the total state subsidy.
- **Telangana**'s food subsidy comprised only rice subsidy. However, it was accounted under departments like Tribal Welfare and Social Welfare, apart from the Civil Supplies Administration. Rice subsidies were halved after FY20, while power subsidy was doubled.

3.3.2 Power

State governments extend power subsides in two ways:

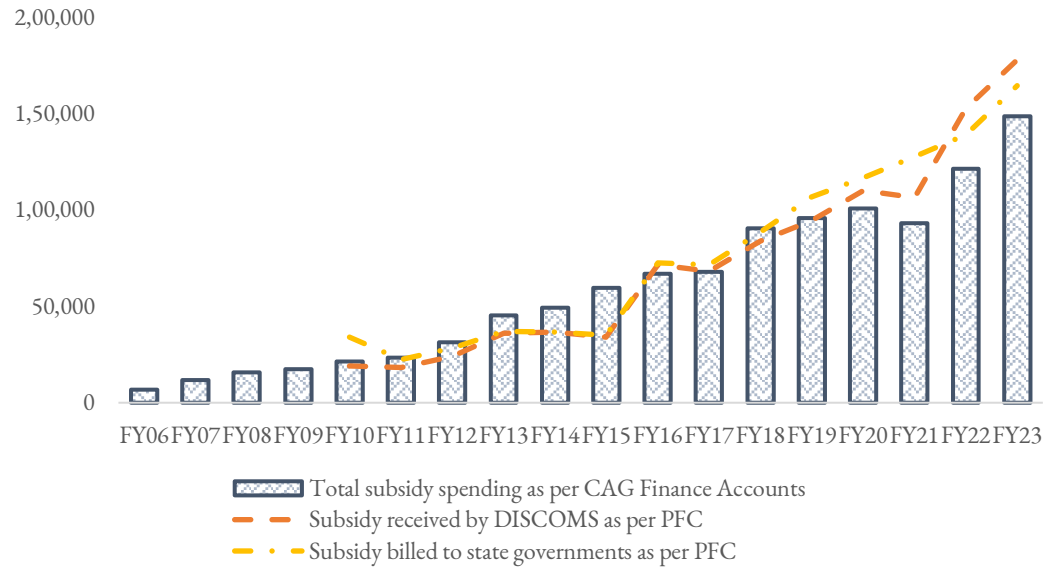
- direct subsidies, that reduce the consumer tariff of a unit of electricity, with the state government compensating distribution companies (DISCOM) for having to sell electricity below cost;
- cross-subsidies, using commercial and industrial consumers to provide subsidised power to agricultural and residential consumers.

It is important to note that subsidies provided through the under-pricing of public services, such as through cross-subsidisation of electricity, may not always be recorded as part of reported subsidy figures, despite being significant in size.

To analyse power subsidy trends, we use data from the State Finance Account Reports and the PFC. PFC in its reports on the Performance of Power Utilities presents granular data on the revenue breakdown of DISCOM.

Figure 23 reflects the increasing trend in power subsidy expenditure of the 18 states since FY06. The graph also shows the two trendlines for 'subsidy billed' and 'subsidy received', as per PFC reports. Subsidy billed is the amount that state governments must reimburse to DISCOMs for selling electricity at lower than the regulatory tariff. Subsidy received or realised is the compensatory payment which DISCOMs actually receive from the State. When the subsidy received is a fraction of the subsidy billed, the difference between the two is termed unrealised or unpaid subsidy and reflects deferred payments (Devaguptapu & Tongia 2020). The gap between the orange and yellow trendlines in the graph below reflects unpaid subsidies.

Figure 23: States' Power subsidy of 18 states as per Finance Accounts and PFC (in Rs. crore)



Source: State Finance Accounts, CAG; PFC

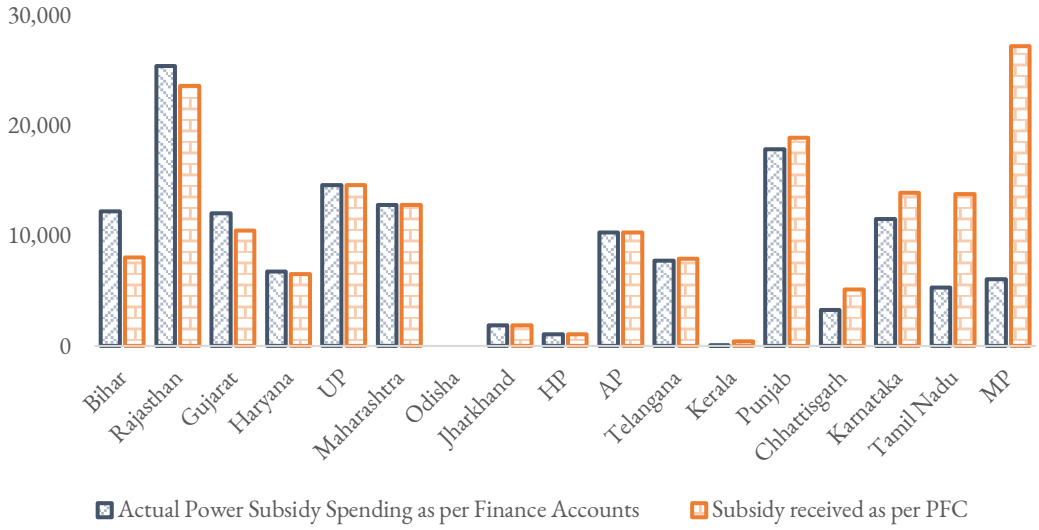
In FY23, the subsidy received by DISCOMs (of the 18 states) was nearly Rs. 30,000 crore more than what was accounted in the CAG State Finance Accounts. It is unclear where the remaining subsidy is being accounted for in states' finance accounts. Figure 24 suggests that in FY23, subsidy received exceeded actual subsidy spending, primarily in 5 of the 18 states – Madhya Pradesh, Tamil Nadu, Karnataka, Chhattisgarh, and Punjab (in ascending order). The difference between the two measures of subsidy is likely reflective of data gaps, such that the definition and accounting methodology adopted by PFC and CAG concerning subsidy received and paid varies and cannot be ascertained.

Whether this inconsistency is a one-off incident or a recurrent accounting practice needs to be further examined. If recurrent, this inconsistency merits a look at where state finance accounts record this additional subsidy expenditure, if not under their subsidy statement. Among the inconsistencies:

- Tamil Nadu, in its CAG subsidy statement, has consistently accounted for power subsidy expenses at a level far below what PFC has listed as the subsidy received by DISCOMs (Figure A3). A fraction of the subsidy received must be accounted for under other unclear accounting heads, kept out of the subsidy statement, or perhaps financed by EBRs.
- Madhya Pradesh does not depict any consistent pattern in under or over-estimation of power subsidy in its finance accounts (Figure A3).
- As per PFC reports, Madhya Pradesh had the highest level of absolute power subsidy released in FY23 among the 18 states. However, as per the Finance Accounts, Rajasthan spent the highest on power subsidy expenditure in that year.

Such inconsistencies in the classification of subsidy spending, therefore, restrict us from accurately assessing the power subsidy burden of state governments.

Figure 24: States' Actual Power Subsidy Spending and Subsidy Received & Booked in FY23 (in Rs. crore)



Source: State Finance Accounts, CAG; PFC

3.3.3 New and Renewable Energy

Overall spending on new and renewable energy by the major states stood at a little over Rs. 2,800 crore in FY23. Of this, 42% was reported as capital expenditure, with the bulk of this being done by Chhattisgarh and Gujarat. Most other states' spending is in the form of revenue expenditure, of which one-fourth is in the form of subsidies.

Only a few states record subsidy spending under new and renewable energy (major head 2810) in their finance accounts – Maharashtra, Tamil Nadu, Haryana, Gujarat, and Madhya Pradesh were the only states which accounted for any expenditure at all under this head between FY06-23. Their combined expenditure in FY23 by these states was Rs. 400 crore, of which Haryana alone spent more than Rs. 300 crore. These include schemes for the installation of solar water pumping systems, grid-connected rooftop solar power plants, the promotion of clean energy for urban industrial and commercial applications, and research and development. Besides, Haryana and Maharashtra are the only states which have given subsidies under this head every year during the mentioned period.

4. Way Forward

Robust data are imperative to consistently evaluate the extent and quality of subsidy spending, as part of the overall strategy for all financial data related to government expenditure. Information gaps which render data incomplete and incomparable at the national and sub-national levels hinder the the ability to monitor progress and patterns, course-correct, and fully assess the impact of policies.

Undoubtedly, when such expenditure commands a significant portion of public spending, exposes the exchequer to international price volatility, and is tied to electoral promises, quality fiscal data becomes a public good. Consistent and well-defined accounting standards and frameworks, timely and reliable reporting, automatic mechanisms for deviation correction, and sanctions for non-compliance, across the national and sub-national governments, are crucial to build a stronger PFM system for India (Singh 2023). Unless this is done, it will be difficult to build the comprehensive fiscal data repository that India needs.

Transparent and disaggregated data on subsidies are crucial for understanding the size, design, and impact of a State's principal instrument to achieve equity and welfare. Especially with regard to the subsidy spending of the previous years, it is imperative to understand the full extent of subsidy expenditure which has occurred[23]. This paper has highlighted the many ways in which subsidies have been financed by the Union and state governments, over and above what was reported in budgets, in the spirit of bringing transparency to India's subsidy spending in recent decades.

Nevertheless, while there have been improvements in the transparency of subsidy spending by the central and state governments in India, significant gaps remain. Uniform reporting standards across states, timely data, and a comprehensive view of both on- and off-budget subsidies would improve the ability of citizens and policymakers to assess subsidy spending effectively. Presently, expenditure data are scattered across different levels of government and, within them, across various departments and agencies, making it difficult to compile and analyse fully.

Although the CAG has consistently tried to identify these gaps in its audit reports, it is crucial to standardise definitions and data formats and integrate information from various sources in reported data. Unless this is done, data gaps will persist in the absence of a uniform reporting framework. The data gaps discussed in this paper are summarised in Table 2.

Table 2: Summarising Data Gaps in Subsidy Reporting

Data Gap	Description	Example
In the absence of a clear definition of subsidy, what should be included in the calculation of subsidy can create many data gaps.		
Incompleteness	It cannot be ascertained from the budget how much of the subsidy spending is the payment of carry-forward liability and accrues to past years.	FY21's fertiliser subsidy (revised estimates) made provisions for clearing the carry-forward liability accumulated. NSSF loans to FCI were taken on budget in FY21, and were reflected in the cumulative reported food subsidy.
	Other modes of financing subsidies, such as EBRs and Special Securities are not reflected in Statement 7 (Union Budget) or Appendix II (state finance accounts). All subsidy-equivalent schemes, as well as other costs, are also not included.	FCI borrows from many other sources which are not reflected in the reported subsidy. SBAs advanced to fertiliser companies comprise EBRs -- however, such information has not been provided for audit. States also leverage EBRs for financing subsidies. PLI schemes and freebies are not enlisted as subsidy spending in the budget. Expenditures such as storage and movement for food grains are not included in food subsidies. Tax incentives are not uniformly considered subsidy expenditure.
Inconsistency	Components for calculating subsidy expenditure change abruptly, without adequate explanation. This required us to add each component separately (given in Demand for Grants) to match the resulting total with that given in Statement 7.	'Under-recoveries to OMCs' was included in the calculation of fuel subsidy between FY10-FY15, but not in FY22. Before FY10, 'under-recoveries' were matched with equal 'deposits by the OMCs'. Thus, what comprises fuel subsidy has changed every few years.
	A change in spending levels under a particular head could merely be due to a change in accounting heads.	Until 2010, all fertiliser subsidies were accounted under "Agriculture and Allied Activities". In 2010, a part of these subsidies came to be accounted under "Industry and Minerals". Power subsidy was reported to be zero in Andhra Pradesh's finance accounts until 2014. However, other indicators suggest that power subsidies were being given by the state. Subsequently, power subsidies became apparent in the finance accounts, suggesting a change in accounting practice had taken place.
Incomparability	Subsidy statements of state accounts record subsidy spending under a combination of heads including departments responsible, head of account, scheme name, state fund or central assistance and revenue or capital account. However, each state typically uses a different set of heads and formats.	Among states, Madhya Pradesh does not give scheme names under the description, but the title of the major head instead.

	Major heads are, in some cases, not presented together, are not in ascending/descending order, and are not totalled consistently.	Among states, Gujarat's entries under major heads are scattered, and no totals for each major head are provided.
	The categorisation of subsidies under major heads is not uniform across states.	While some states categorise the cooking oil subsidy under food subsidy, others consider it a subsidy for women's development.
	Data in finance accounts cannot be easily compared with and differs from other data sets.	There are wide variations in reported subsidy spending in the finance accounts and subsidy received as per PFC. In some states, these variations appear consistently over the years.
Data Unavailability	Our data source for principal raised and ongoing bonds – Assets and Liability Statements (Part B) of the Receipts Budget – is only available post-FY08. However, since the Union was reporting interest paid on some of these bonds after FY03, it is most likely bonds were being raised before FY08.	
	Data on interest payments post-FY23 are unavailable, as the latest Finance Accounts publication of the CGA are not yet available.	
	Implicit subsidies are not accounted in budgets and finance statements.	Odisha provides its implicit subsidy spending in its finance accounts but does not give its breakdown.

An essential starting point is to establish a comprehensive definition of subsidies, including implicit ones, to understand their scope, ensure their full measurement, and differentiate them from other welfare-related spending. As Gupta and James (2023) have noted in the context of off-budget borrowings—which are one of the opaque ways in which subsidies are financed—data gaps tend to reflect legal gaps, and persist in the absence of a uniform reporting framework. In this light, a comprehensive definition of subsidies could be statutorily established by way of an overarching PFM law that applies uniformly to the Union as well as the states (James, Patel, and Singh 2022).

All expenses that fit within this definition should be recorded in the statement of subsidies. This would require expanding the scope of the statement, as was done when NSSF loans to FCI were merged with existing subsidies in FY2124. Similar steps with regard to the special securities issued in lieu of cash subsidies, other current borrowing liabilities of the government, and implicit subsidies, need to be taken to give a complete assessment of India's subsidy spending.

These steps apply equally to the sub-national level, where implicit subsidies should be defined and reported to bring uniformity to the Union and state accounting standards. Overall, the classification and calculation of subsidies must be done uniformly and transparently across all levels of government to ensure comparability across the years.

In a similar vein, to better understand the direction and use of government subsidy spending, the GoI's categorisation of major expenditure heads needs to be transformed. Presently, the categorisation is outdated and does not reflect outcome-based policy priorities25. For example, presently, food subsidy comprises the largest Union expenditure on the agriculture sector—but the inclusion and

classification of consumer-based food subsidies under "agriculture and allied activities" is not relevant anymore, as consumers of subsidised food are not necessarily farmers26. In this regard, food subsidies need to be excluded from the accounting of public expenditure on agriculture development, as they inflate actual government expenditure towards the sector.

Convincing Indian states to report uniform spending requires a systematic approach that involves engaging with the state governments and creating awareness about the benefits of standardised reporting across all levels of government. There is also an increasing integration of technology in PFM systems with the adoption of the Financial Management Information Systems (FIMS). These can be used to improve reporting, assist in spending decisions and budget planning, and achieve greater efficiency in expenditure. For example, digital infrastructure can already help in allocating fertilisers to farmers based on the size of their land. Collaboration, stakeholder engagement, and continuous advocacy will play a vital role in driving the adoption of standardised reporting practices.

The shortcomings of fiscal data impede the accurate assessment of public resources. Better data and improved evidence on subsidies in real-time will encourage citizen oversight and allow governments to build the case for phasing out unproductive subsidies or for improved targeting. A constrained fiscal space limits spending towards human capital and climate goals. With more transparent reporting, subsidy expenditure can be better aligned with welfare and sustainable development policies, and allow India to maximise the private as well as social benefits of public spending.

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Annexure

Note 1: Data Sources

Our analysis in this paper has utilised data from a variety of sources. This paper began with a careful compilation of data on the Union's and States' subsidy expenditure, followed by a precautionary triangulation by comparing it with what was available in the news media, and academic research.

Data on the Union's subsidy expenses has been compiled from Statement 7 (Statement on Subsidies and subsidy-related schemes) of Part I of the Expenditure Profile of the Union Budget. Wherever disaggregated data was needed, especially, concerning fuel and fertiliser subsidy, we referred to ministry-wise budget estimates of the Union budget. All budget data is presented as follows– 'actuals' for FY04-FY23, revised estimates (RE) for FY01-FY03 and FY24, and budget estimates for the current fiscal year, FY25.

Data on principal payments, principal liability raised and bond maturation dates of special securities has been extracted from Assets and Liability Statements (Part B) of the Receipts Budget of the Union budget and on interest payments on special securities (2049-60) from GoI's Finance Accounts available on Controller General of Account's (CGA) website. EBRs, including NSSF loans, are presented under Part IV of the budget's Expenditure profile; and data on PLIs has been obtained from Statement 4B on Central Sector Schemes. Information on deferred liabilities has been inferred from ministry-wise budget estimates and the Comptroller and Auditor General of India's (CAG) Audit Reports.

Subsidy spending data for the states has been extracted and compiled from Appendix II: Comparative Expenditure on Subsidy (Part II, Volume II) of CAG's State Finance Accounts, available for FY06-FY23 for all states. To understand power subsidy spending, we also referred to the Power Finance Commission's Report on the Performance of Power Utilities.

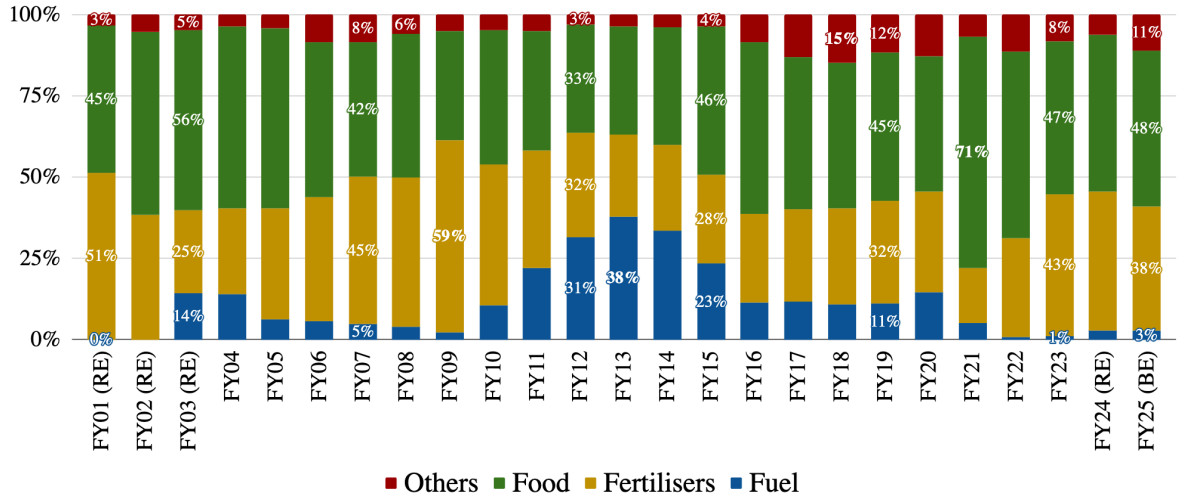
Note 2: Format of Subsidy Statements

The format of the subsidy statement contains the following columns:

1. Ministry/Department: The name of the ministry and the department administering the subsidy.
2. Head of Account: The designated functional head or sector to which the subsidy pertains. For example, major head 2408 represents the Revenue Expenditure Head for Food, Storage, and Warehousing. This is further divided into sub-major heads and minor heads.
3. Description of Subsidy: A brief description of the specific subsidy (e.g., electricity subsidy to farmers, food subsidies, subsidies on fertilisers) or the scheme name.

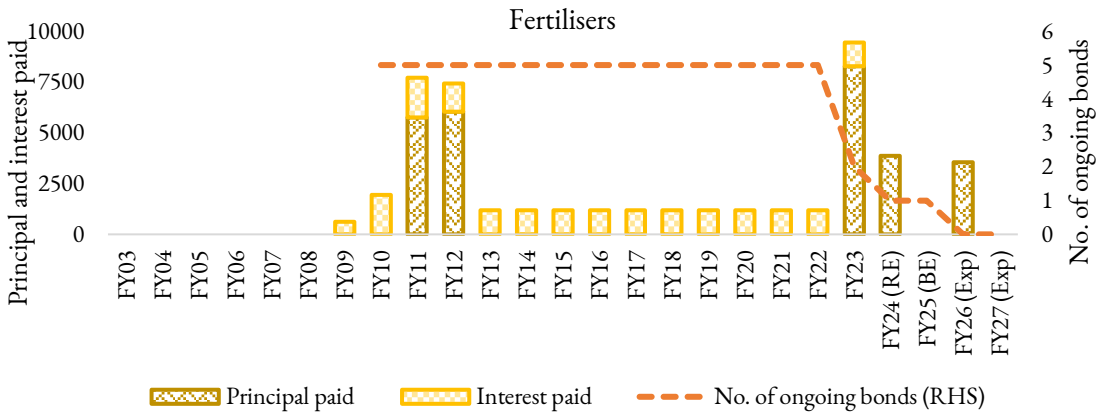
4. Expenditure: The total expenditure on the subsidy in the current and the previous financial year.
5. State Fund Expenditure/ Central Assistance: It is noted whether the expenditure is incurred from the state's own fund or using central assistance under centrally sponsored or central sector schemes.

Figure A1: Composition of Union's Reported Subsidy Expenditure

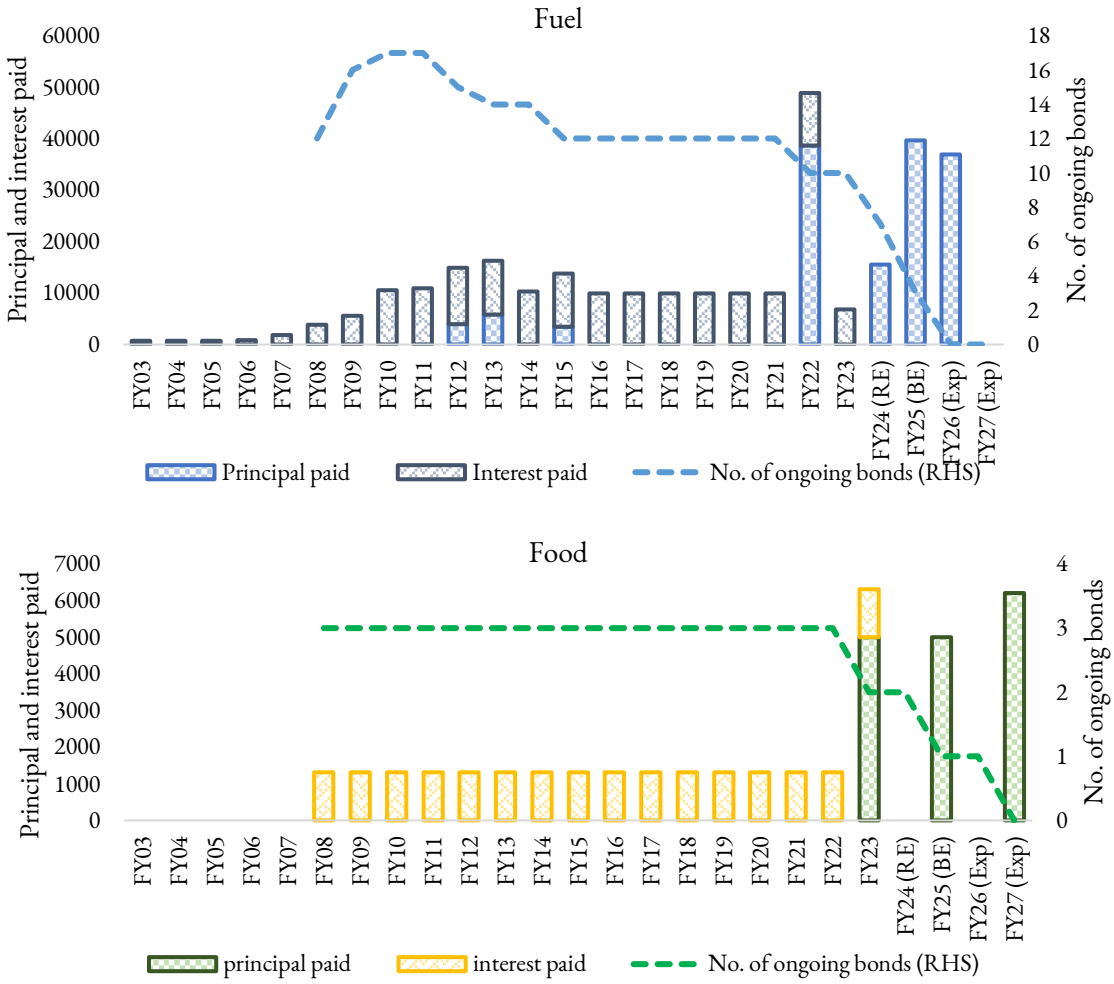


Source: Union Budgets, GoI

Figure A2: Principal Paid on Securities Issued in Lieu of Cash Subsidy & Number of Ongoing Bonds

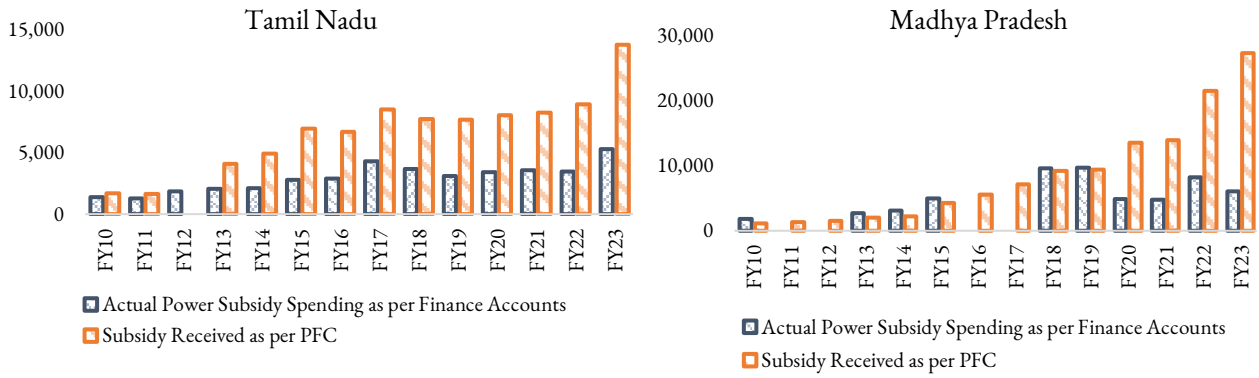


Note: In FY11 and FY12, GoI repurchased part of the bonds issued to fertiliser companies due to the liquidity constraints faced by the companies (Lok Sabha, 2011)– this is marked in brown in the graph.



Source: Union Budgets, GoI

Figure A3: Actual Power Subsidy Spending and Subsidy Received (in Rs crore)



Source: State Finance Accounts, CAG; PFC

Table A1: Union's Reported and Actual Subsidy (in Rs crore)

	Fuel		Fertiliser		Food		Others		Total	
	Reported	Actual	Reported	Actual	Reported	Actual	Reported	Actual	Reported	Actual
FY01 (RE)	0	0	13,800	13,800	12,125	12,125	913	913	26,838	26,838
FY02 (RE)	0	0	11,944	11,944	17,612	17,612	1,654	1,654	31,210	31,210
FY03 (RE)	6,265	6,932	11,009	11,009	24,200	24,200	2,059	2,059	43,533	44,200
FY04	6,292	6,958	11,847	11,847	25,160	25,160	1,669	1,669	44,968	45,634
FY05	2,956	3,640	15,879	15,879	25,797	25,797	1,975	1,975	46,608	47,292
FY06	2,683	3,528	18,460	18,460	23,077	23,077	4,150	4,150	48,370	49,215
FY07	2,699	4,600	26,223	26,223	24,014	24,014	4,894	4,894	57,829	59,730
FY08	2,820	64,611	32,490	39,990	31,328	48,847	4,288	4,288	70,926	157,737
FY09	2,852	84,324	76,602	97,212	43,751	45,070	6,502	6,502	129,708	233,108
FY10	14,951	35,793	61,264	63,221	58,443	59,762	6,692	6,692	141,350	165,468
FY11	38,371	49,329	62,301	64,258	63,844	65,163	8,903	8,903	173,420	187,653
FY12	68,484	79,442	70,013	71,399	72,822	74,141	6,622	6,622	217,941	231,604
FY13	96,880	107,338	65,613	66,786	85,000	86,319	9,586	9,586	257,079	270,029
FY14	85,378	95,634	67,339	68,512	92,000	93,319	9,915	9,915	254,632	267,381
FY15	60,269	70,525	71,076	72,249	117,671	118,990	9,242	9,242	258,258	271,006
FY16	29,999	39,989	72,415	73,589	139,401	140,720	22,290	22,290	264,105	276,588
FY17	27,539	37,529	66,313	67,487	110,173	181,492	30,784	30,784	234,809	317,291
FY18	24,460	34,450	66,468	67,641	100,282	166,601	33,245	33,245	224,455	301,938
FY19	24,837	34,827	70,605	71,778	101,327	199,646	26,185	26,185	222,954	332,437
FY20	38,529	48,519	81,124	82,298	108,688	220,008	33,963	33,963	262,304	384,787
FY21	38,455	48,445	127,922	129,095	541,330	200,649	50,459	50,459	758,166	428,648
FY22	3,423	13,592	153,758	154,932	288,969	290,288	57,758	57,768	503,907	516,579
FY23	6,817	35,666	251,339	252,513	272,802	274,122	46,957	50,614	577,916	612,914
FY24 (RE)	12,240	12,240	188,894	188,894	212,332	212,332	27,070	35,077	440,536	448,543
FY25 (BE)	11,925	11,925	164,000	164,000	205,250	268,328	47,248	61,431	428,423	505,684

Source: Union Budgets, GoI; CAG; FCI

Table A2: States' Subsidy Expenditure as a % of GSDP

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Andhra Pradesh	0.5	0.5	0.7	1.2	1.0	0.9	0.8	1.0	2.2	0.3	1.1	0.9	0.9	0.3	0.7	0.5	1.3	1.8
Arunachal Pradesh	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.1	0.0	0.0
Assam	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.4	0.3	0.6	0.5	0.0
Bihar	0.0	0.0	0.0	0.6	0.6	0.6	1.1	1.5	0.5	1.4	2.4	2.1	1.1	1.6	1.2	1.4	1.6	2.0
Chhattisgarh	0.0	0.5	1.0	1.4	2.0	1.5	1.2	1.0	1.5	1.7	3.3	1.6	1.8	2.5	3.3	2.1	1.6	1.8
Gujarat	1.1	1.0	0.9	1.1	1.1	1.0	0.9	0.9	0.8	1.0	0.9	1.0	1.0	1.2	1.1	1.4	1.2	1.2
Haryana	0.0	3.0	2.0	1.8	1.4	1.3	1.3	1.6	1.4	1.3	1.4	1.4	1.3	1.2	1.1	1.1	1.1	1.0
Himachal Pradesh	0.5	1.1	1.0	0.9	0.8	0.8	0.6	0.7	0.5	0.8	1.2	0.6	0.7	0.9	0.7	0.8	0.7	1.0
Jharkhand	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.3	0.8	0.5	0.7	1.4	1.1	1.6	1.0
Karnataka	1.9	1.9	2.0	1.1	1.2	1.5	1.2	1.5	1.6	1.2	1.3	1.2	1.1	1.0	1.1	1.1	1.4	1.0
Kerala	0.0	0.0	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.9	0.4	0.2
Madhya Pradesh	0.0	0.0	0.1	0.1	0.9	0.9	0.8	1.5	1.5	2.1	2.2	2.5	2.7	2.6	1.4	1.4	1.8	1.6
Maharashtra	0.6	0.7	0.7	0.6	0.9	0.5	0.8	0.6	0.7	1.1	0.9	1.0	1.4	1.1	1.1	1.6	0.9	NA
Manipur	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.0	0.7	0.5	0.4	0.4	0.4	0.3	NA
Meghalaya	8.1	0.4	0.4	0.2	0.2	0.4	0.1	0.4	0.3	0.5	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.2
Mizoram	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.3	NA
Nagaland	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3
Odisha	0.1	0.2	0.1	0.5	0.6	0.7	0.8	0.8	0.7	0.7	0.8	0.6	0.6	0.6	0.6	0.8	0.7	0.5
Punjab	1.5	1.2	1.3	1.6	1.5	1.5	1.2	1.7	1.5	1.3	1.3	1.4	1.5	2.6	1.9	1.8	2.4	3.1
Rajasthan	0.0	0.0	1.6	0.6	0.6	0.7	0.7	1.1	1.3	1.4	1.5	2.3	2.8	2.4	1.9	1.5	2.0	1.9
Sikkim	0.5	0.5	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tamil Nadu	1.3	1.4	1.2	1.6	1.4	1.3	1.2	1.1	1.0	1.0	1.1	1.2	1.0	1.2	1.2	1.4	1.1	1.3
Telangana	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.9	0.9	0.8	0.7	0.7	1.0	0.9	0.7
Tripura	0.0	0.0	0.1	0.0	0.0	6.2	6.6	0.2	0.4	0.5	0.4	0.3	0.3	0.3	0.1	0.3	0.2	0.2
Uttar Pradesh	0.0	0.0	0.0	0.9	0.8	0.7	0.8	0.7	0.7	0.8	0.7	0.6	0.6	0.9	0.8	0.7	1.0	0.9
Uttarakhand	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1
West Bengal	0.0	0.0	0.0	0.4	0.0	0.5	0.5	0.7	0.5	0.3	0.6	1.1	1.2	1.2	0.8	1.1	0.9	NA

Source: State Finance Accounts, CAG; RBI

Notes

[1] All revenue, loans, and repayment of loans are credited to the Consolidated Fund of India of GoI. All expenditure is debited from the Fund. However, governments have often resorted to extra-budgetary borrowings to fund expenditure.

[2] For example, the debt-to-GDP ratio for Andhra Pradesh had gone up by 9% in FY21 after the inclusion of the state's off-budget borrowings (Gupta and James 2023).

[3] The total off-budget borrowings for FY24 were Rs 35,705 crore (DoE, n.d.).

[4] Houthakker (1972) famously quipped "the concept of a subsidy is just too elusive to even attempt to define" (in Chakraborty et al. 2003, 2; in Schwartz, Hugounenq, and Clements 1995). The 1997 Discussion Paper on Government Subsidies in India by the Ministry of Finance (Srivastava and Amar Nath 2001) defines budgetary subsidies as "unrecovered costs in the public provision of private goods" (Chakraborty et al. 2003).

[5] FCI had been the biggest recipient of loans from NSSF until FY21. These loans were meant to supplement food subsidy spending when budget allocations were insufficient to meet the demand for subsidised food (Gupta & James 2023).

[6] In the past 25 years, food subsidies have taken up a considerable share (47%) of total subsidy expenditure, followed by fertiliser subsidies (35%) and petroleum subsidies (11%).

[7] Between FY10-FY15, fuel subsidies included Post-APM subsidies and other expenditures and compensation to OMCs for under-recoveries. In FY16, the formula changed to total LPG subsidy plus kerosene subsidy.

[8] Compensatory payments to OMCs for selling fuel to domestic consumers at subsidised rates, even when their supply prices skyrocketed and breached the estimated supply costs at the time of GoI's budget-setting, are termed as 'under-recoveries'.

[9] The Public Account of India credits any money received by the Government, where GoI acts as a trustee or banker. This includes Advances, Deposits, Reserve Funds, Remittances and Suspense heads, and Small Savings and Provident Funds. Unlike the Consolidated Fund, the withdrawals of moneys Public Account is not subject to parliamentary approval.

[10] FCI is also entitled to authorised working capital from the government, which was increased from Rs 10,000 crore to Rs 21,000 crore in FY24 (PIB 2024). It is aimed at reducing FCI's reliance on cash credits and short-term loans. This will help in freeing up the credit to other sectors from a consortium of banks (Kumar and Meena 2024).

[11] This implies that the price at which the bonds are issued equals the principal amount which will be repaid at the end of maturity.

[12] Data on interest payments post FY23 is unavailable, as the latest Finance Accounts publication of the CGA is for 2022-23.

[13] Under National Food Security Act (NFSA) 2013, Antyodya Anna Yojana (AAY) beneficiaries are entitled to 35 kg of food grains per household per month, and the Priority Households (PHH) beneficiaries to 5 kg per person per month free of cost. Additionally, under PMGKAY, additional 5 kg grains per beneficiary per month are also provided.

[14] Assistance to State Agencies for intra-state movement of foodgrains, integrated management of PDS, and assisting sugar mills for handling and upgradation costs on the export of sugar are some of the schemes.

[15] Urea fertilisers are sold at a statutorily notified uniform MRP of Rs 242 per 45 kg bag pan-India.

[16] NBS establishes a fixed per-tonne subsidy amount for P&K fertilisers which is revised annually, as suggested by the GoI based on factors such as global price changes, inventory levels, and exchange rates.
[17] LPG subsidies fall under Pratyaksh Hanstantrit Labh (PAHAL), also known as Direct Benefit Transfer– LPG (DBT-L) and Pradhan Mantri Ujjwala Yojana (PMUY)-- a scheme for providing cooking gas connections to households.

[18] PAHAL entitles households with an annual income of less than Rs 10 lakh to a direct benefit transfer of the value of the per-unit subsidy amount into their bank accounts, with a cap of 12 LPG cylinders per year. PMUY facilitates the adoption of LPG connections to a targeted set of low-income female beneficiaries, with a Rs 1,600 subsidy per connection to cover cylinder and installation costs. At present, GoI subsidises only LPG for domestic purposes.

[19] It should be noted that the Union also incurred interest of Rs 667 crore payments in FY03, indicating that GoI had issued oil bonds before FY03. Data on interest payments is only available post FY03 in the CGA Finance Accounts.

[20] This excludes smaller and hilly states like Sikkim, Goa, Jammu, Meghalaya, etc. for ease of analysis.

[21] Rule 24(a) of the Government Accounting Rules, 1990 (CGA 1990) requires that "Within each of the Divisions and sections of the Consolidated Fund referred to in rule 23, the transactions shall be grouped into Sectors such as, "General Services", "Social Services", "Economic Services", under which specific functions or services shall be grouped. The Sectors shall be subdivided into Major Heads of Account, in some cases the Sectors are, in addition, sub-divided into sub-sectors before their division into Major Heads of Account. Each Sector in a section shall be distinguished by a letter of the Alphabet."

[22] The rule states "The detailed classification of account heads in Government Accounts and the order in which the Major and Minor heads shall appear in all account records shall be such as are prescribed by the Central Government from time to time on the advice of the Comptroller and Auditor General of India. The 'List of Major and Minor Heads of Account of Union and States contains the classification prescribed in this regard. The classification prescribed (including the code No. assigned up to the major heads and minor heads thereunder) should be strictly followed."

[23] In this context, Dr Y.V. Reddy, in 2018, famously remarked "Everywhere around the world, the future is uncertain; in India, even the past is uncertain". (Ranade 2018)

[24] An important step forward has recently been taken by the publication of Statement No 27-A in the recent budget by the Centre which lists the extra-budgetary resources used by two state-owned commercial undertakings.

[25] Pathak, Tripathi, and Kumar (2024) employ the CAG's Combined Finance and Revenue Accounts (CFRA) categorisation of expenditure including functional and minor heads, to create a suggestive categorisation for public expenditure on agriculture. As per their framework, subsidies (food and fertiliser) are one of 7 suggestive categories. The others include 1. Crops, livestock and fisheries, 2. Marketing and storage infrastructure, 3. Research and extension, 4. Cooperatives, 5. Irrigation and, 6. Risk mitigation and resilience.

[26] Gulati and Banerjee (2020) quip that "subsidising the poor (or rich) consumer is not the responsibility of the farmer".

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IPPR

Fiscal Transfers from the Union to States and Healthcare in India

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Abstract

The key focus of the study is to assess the role of fiscal transfers from the Union government compared to States' own revenue in explaining their healthcare spending. The study found that both States' own revenue and unconditional transfers impact their health spending. However, own revenue was more significant than unconditional fiscal transfers in explaining health spending by economically well-off states. In contrast, unconditional fiscal transfers were the sole factor for health spending by economically weaker states. Generally, States were substituting their non-National Health Mission (NHM) health spending with NHM health spending. However, this substitution was much less pronounced in economically well-off states compared to economically weaker states. Post-NHM, there was a slight increase in horizontal inequalities. The intricate interplay between fiscal transfers and health spending by Indian states underlines the need for nuanced policy changes. A differentiated strategy is essential for economically well-off and economically weaker states to improve healthcare spending in the country.

Keywords: National Health Mission, Fiscal Transfers, India Healthcare, Healthcare expenditure

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Abbreviations

PM-ABHIM	PM-Ayushman Bharat Health Infrastructure Mission
AIIMS	All India Institutes of Medical Sciences
CGHS	Central Government Health Scheme
CSS	Centrally Sponsored Scheme
CV	Coefficient of Variation
FC	Finance Commission
FRBM	Fiscal Responsibility and Budget Management
FRL	Fiscal Responsibility Legislation
GDP	Gross Domestic Product
GFD	Gross Fiscal Deficit
GSDP	Gross State Domestic Product
GST	Goods and Services Tax
HLEG	High-Level Expert Groups
PM-JAY	Prime Minister Jan Arogya Yojana
NCT	National Capital Territory
NHM	National Health Mission
NRHM	National Rural Health Mission
NSDP	Net State Domestic Product
NUHM	National Urban Health Mission
OOPE	Out of Pocket Expenditure
PC	Per capita
PHE	per capita public health spending

1. Introduction

Health is a crucial element of human development, not only as an end in itself but also because it plays a critical role in furthering education and economic growth of both individuals and countries. Health spending in India has remained very low—both as a percentage of GDP and on a per capita basis—relative to many of India's peers, let alone advanced economies. As a result, India has one of the highest rates of out-of-pocket expenditure (OOPE) in the world, leading to various hardships and sacrifices, including impoverishment and indebtedness (Garg and Karan, 2009; Selvaraj and Karan, 2009). Several High-Level Expert Groups (HLEGs), Parliamentary Standing Committees, and even the government's own health policies have, from time to time, proposed that public investment in health be raised to 2.5-3 per cent of GDP. However, despite the rollout of multiple schemes, there has hardly been any change on the ground so far (Raj, et al., 2023).

In India, health is primarily the responsibility of States under the Seventh Schedule of the Constitution of India, though some areas are also the joint responsibility of the States and the Union government. Since "Public health and sanitation; hospitals and dispensaries," is in the State List (Entry 6), it is the sole responsibility of States. As five areas relating to health are in the concurrent list, they are the joint responsibilities of the Union and state governments1. These are: (i) "Lunacy and mental deficiency, including places for the reception or treatment of lunatics and mental deficient" (Entry 16); (ii) "Population control and family planning" (Entry 20A); (iii) "Medical education" (Entry 25); and (iv) "Legal, medical and other professions" (Entry 26); and (v) "Infectious diseases" (Entry 29). Furthermore, the Union government can create institutions of national importance (such as the All India Institutes of Medical Sciences) under Entry 62 in the Union List. Although health is a state subject, and the primary responsibility for providing good healthcare services lies with the States, the Union has also been playing a role. However, it has shied away from taking direct responsibility for healthcare. A written response to the Lok Sabha2 it was indicated that since health is a state subject, the Central Government supplements the efforts of the state governments in delivering health services through various schemes of primary, secondary, and tertiary care.

'Fiscal Federalism' is a broad term referring to the efficient provision of public services to meet varying preferences in multi-level fiscal systems. Under fiscal federalism, the national government first centrally raises financial resources through some form of taxation and then distributes them to local levels using allocation formulae (Rotulo et al., 2020). The core of fiscal federalism is inter-governmental transfers (Reddy, 2019). As a corollary, fiscal federalism in healthcare would imply inter-governmental transfers relating to healthcare and other transfers, which may have a bearing on health spending. Fiscal choices by the States, including health, are expected to respond both to their own resources as well as transfers from the Central Government. That is, healthcare financing by States is not only expected to depend on healthcare transfers alone but also on their overall financial capacity. This, in turn, depends on general-purpose transfers from the Union, apart from the States' own revenue. This is because there is a vertical imbalance in the country—relative to their spending

responsibilities, the States have much fewer revenue sources. Because of this, under Article 280 of the Constitution of India, there is a provision for distribution of tax revenues between the Union and the States and amongst the States on the recommendations of an independent body, viz., the Finance Commission (FC), appointed once every five years. Untied or general-purpose or unconditional transfers are, in fact, more important than tied or specific transfers as they give complete flexibility to the States to spend in areas which they feel are more appropriate and/or urgent.

In the last few years, significant changes have taken place that are expected to have influenced the overall finances of the States. These include fiscal responsibility legislations, increase in the share of tax devolution to the States from 32 per cent to 42 per cent based on the recommendations of the Fourteenth Finance Commission (FC-XIV), etc. Centrally Sponsored Schemes (CSSs) framed under Article 282 of the Constitution, which were expected to play a role only at the margin, have become a key instrument for the Union government to transfer resources to States on subjects that were mainly in the state list. In health, the Union government rolled out a major CSS in the form of National Rural Health Mission (NRHM)—since 2013, the National Health Mission (NHM)—in 2005.

In this backdrop, this study examines whether the Union-State fiscal relations in general, and healthcare in particular, have any bearing on health spending by the States. Our specific interest is in understanding how far health spending by States is influenced by their own revenue vis-à-vis general-purpose transfers and also by health-specific transfers. Some of the key questions to which we seek answers in this paper are: (i) How have fiscal transfers to the States in general evolved in last 20 years? (ii) How has health spending b the States been shaped in light of changes in their own revenue and fiscal transfers from the Union? (iii) How far do the States' own revenue and/or fiscal transfers from the Union influence health spending by states? (iv) Do the States substitute their non-NHM health spending with NHM spending? (vi) How far have inter-state or horizontal inequalities in healthcare spending been addressed post-NRHM?

It is not the objective of the paper to investigate the basis of general or specific-purpose transfers from the Centre to States or the design and implementation aspect of fiscal transfers in India. Nor is it the purpose of this study to examine the impact of union-state fiscal relations on health outcomes. The limited objective of this study is to examine (i) how healthcare spending by the States has been shaped under the current arrangements of fiscal federalism, and (ii) the major factors that influence health spending by the States.

Several important findings emerge from the study:

i. The share of the States' own revenue in their revenue receipts declined sharply from 2014-15, while that of fiscal transfers from the Union increased markedly. The increase in fiscal transfers was largely driven by conditional transfers, *i.e.,* CSS transfers, which the FC-XIV tried to reduce.

ii. Based on various indicators, health remained a low priority in many states. Health was found to be a low priority even in some economically well-off states. Based on the income-health

spending relationship, four patterns were observed, two of which included high-income low health spending states and low-income and high health spending states.

iii. The Central Government has expanded its footprint in healthcare post-NRHM, though the nature of its involvement has changed. In the first five years after the introduction of NRHM, its role in healthcare expanded through CSS, but thereafter through central sector schemes.

iv. The States' own revenue and unconditional transfers by the Union were found to have a positive impact on health spending by the States. However, the economic impact of unconditional transfers was greater than that of the States' own revenue, which was not the case prior to the award period of the FC-XIV. However, results changed quite dramatically when the states were split into economically well-off states and economically weaker states (based on average per capita income). Health spending by economically well-off states was influenced more by their own revenue than unconditional transfers. However, health spending by economically weaker states depended more on the unconditional transfers from the Centre (apart from income) and not at all their own revenue.

v. Economically weaker states were found to be substituting their non-NHM health spending with NHM spending (substitution effect). This suggested that economically weaker states reduce their non-NHM health expenditure to make a matching contribution to NHM.

vi. The horizontal inequalities in health spending widened post-NHM.

The remainder of this paper is organised in seven sections. Section 2 outlines the historical and constitutional backdrop of fiscal federalism in India. Section 3 details the recent developments in fiscal federalism in general and healthcare, in particular, which might have had a bearing on healthcare financing by the States in India. Section 4 explains the impact of centre-state fiscal relations on the finances of the States in the recent period. Section 5 delineates the key trends in health spending by the States and explains the changing role of the Union in healthcare. Section 6 examines the factors affecting healthcare financing in India, with a specific focus on (a) the relative significance of the States' own revenue vis-à-vis transfers from the Centre in explaining health spending by the States; and (b) whether the States substitute their non-NHM health spending with NHM spending. Section 7 examines how far healthcare financing by the Union government under the NHM has been able to address horizontal inequalities in health spending in India. Section 8 sums up the key findings of the study and spells out the policy implications.

2. Fiscal Federalism in India – Historical and Constitutional Backdrop

India's fiscal federalism is known to have several centralising features, with some leading scholars referring to it as "*quasi* federal" (Stephan, 1999). The Constitution of India grants the Union government overwhelming economic powers, including a significantly higher revenue-raising ability relative to the States, and imposes restrictions on State borrowings. The literature on fiscal federalism

suggests three main economic rationales for inter-governmental transfers, *viz*., (i) addressing vertical fiscal balances; (ii) addressing horizontal fiscal balances; and (iii) addressing inter-jurisdictional spill over effects (Box 1).

Box 1: Fiscal Transfers – The Rationales

Addressing vertical fiscal imbalances: In most countries, the revenue-raising responsibilities of provincial or state governments typically fall short of their expenditure responsibilities. This shortfall arises because the national, federal or central government often retains the major tax bases, leaving provincial or state levels with insufficient fiscal resources. Therefore, inter-governmental transfers are needed to balance the budget at these sub-national levels.

Addressing horizontal fiscal imbalances: The fiscal capacity of States may also vary. Some States may have better access to natural resources or other tax bases than others. The capacity to raise revenues from their own sources may differ across states. Furthermore, the expenditures required to deliver specified service levels may also vary. These expenditure needs should, therefore, be addressed by Central Government transfers. A less stringent interpretation of this argument holds that the Central Government has an obligation to maintain a minimum standard of public services in all sub-national or state-level units. Regions that lack sufficient resources to reach this minimum level should be subsidised.

Addressing inter-jurisdictional spill over effects: Some public services have spillover effects (or externalities) that extent to other jurisdictions (Ma, J, 1997). Examples include pollution control (water or air), inter-regional highways, and higher education, where individuals with higher education may migrate to other regions for work. Thus, the Central Government needs to provide incentives or financial resources to address such under-provision problems (Ma, 1997). Another function of these transfers is to sometimes allow the federal government to exercise influence or oversight over the design of state programs (Boadway and Shah, 2007).

In India, the major burden of expenditure falls on the States, they have limited sources of income. The Constitution of India assigns greater revenue-raising powers to the Union, while most of the expenditure responsibilities are vested with the States. For instance, the Fifteenth Finance Commission (FC-XV) observed that the States had access to only 37.3 per cent of the resources but were responsible for 62.4 per cent of the expenditure incurred. To address this vertical imbalance, the Constitution established a framework of fiscal transfers from the Union to the States, based on the recommendations of the Finance Commission. Additionally, resources are also transferred from the

Union to the States by the respective central ministries. However, these transfers have been the subject of some controversy (Box 2).

Box 2: Fiscal Transfers from the Union to States in India – Channels and the Controversy

There are three main channels through which fund transfers are carried out from the Union to the States in India. Major transfers occur through Article 270 and 275 of the Constitution, based on the recommendations of the Finance Commission. These are general-purpose transfers, the rationale for which is to enable all the States to provide comparable levels of public services at comparable tax rates (Rao and Singh, 2005). The basic rationale behind general-purpose transfers is to ensure equity on horizontal grounds (Buchanan, 1950; Boadway and Flatters, 1982). Article 270 provides for the distribution of taxes between the Union and the States—taxes that are levied and collected by the Union. On the other hand, Article 275 provides for grants-in-aid to the States. Unlike tax devolution which is untied or unconditional, grants under Article 275 could be conditional.

The third channel of transfers is through Centrally Sponsored Schemes (CSSs), introduced by the Union but implemented by the States on a matching contribution basis. Funds for such schemes were routed through Article 282 of the Constitution for financing targeted interventions for socio-economic development (Reddy, 2019)[3]. Initially recommended by the Planning Commission set up in March 1950, these schemes are now carried out by respective central ministries. CSSs are discretionary transfers made by the Union to the States, and they often pertain to subjects within the domain of states or in the concurrent list (Ritwika, *et al.*, 2021). These are specific transfers aim at enforce minimum standard of public service. However, none of the specific-purpose transfers in the Indian context are designed in this manner, i.e., minimum standards have not been defined and specific transfers are not tailored to meet them (Rao, 2017).

Transfers by the Union to the States through CSS under Article 282 have been a matter of significant controversy, mainly for two reasons. First, funds under Article 282 are tied, meaning that the States do not have the freedom to spend the resources as they deem fit. The design features of CSSs also do not offer enough flexibility for States to innovate and adapt. Owing to rigidities in the scheme, most CSSs suffer from micromanagement, inadequate allocation to different activities, and subsequent wastage (Rao, 2018). Secondly, the Union uses CSSs to interfere in subjects that are within the domain of the States.

In its unanimous judgment in the famous 2010 Bhim Singh *versus* Union of India case, the Supreme Court held that the Union under Article 282 was unrestricted. The court observed: "Owing to the quasi-federal nature of the Constitution and the specific wording of Article 282, both the Union and the State have the power to make grants for a purpose irrespective of whether the subject matter of the purpose falls in the Seventh Schedule[4] provided that the purpose is 'public purpose' within the meaning of the Constitution[5]."

While the legality of the use of funds transfers by the Union under Article 282 is now settled, the proliferation of CSSs and the massive funds transferred to the States under it has continued to be a point of contention in the centre-state fiscal relations. The Chairman of the Finance Commission XV argued that the provision (Article 282) was not meant to be an overarching route for effecting transfers, but an extraordinary one to be sparingly used (Singh, 2019). He opined:

"I think Article 282 of the Constitution needs to be circumscribed and prescribed some conditions which can be invoked for undertaking schemes and measures which can undercut the basic functioning of the transfer mechanism through the Finance Commission. Indeed, in the history of the Finance Commission, the extra constitutional comfort of the Planning Commission in undertaking several of these transfers by recourse of Article 282 is part of this original sin"[6].

It is significant that federal governments in several other federal structures also play a role in healthcare, though the exact nature of this relationship varies from country to country (see Appendix I).

3. Fiscal Federalism and Healthcare in India: Recent Developments

In the last 20 years or so, several changes have taken place which have impacted the States' own revenue as well as the transfers from the Centre.

3.1 The Fiscal Responsibility and Budget Management Act

The Fiscal Responsibility and Budget Management (FRBM) Act was enacted by the Union government in 2003. This Act was mirrored by Fiscal Responsibility Legislation (FRL) enacted by the States. Fiscal targets were established, which were the same for all the States; the overall deficit was not allowed to exceed 3 per cent of GSDP at any point, while the revenue deficit was to be eliminated by 2008/9 (later extended to 2009/10). The fiscal deficit target was temporarily relaxed to deal with extraordinary situations such as the North Atlantic Financial Crisis (NAFC) and the Covid pandemic. FRL thus imposed strict discipline on the States, meaning that spending by the States on any sector, including health, would largely depend on their ability to raise revenue.

3.2 Three CSSs in Health Launched

The National Rural Health Mission (NRHM) was launched in April 2005. This was later renamed the National Health Mission in April 2015, subsuming NRHM and the new National Urban Health Mission (NUHM) launched. The NHM is the flagship healthcare programme of the Union, aimed at providing accessible, affordable, and quality healthcare, especially to vulnerable groups. The core focus of the scheme was on reducing maternal and child mortality. While it is not our intention to delve into the details of scheme here, three elements of the scheme are noteworthy. Initially, the Centre fully funded the scheme. In 2007, the funding pattern was changed to 85:15

(centre: states). Currently, the funding pattern is 60:40 (other than UTs without legislature and some north-eastern states). Second, for allocating funds under the NRHM, the States were categorised into two parts. The States with poor health status were classified as high focus States and others as non-high focus States. The funds for NRHM were allocated according to population, with high focus States receiving 30 per cent higher weight. (Coady et al, 2012). Third, the Union followed a system of flexi pool as the basis of allotment, *i.e.,* the funding for each component of NHM by the Centre was fixed, and there was no flexibility in changing the funding among components[7].

The second important healthcare scheme of the Union is the Prime Minister *Jan Arogya Yojana (PM-JAY),* which aims to provide health protection cover to poor and vulnerable families against financial risk arising out of catastrophic health episodes (Report: GS1 India, 2022). It offers a benefit cover of Rs 5 lakh per family per year (on a family floater basis) and covers medical and hospitalisation expenses for almost all secondary care and most tertiary care procedures (Economic Survey, 2020-21, Volume 1). The funding pattern of the scheme between the Centre and the States is 50:50. PM-JAY replaced the erstwhile *Rashtriya Swasthaya Bima Yojana* (RSBY).

Third PM-Ayushman Bharat Health Infrastructure Mission (PM-ABHIM) was launched in October 2021 to develop capacities of health systems and institutions across primary, secondary, and tertiary healthcare levels, and to prepare health systems to respond effectively to current and future pandemics (Demand for Grants Report, PRS 2022-23).

3.3 NRHM Transfers – Bypassing of State Budgets

With the introduction of NRHM, different societies were merged to form the State Health Societies (GoI 2005a). NRHM funds from the Central Government were directly transferred to these societies, bypassing the state budgets, even though the CSSs were either fully or partially funded through a matching contribution from the State governments. This practice of transferring funds directly to SHSs was discontinued from 2014-15. Instead, NHM funds are now devolved directly to state treasuries which, in turn, transfer funds to SHSs. This change in the arrangement was made to improve transparency and accountability (Duggal *et al*., 2014). As a result, NHM expenditure in state budgets prior to 2014-15 and post 2014-15 is not strictly comparable, and GoI NHM funds need to be adjusted to ensure comparability.

3.4 Recommendations of FC – XIV: Increased Tax Devolutions to States

The FC-XIV recommended significant changes in how tax resources were to be shared between the Central and the State governments. The FC-XIV was concerned with the large resource transfer to the States by way of grants under various CSSs, including those transferred directly to the implementing agencies, bypassing the state budget until 2013-14. The FC-XIV observed that between 2005 and 2012, the Central Government's spending on state subjects increased from 14 to 20 per cent and its spending on concurrent subjects increased from 13 to 17 per cent.

The FC-XIV was sensitive to the States' demand that resources should flow in the form of tax devolution and that the outlay on CSSs be reduced. It viewed tax devolution as the primary route of resource transfer to the States since it is formula-based and thus conducive to sound fiscal federalism. Taking a comprehensive view of the aggregate transfers from the Centre to the States and emphasising that tax devolution to the States should be the primary route, the FC-XIV increased the share of tax devolution to the States to 42 per cent of the divisible pool (as against 32 per cent recommended by the FC-XIII) to serve the twin objectives of increasing the flow of unconditional transfers to the States and yet leave appropriate fiscal space for the Centre to carry out specific-purpose transfers to the States. It is significant that the Planning Commission, which was entrusted with the responsibility of making non-plan allocations to the State governments was abolished in 2015.

3.5 Increased Tax Devolutions to States Countered by Transferring CSSs to States

When the FC-XIV submitted its recommendations, two other significant changes occurred, which offset, to a large extent, the increased tax devolutions to states. First, in order to arrive at the greater devolution of 42 per cent to the States, more than 30 CSSs ought to have been transferred to the States. This is because the expenditure on them had already been considered as state expenditure[8]. However, the Central Government decided to delink only 8 CSSs from its support and continue other schemes as it believed that many CSSs were national priorities, and this also included the NHM. Second, it was decided to change the sharing pattern of 24 CSSs on the ground that the States could share a higher fiscal responsibility for their implementation. In the case of NHM, the sharing pattern between the Union and the States was changed from 75:25 to 60:40.

3.6 Introduction of GST

The introduction of GST in July 2017 has brought considerable changes to the union-state fiscal relationship. The States no longer have the power of taxation or deciding tax rates, other than on petroleum products and liquor. They largely depend on GST collections. At the time of GST's introduction, the States' revenue subsumed under GST was legislatively protected for the transition period of five years (2017-18 to 2021-22), assuming a constant nominal growth of 14 per cent per annum over the 2015-16 revenue base. Any shortfall was to be funded through additional taxation (compensation cess) on sin/luxury goods.

3.7 Increased Grants-in Aid to States

To address the various challenges faced by the health sector in India, the Fifteenth Finance Commission (FC-XV) recommended total grants-in-aid support to the health sector aggregating Rs. 1.06 lakh crore. These included Rs. 70,051 crore through local governments, Rs. 31,755 crore sectoral grants, and Rs. 4,800 crore state-specific grants, constituting 10.3 per cent of the total grants-in-aid recommended by the Commission. These grants were unconditional. The FC-XV also frontloaded this support over the award period to help address the immediate requirements of funds due to the

then prevailing pandemic. The FC-XV noted that grants-in-aid can make corrections for cost disabilities and other redistributive requirements, which can be addressed only to a limited extent in any devolution formula. Furthermore, grants-in-aid are more directly targeted and used to equalise standards of basic services.

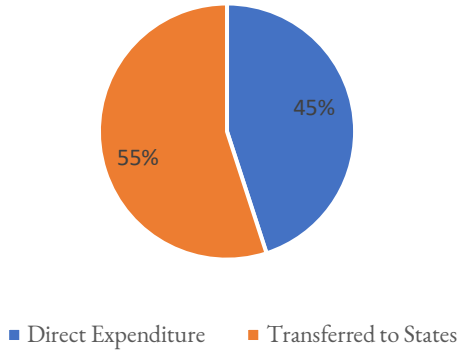
4. Fiscal Transfers to States – An Analysis

Healthcare financing in the Indian context encompasses three aspects. First, a State's spending on any sector, including health, is based on its overall financial capacity, which in turn depends on its own resources/revenue and untied or unconditional transfers from the Union government. It is undeniable that a State's own revenue is crucial for its spending on any sector. However, in situations where States do not have many avenues to levy taxes[9], the transfer of resources from the Union to the States are expected to play a key role in their spending decisions. Secondly, the Central Government makes specific health transfers to the States under CSSs, with the States making matching contributions. The purpose of these specific transfers is to ensure minimum standard of healthcare throughout the country, as alluded to . Thirdly, the Union government also spends directly on health under the CSSs (Box 3). In this section, we study how the overall finances of the States have evolved in last 20 years or so. In the following section, we assess how these changes have shaped health spending by the States. We also look at the changing role of the Union government in healthcare financing.

Box 3: Central Government Spending on Health – Components

- Of the total expenditure on health by the Union government, about 55 per cent[10] is transferred to states under CSSs, while the rest is spent directly by the Centre (Figure 3a).
- Direct expenditure constitutes expenditure on autonomous bodies such as AIIMs, central sector schemes, CGHS, and other hospitals. These schemes are listed in Appendix I.
- 72 per cent of the funds earmarked for central sector schemes go to two central sector schemes, *viz.*, Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) and AIDS control (Figure 3b).
- The 3 main CSSs (NHM, PMJAY and PM-Ayushman Bharat Health Infrastructure Mission (PM-ABHIM)) constitute 99 per cent of the total transfers under CSS (Figure 3c).

Figure 3a: Central Health Expenditure
(As budgeted for 2023-24)



Source: Union budget 2023-24.

Figure 3b: Composition of Direct expenditure (As budgeted for 2023-24)

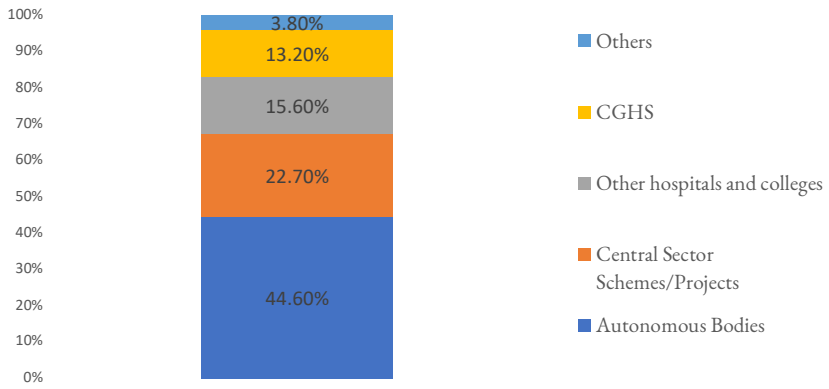
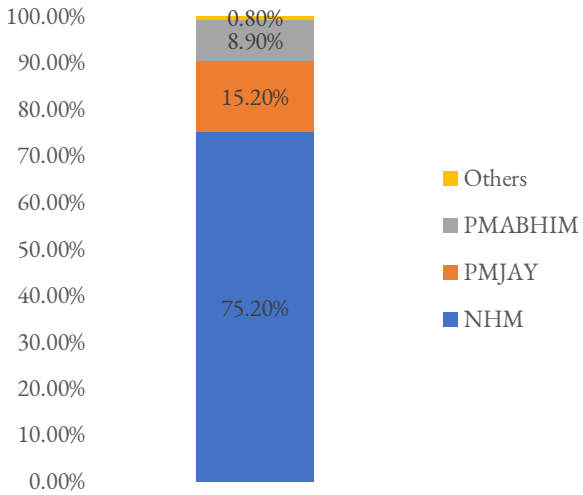


Figure 3c: Composition of Transfer to States (As budgeted for 2023-24)



Source: Union Budget 2023-24

As alluded to in Box 2, there are three channels of fiscal transfers from the Union to the States. Over the years, the quantum and composition of these fiscal transfers have undergone significant changes, as detailed in Appendix II. The key points emerging from the analysis are summarised below:

i. The share of tax devolutions in revenue receipts of the States increased sharply during the overall award period of the FC-XIV vis-a-vis that of the FC-XIII. However, beginning 2019-20, *i.e.,* the fourth year of the FC-XIV award period, the share of tax devolutions in the revenue receipts of the States declined significantly (Figure A1 and Table A1, Appendix II).

ii. The share of the States' own revenue in their revenue receipts declined sharply from 2014-15 onwards, while that of fiscal transfers increased. Consequently, the shares of the States' own revenue and fiscal transfers in overall revenue receipts of the States almost converged in 2020-21 (Figure A5 and Table A2, Appendix II). Relative to GDP, the States' own revenue has remained flat in the last 15 years, while the share of fiscal transfers from the Union increased by more than 2 percentage point of GDP, from 4.4 per cent to 6.7 per cent in 2020-21 (Figure A7 and Table A4, Appendix II).

iii. With respect to fiscal transfers, the share of tax devolutions in revenue receipts of the States remained broadly unchanged between 2014-15 and 2020-21, while that of tied transfers (CSS and others) increased sharply, which the FC-XIV tried to reduce. Because of this, the gap between tax devolutions and CSS transfers narrowed down sharply (Figure A5 and Table A2, Appendix II).

iv. These trends suggest that the States' dependence on fiscal transfers has increased post FC-XIV, and within fiscal transfers, the reliance on tied transfers has increased much more than that on untied transfers. These developments do not augur well for the autonomy of the States and their own development needs.

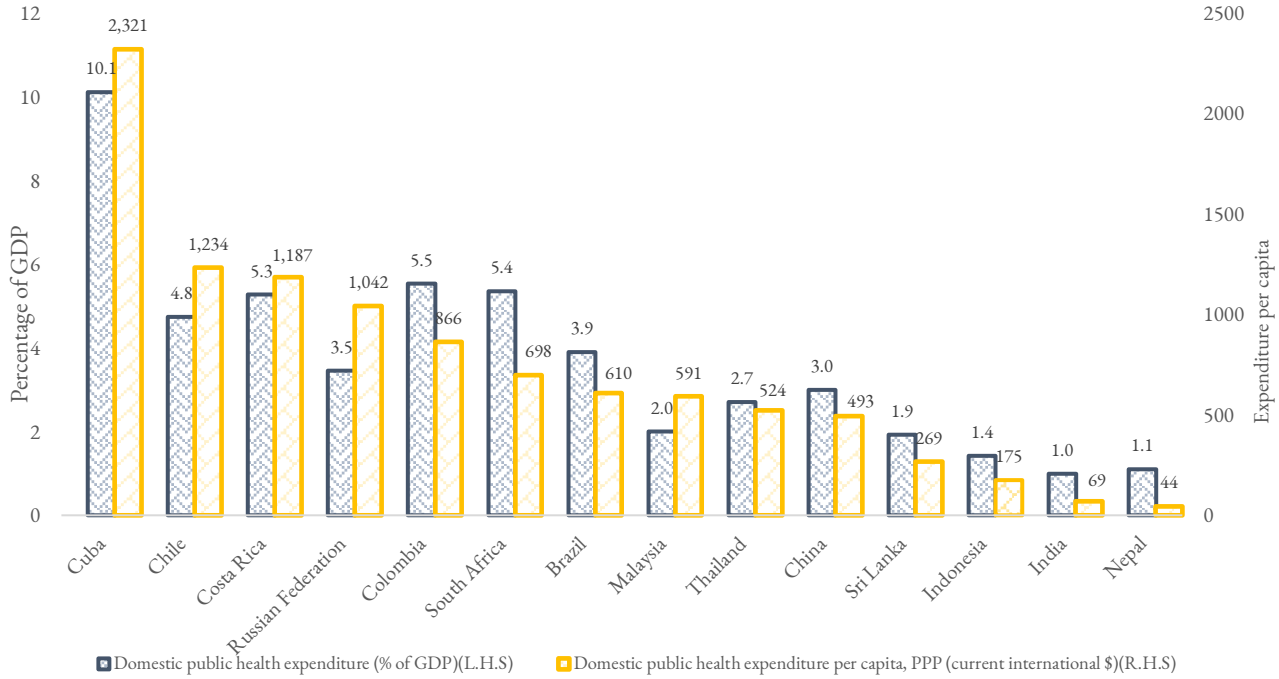
v. The relative significance of NHM transfers in total CSS transfers declined over the years (Figure A8, Appendix II).

5. Public Health Spending in India – An Analysis

5.1 India versus Selected Other Countries

Public spending on health in India, measured both as a percentage of GDP and in per capita terms, is among the lowest in the world. Other emerging countries such as Brazil, Chile, Colombia, Thailand, Malaysia, and South Africa allocate significantly higher proportions of their GDP to health relative to India. This is both in terms of percentage of GDP and on a per capita basis (Figure 1).

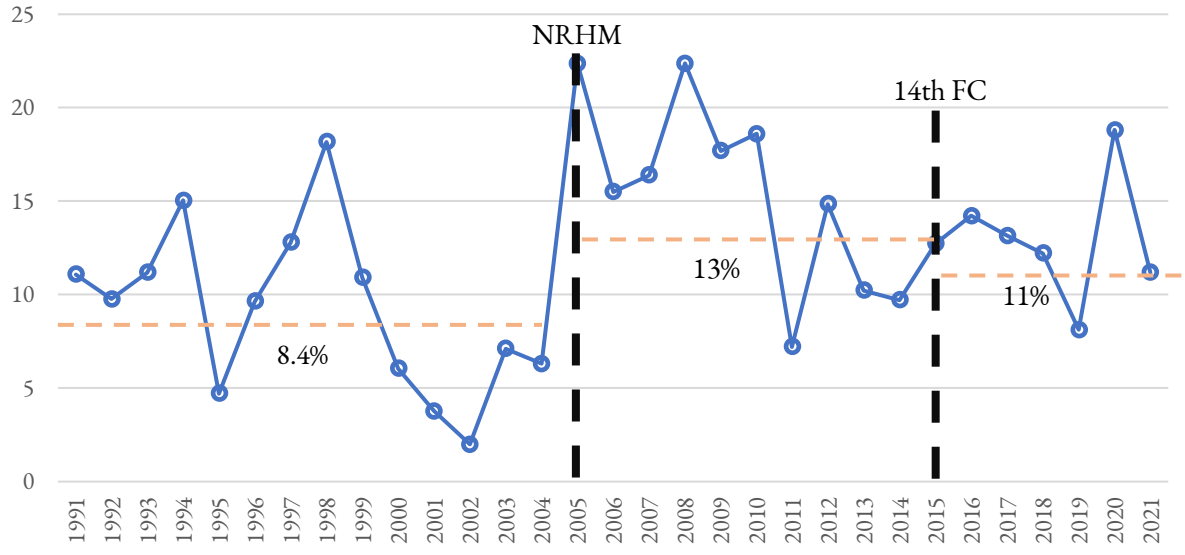
Figure 1: Public Health Spending - India and Select Countries - 2019



Source: Compiled using data from World Development Indicators, World Bank.

Growth in per capita spending on health by both the Union and the States surged following the launch of the NRHM, but it moderated from the fiscal year 2015-16 onwards (Figure 2).

Figure 2: Growth in per capita public health expenditure

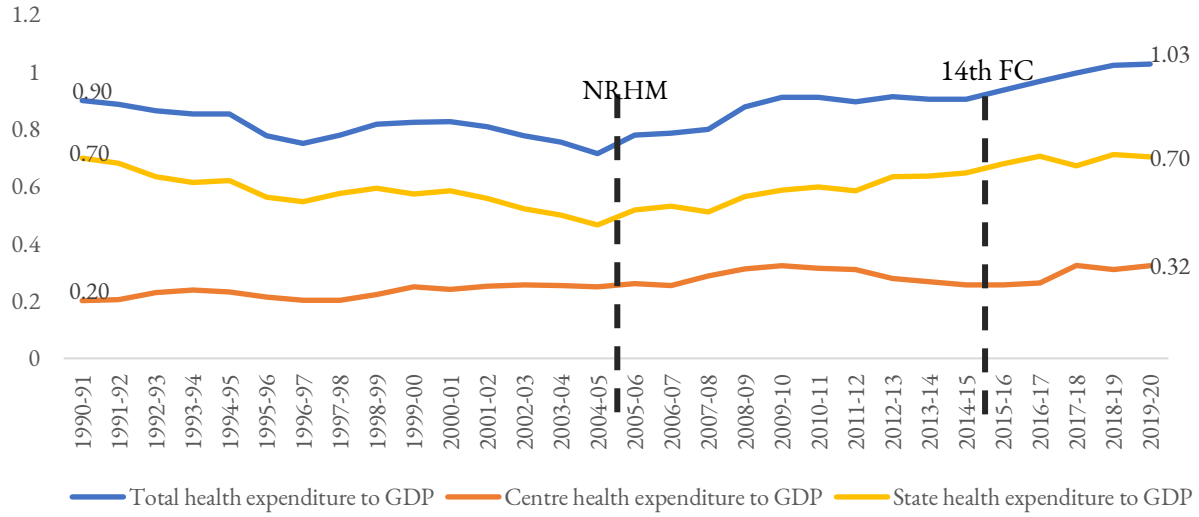


Source: RBI State Finances, A Study of Budget; Union budgets
Note: i. Total Public health expenditure includes expenditure by the Centre and the States on Medical and Public Health and Family welfare. Health expenditure by ministries other than Ministry of Health has been excluded. ii. Data used in this chart have been separately provided in Table A5 (Appendix III).

5.2 Union government vis-à-vis the States

Of over 1.0 per cent of its GDP spent by India as public expenditure on health, over two-thirds is contributed by the States and one-third by the Centre. However, it is disconcerting to note that in the 30-year period between 1990-91 and 2020-21, health expenditure in India as a percentage of GDP rose only marginally, by 0.14 percentage points. The increase was contributed entirely by the Union's health spending, while the States' health spending as a percentage of GDP remained unchanged. Health spending by the States declined almost continuously from 0.70 per cent of GDP in 1990-91 to 0.47 per cent of GDP in 2004-05. This declining trend was reversed after the launch of the NHM, which restored the States' health spending to 0.70 per cent of GDP in 2019-20—the same level that existed in 1990-91 (Figure 3).

Figure 3: Public Health Expenditure (as a per cent of GDP)

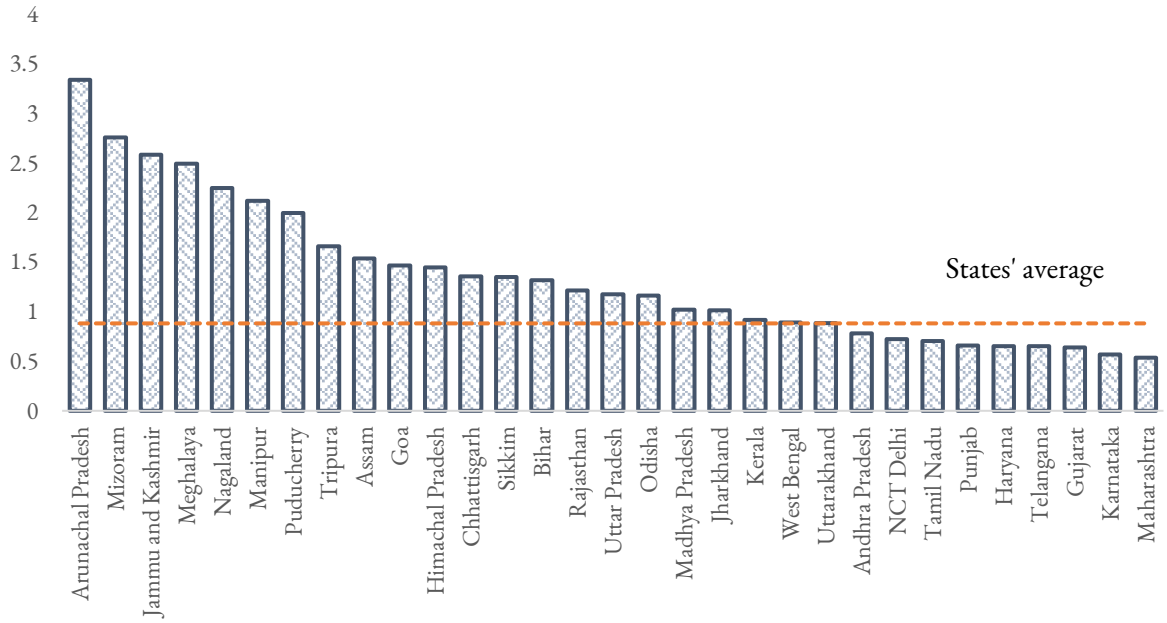


Source: RBI State Finances, A Study of Budget; Union budgets.
Note: i. Total health expenditure includes expenditure by the Centre and the States on Medical and Public Health and Family welfare. Health expenditure by ministries other than the Ministry of Health has been excluded.
ii. Data used in this chart have been separately provided in Table A6 (Appendix III).

5.3 Health Remains a Low Priority in State Budgets

Given the resources available to the States, one question arises: How do they prioritize health? This aspect could be assessed using various indicators. Intriguingly, health spending as a percentage of GSDP in many economically well-off states such as Maharashtra, Karnataka Gujarat, Punjab, Haryana, Tamil Nadu, and Delhi (NCT) is below the average spending on health. On the other hand, health spending as a percentage of GDP in some states, including Arunachal Pradesh, Mizoram, Jammu and Kashmir, Meghalaya, Nagaland, Manipur, Puducherry, and Tripura, is above the national average (Figure 4). The latter states are mostly small and hilly, belonging to the category of Special Category states.

Figure 4: Health Expenditure as a Percentage of GSDP - 2019

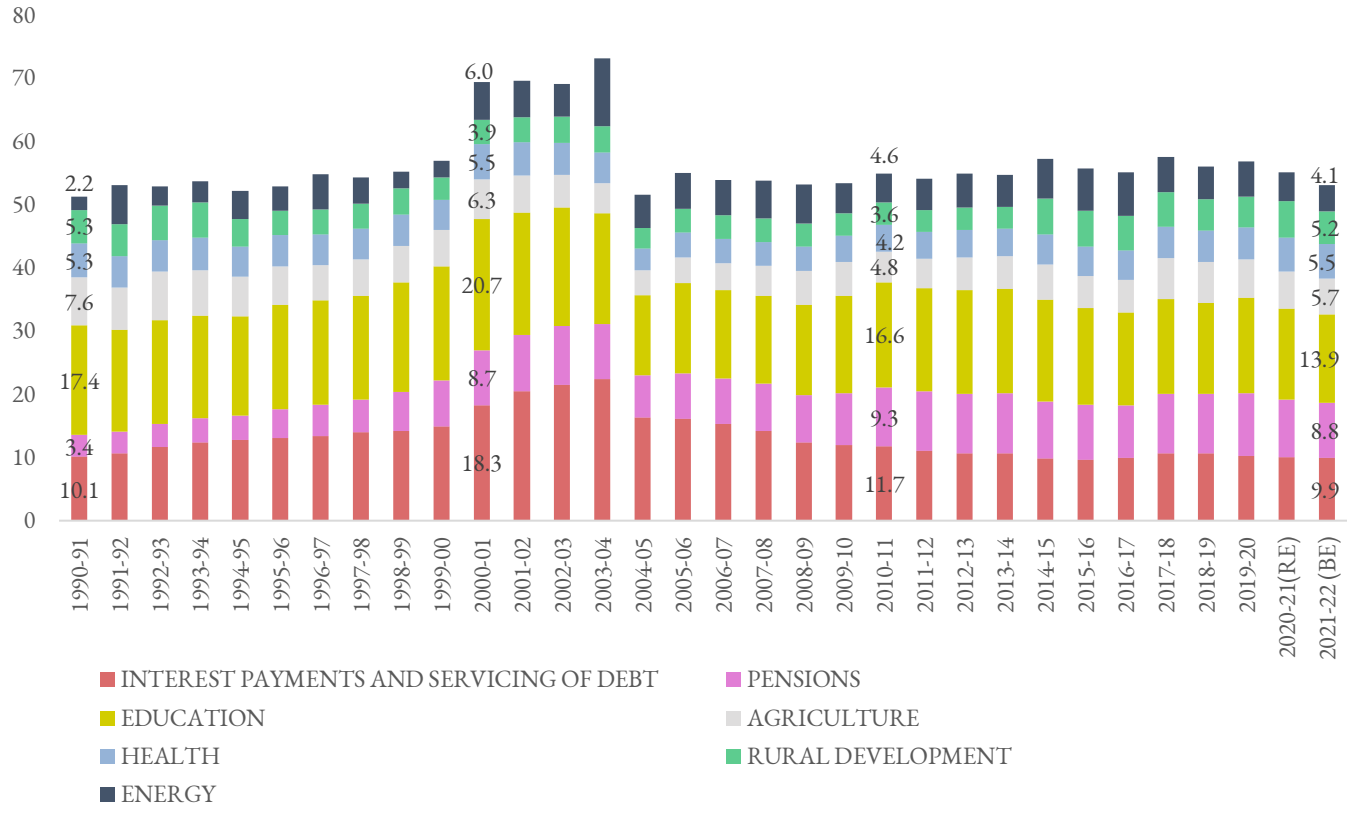


Source: RBI State finances; RBI handbook of Statistics for Indian States. Note: i. Including the Centre's health transfers to the States. ii. Data used in this chart have been separately provided in Table A7 (Appendix III).

Among all the major items of expenditure in State budgets, health has consistently been one of the lowest priorities. Over the past 30 years, the share of health spending in the total budgets of the States has remained within the range of 3.5 to 5.5 per cent (Figure 5).

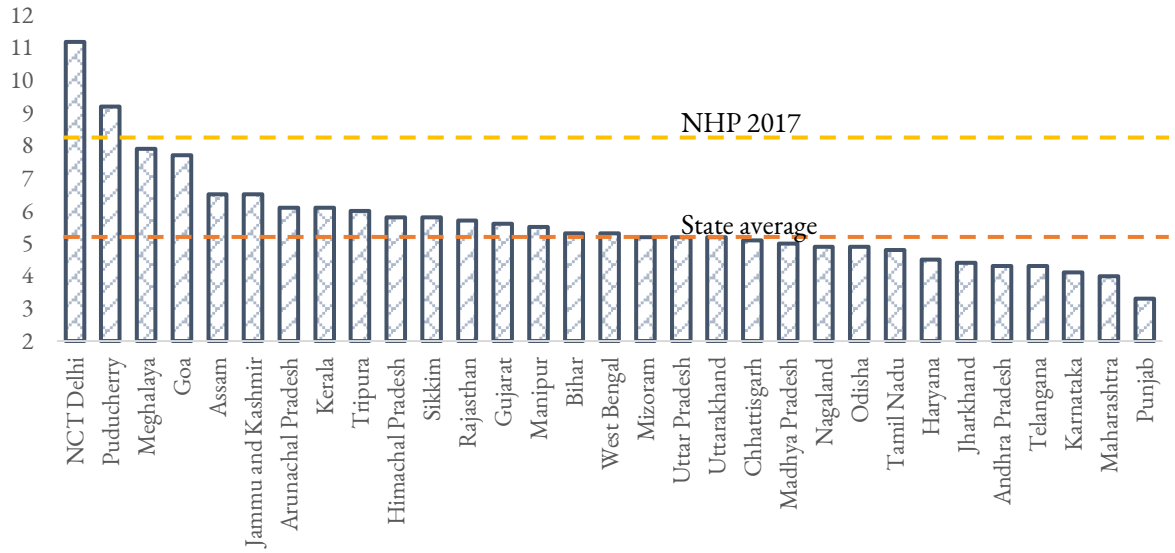
Health spending by most States has been around 5 per cent or lower of their total expenditure, even though the National Health Policy, 2017, exhorted the States to increase their health expenditure to 8 per cent of their total expenditure. Only two States/UTs, *viz.*, Delhi and Puducherry, spend more than 8 per cent of their total expenditure on health. On average, States spend 5 percent of their total expenditure on health, but one State, *viz.*, Punjab, spends even less than 4 per cent of its total expenditure on health (Figure 6).

Figure 5: Share of Various Items in Total Expenditure (States)



Source: RBI State Finances, A Study of Budgets. Note: Including the Centre's health transfers to the States.

Figure 6: Health Expenditure as Percentage of Total Expenditure (2019-20)

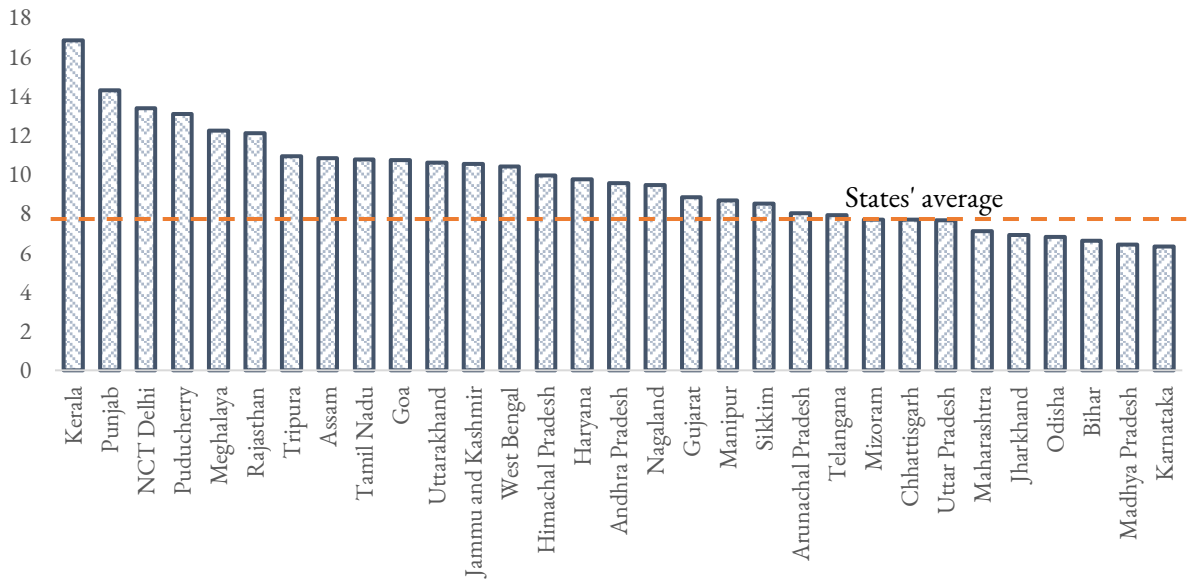


Source: RBI State Finances, A Study of Budget. Note: i. Including the Centre's health transfers to the States. ii. Data used in this chart has been separately provided in Table A8 (Appendix III).

However, measuring health expenditure as a portion of the total budget may be misleading, as States have varying level of committed liabilities (such as interest payments and pensions), which pre-

empt their resources, leaving less room for discretionary spending in other sectors. By adjusting for these committed liabilities, we derive what we call 'discretionary capacity.' The ranking of many States changes significantly when their health spending is measured against this discretionary capacity. Kerala, for instance, occupies the top position in health spending, surpassing New Delhi. Punjab, which is at the bottom in terms of health spending based on total expenditure, moves up the ladder to the second position when measured against discretionary capacity. Tamil Nadu and Haryana are two other States that also moved up several places in health spending based on discretionary capacity. Conversely, Maharashtra and Karnataka, despite being economically well-off states, are almost at the bottom in terms of both measures of health spending (Figure 7).

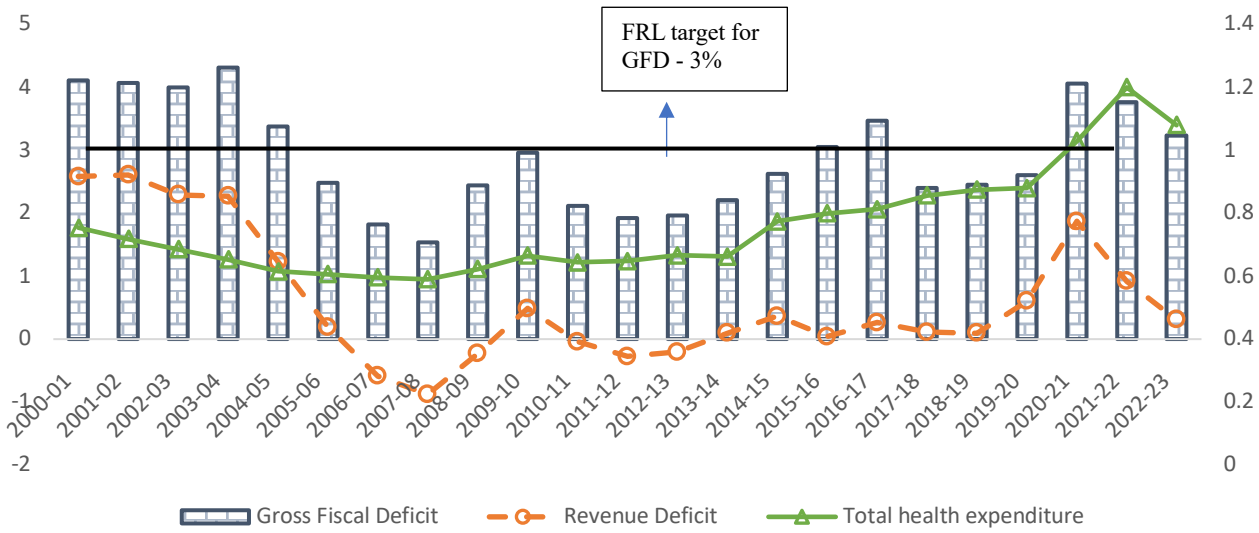
Figure 7: Health Expenditure as a Share of Discretionary Capacity (2015-20)



Source: RBI State Finances, A Study of Budgets. Note: i. Discretionary capacity is total revenue capacity minus non-developmental expenses. ii. Including the Centre's health transfers to the States.

Public spending on crucial social sector priorities such as health and education, also depends on the fiscal space available to the States. Under the FRBM Act, States are required to maintain a zero revenue deficit and keep the fiscal deficit at 3.0 per cent. An analysis of data on key deficit indicators from all States suggests that, until Covid-19 induced disruptions in the economy, States generally maintained almost zero revenue deficit on average, and even recorded a surplus in some years. However, despite having fiscal space, States' health spending remained low (Figure 8).

Figure 8: Key Deficit Indicators and Health Expenditure – All States (As percentage of GDP)

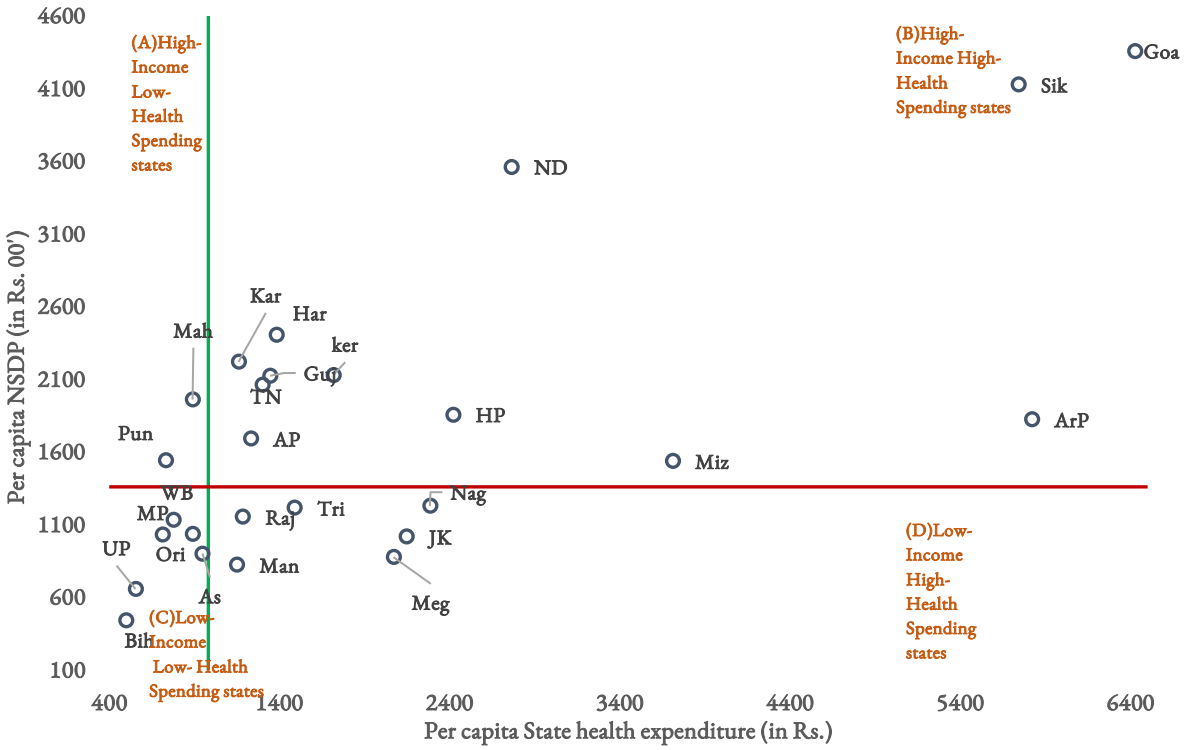


Source: State Finances, A Study of Budgets, RBI and Union Budget documents. Note: The 3 per cent GFD for States was relaxed temporarily to 3.5 per cent in 2008-09 and to 4 per cent in 2009-10.

5.4 Income and Health Spending by States – Pattern of Relationship

After analysing various health spending indicators, we sought to examine the pattern of the relationship between income and health spending. For this purpose, we used weighted per capita state health spending and weighted per capita income, with weights based on the population levels of the respective States for the year 2019-20, as benchmarks to measure the States' performance in health spending. Four distinct different patterns emerged: (i) Quadrant B includes States with above-average per capita income and above-average per capita health spending (high-income high-health spending States). This quadrant comprises Delhi, Himachal Pradesh, Kerala, Gujarat, Tamil Nadu Karnataka, Sikkim, Goa, and Andhra Pradesh. (ii) Quadrant (D) encompasses States with below-average per capita income but above-average health spending (low-income high-health spending States). States in this quadrant include Nagaland, Meghalaya, Jammu and Kashmir, Tripura, Rajasthan, and Manipur. (iii) Quadrant A represents States with above-average income but below-average health spending (high-income low-health spending states) such as Maharashtra and Punjab. (iv) Finally, Quadrant C consists of States with both below-average income and below-average health spending (low-income low-health spending states), including Uttar Pradesh, Bihar, West Bengal, Madhya Pradesh and Assam (Figure 9).

Figure 9: Income and Health Spending: Pattern of Relationship



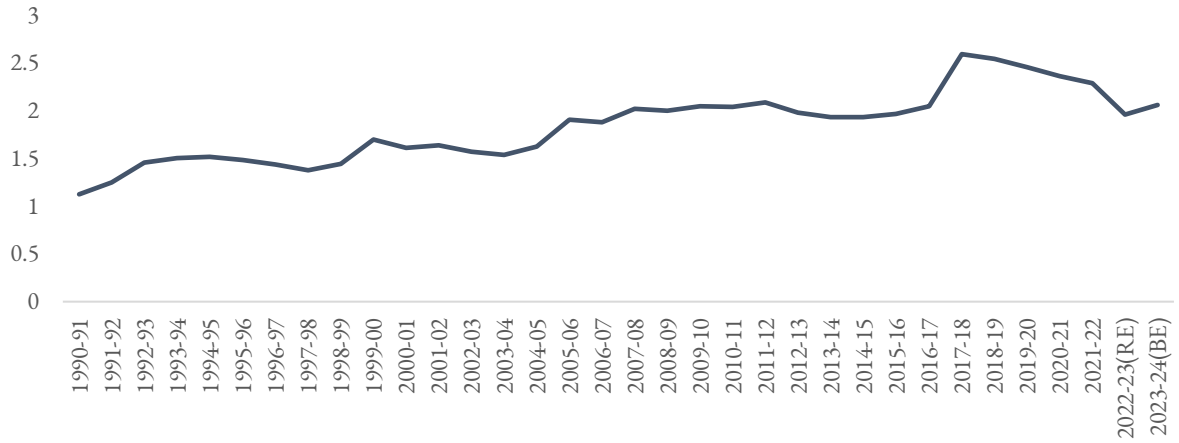
Source: State Finances, A Study of Budgets, RBI and Union Budget documents.

Based on various indicators, some contrasting trends emerge at the State level. Notably, some north-eastern States, especially, Meghalaya, Sikkim, and Arunachal Pradesh, spend much more on health than many of their counterparts. Sikkim's higher per capita income partly explains its increased health spending. However, Arunachal Pradesh, despite having much lower per capita income, spends as much on health per capita as Sikkim, suggesting that health is a high priority for Arunachal Pradesh. Meghalaya and Mizoram were two other States where health spending was better relative to their income levels. In contrast, Maharashtra and Karnataka, despite being economically well-off, spend much less on health relative to their incomes.

5.5 Public Health Financing – Rising Role of the Central Government

Though health is a state subject, the Union government has been playing an increasingly greater role in health financing. With the launch of several CSSs such as the NHM, Ayushman Bharat, and Central Schemes like the *Pradhan Mantri Swasthya Surakasha Yojana* (PMSSY), the Union government has expanded its footprint in healthcare. Reflecting a higher rate of health spending compared to its overall spending, the share of health expenditure in the total spending of the Union Government increased post-NHM, reaching a peak of 2.6 per cent in 2017, before declining thereafter (Figure 10).

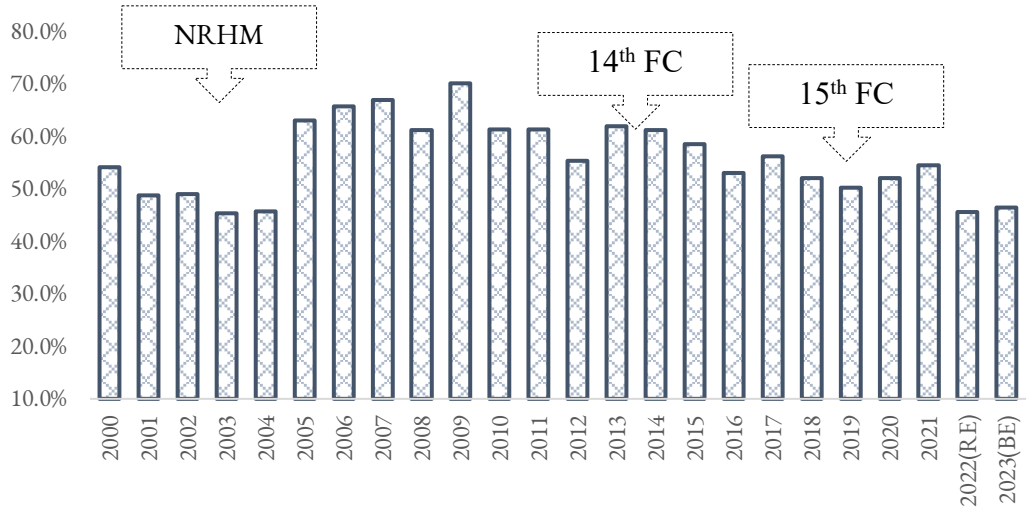
Figure 10: Central Government Budget – Health Spending (As per cent of total budget)



Source: Union budgets. Note: Data used in this chart have been separately provided in Table A9 (Appendix III).

Before the NHM was introduced, the share of health transfers to States in total health spending by the Centre was 45.6 per cent in 2004. This figure shot up to 63.0 per cent in 2005 following the launch of the NRHM and peaked at 70.0 per cent in 2009. Thereafter, the share gradually declined (Figure 11). This trend suggests that the Central government now allocates relatively more resources on health spending through central sector schemes rather than indirectly through CSSs.

Figure 11: Share of Health Transfers to States in Total Union Spending on Health (per cent)



Source: Union budgets. Note: 15th FC reduced the share of tax devolution to states to 41 per cent on account of reorganisation of the state of Jammu and Kashmir into 2 union territories.

The following key points emerge from the above analysis:

i. First, the growth rate of public health spending improved significantly after the launch of the NRHM/NHM, driven by increased spending by both the Union and the States. Health spending by the States, measured as a percentage of GDP and their total expenditure, increased post-NRHM, reversing the declining trend observed from the early 1990s. However, overall spending by States on health in their total expenditure remained broadly unchanged at 0.7 per

cent of GDP and 5.5 per cent of total expenditure over the last 30 years. As such, health generally remains a low priority in State budgets, including in some economically well-off States.

ii. Four patterns in the income-health spending relationship were observed: (i) high-income high health spending states; (ii) low-income high health spending states; (iii) high-income low health spending states; and (iv) low-income low health spending states.

iii. As expected, an inverse relationship was found between public health spending and OOPE.

iv. Health spending by the Union government increased post NRHM\NHM. However, most of the increase occurred directly through central sector schemes than through CSSs.

6. Determinants of Health Spending by States

Having analysed trends in the States' own revenues, untied transfers, health-specific transfers by the Centre to the states, we explain their role in determining the health spendings by the States in this section. We seek answers to essentially three questions: (i) To what extent are states' own revenue and untied transfers from the Union are important in explaining health spending in India? (ii) Do States substitute their non-NHM health spending with NHM spending? (iii) To what extent have health transfers by the Centre been able to address horizontal inequalities in health spending post-NHM?

6.1 Literature Review

Several academic works explored the relationship between income and health expenditure across countries. The first seminal work on this topic dates back to 1977 by Joseph P. Newhouse in 1977, who argued that the income elasticity of health expenditure is greater than one, involving a cross-national study of 13 OECD. Subsequent studies by Leu (1986), Parkin et al. (1987), and Brown (1x987) confirmed the relationship between income and health spending, along with several other non-income determinants of healthcare expenditure such as public expenditure, dependency ratio, ageing, and the cost of healthcare services.

The works referred to above generally studied the total health expenditure, comprising both private and public expenditure. A series of literature has also focussed on public health expenditure, which is the interest of our study. Karatzas (2000) studied the determinants of public health expenditure in the U.S. between 1962 and 1989 and found ageing to be the most important factor, followed by income level. A panel data analysis across Italian regions from 1980-95 by Giannoni and Hitiris (2002) also found per capita income and population ageing to be the major determinants of public health care expenditure. Clemente et al. (2004), in a panel data analysis across OECD countries from 1960-77, argued income level was the only determinant of public health expenditure. Lu et al. (2010), however, found income to be an insignificant determinant of public health expenditure in several low and middle-income group countries. In an interesting study on Chinese provinces, Yu et

al. (2013) found strategic interaction among the provinces to be determining the level of health expenditure. Boachie et al. (2014) found that health policies initiated in the country had a positive role in increasing the public expenditure on health. A Bayesian model used by Byaro et al. (2018) identified the old age population as a major determinant of health spending in Tanzania after GDP per capita.

A few studies also explored the relationship between fiscal federalism and public health expenditure. A lot of heterogeneity in public health expenditure in Spanish regions could be explained by the level of decentralisation (Font and Novell, 2006). Matteo and Matteo (1998) found that per capita central transfers of revenue (in real terms) to provinces were a significant and positive determinant of provincial public health expenditure in Canada. A somewhat similar result was observed by Pan and Liu (2011) in a panel data analysis of Chinese provinces. Both the fiscal transfers and budget revenue were found to be significant determinants of public health expenditure in China, but the elasticity of fiscal transfer was slightly lower than that of the latter. They also found that urbanisation had a negative impact on public health spending, while the proportion of female population in the total population was not found to be impacting health spending.

Several studies also exist on the determinants of public health expenditure in India. Bhat and Jain (2004) analysed public health expenditure at the state level from 1990-2002 using Panel Generalized Method of Moments (GMM) estimation. They found the States' income is the main determinant of public health spending, with an income elasticity of 0.68. In a similar attempt with a panel of 14 states and time period from 1971-91, Rahman (2008) found an income elasticity of 0.47 in India. The study also found the literacy rate to be a significant determinant of public health expenditure with a positive correlation, whereas other supply-side factors, such as doctors relative to population and the primary health care centres, were found to be insignificant. Bringing out the importance of political economy, Hooda (2016) claimed that the election participation was directly related to the level of public health expenditure across the States. The study also found that income elasticity over the years had increased to around unity (i.e., one per cent increase in income led to an almost one per cent increase in public health spending) and availability of financial resources with the States played a crucial role in determining the public health expenditure.

The substitution of health expenditure by states/provinces with health spending by the federal/central government has also been a widely discussed issue worldwide. Farag et al. (2009) found evidence of a strong substitution effect in their study, i.e., the extent to which health aid is substituted for, rather than complemented by, domestic health financing among the developing countries. In another study on health financing among developing countries, Lu et al. (2010) asserted that the external assistance on health spending decreases health expenditure by the domestic government.

In the Indian context, Rao and Choudhury (2012) in their study on health financing comprising 14 Indian states for the period between 1991 to 2007 found a strong evidence of substitution of states' own health expenditure with centre's health grants. That is, increased central grants to States had the opposite impact on changes in States' own expenditure on health. Kotasthane et al. (2018) extended

the same analysis to the period 2012-15 and found the similar results. Bowser et al. (2019) studied the degree of additionality provided by central grants for primary healthcare among 16 Indian states for the period 2005-13. They suggested a lack of additionality effect between central allocations and States' own contribution to public health. They found this phenomenon was more severe for the wealthier states.

To sum up, studies in the international context have found income to be the main determinant of health spending. However, population ageing, rather than income, was identified as the primary determinant of public health spending. Interestingly, while income was the sole determinant of public health spending in advanced economies, it was not a determinant for low- and middle-income countries. Some studies, which explored the relationship between fiscal federalism and healthcare identified per capita central transfers of revenue to provinces as the key determinant of health expenditure by the provinces.

Studies in the Indian context have found income to be the main determinant of public health spending by States. Additionally, the financial resources available to States were also found to be play a key role in public health spending. Literacy was another determinant of public health spending in India. Studies in both international and Indian contexts have found evidence of a substitution effect. A study in the international context found that health aid decreased domestic government health expenditure. In the Indian context, a study found that increased Centre's grants to States were found to be reducing States' own health expenditure.

6.2 Data and Methodology

The study covers 25 states[11] and one UT[12] spanning from 2005-06 to 2019-20, *i.e.,* after the introduction of National Rural Health Mission (NRHM) in 2005. For our analysis, we use the following variables: (i) per capita public state health expenditure; (ii) net state domestic product (NSDP) as a measure of income of a State; (iii) States' own revenue; (iv) untied or unconditional transfers from the centre; (v) health-specific transfers from the Centre to States. The variables of interest are (i) the States' own revenue and (ii) unconditional and health-specific transfers from the Centre. Per capita Net State Domestic Product (NSDP) is used as a control variable. Following studies by Gerdtham *et al.* (1992) and Pan and Liu (2011), we also use proportion of the female population and the proportion of urban population as other control variables. We were unable to control for literacy rate and aging population due to the unavailability of data.

Per capita nominal NSDP is measured using NSDP at current prices with 2011-12 base divided by state-wise population. Health-specific central grants are proxied by central releases under National Health Mission (NHM) to the States. Per capita health expenditure by the States was obtained after subtracting the central contribution (per capita release under NHM) from the total per capita public expenditure (PHE) in a state. We also calculate PHE by the States after excluding their contribution to NHM, using the matching share of 60:40 (75:25 before 2016-17) and 90:10 under NHM for the States as the case may be. States in India are quite heterogenous, which therefore demands that they

should be analysed separately, especially Special Category states vis-à-vis other states. However, this process faced statistical challenges. Testing separate models resulted in unit roots and high multicollinearity. Owing to the short time period of the study, it was not feasible to address unit roots in the variables of interest, as it would have resulted in a significant loss of information. The severe problem of multicollinearity among the variables tends to decrease the reliability of the results as it inflates the standard error of the estimated coefficients. Thus, we proceeded with the analysis for all States together.

The States' own total revenue comprises both their tax and non-tax revenue. Unconditional transfers were arrived at by deducting grants under the CSSs by the Centre to States from the sum of tax devolutions and central grants. The proportion of female and urban population was represented by the ratio of the number of females and urban population to the total population in a state. All the data series are sourced from the 'Handbook of Statistics on Indian States and State Finances: A Study of Budgets' by the Reserve Bank of India, except for NHM releases by the Centre, which were obtained from the Lok Sabha's unstarred questions[13]. There are some differences in the data as presented in the state budgets and those in the RBI study of state finances. However, a validation exercise conducted on health expenditure in the two sources for the period from 2014-15 to 2019-20 showed that the two series were not significantly different (Avani *et al.* 2023). Therefore, the data based on the RBI state finances were used for the purpose of our analyses. The state-wise data on population were taken from the 'Population Projection of India and States' report of the technical group on population projection in 2020. All the data sets collected are on an annual basis and state-wise.

Since the presence of unit root in the data series can lead to spurious results, we have tested all the variables for unit roots using Levin-Lin-Chu test, the results of which are presented in Table A1 in Appendix IV. All the data series were found to be stationary at levels (*i.e.,* no unit roots), except proportion of female and urban population, which were stationary in the first difference. Thus, we used the first difference form of these variables and level form of other variables.

The following model was used for the purpose of our analysis:

$$log\ (st\_hlth)_{it} = a + b^{*}\log\ (\text{pc\_nsdp})_{\ it} + \ c^{*}\log\ (hlth\_trans)_{it} + d^{*}\log(st\_rev)_{it} + e^{*}\log(un\_grant)_{it} + f^{*}(\Delta female)_{it} + +g^{*}(\Delta urban)_{it} + z_{\ i} + u_{it}$$

where;

st_hlth is per capita health expenditure by states,

pc_nsdp is per capita NSDP,

$hlth\_trans$ is per capita health-specific central transfer,

st_rev is per capita states' own revenue,

un_grant is per capita unconditional transfers from the centre,

$female$ and $urban$ is proportion of female and urban population, respectively.

We tested the above model with two forms of per capita health expenditure by States as the dependent variable—one including the States' contribution to NHM, and the other excluding it. The underlying idea to exclude States' contribution to NHM was to test the substitutability, *i.e.,* whether the States reduce their non-NHM health expenditure to finance NHM. This is because the States are required to make matching contributions to NHM. Therefore, as the Centre's health-specific transfers increase, the States are also required to contribute more to NHM. Therefore, the States may be tempted to substitute their non-NHM health expenditure with that of NHM expenditure.

The subscripts 'i ' and 't ' denotes i^{th} state and t^{th} time period, respectively z_i is the unobserved time invariant characteristics; and u_{it} is the idiosyncratic error term. 'Δ' represents the first difference form.

We expect coefficients of the States' own revenue (d) and unconditional transfer (e) to have positive signs. A negative sign of per capita health-specific central transfer (c) would indicate that the States substitute their non-NHM health spending with NHM spending.

In order to ensure that the chosen model is appropriate, we conducted the Breusch-Pagan Lagrange Multiplier test to check whether the state-specific characteristics were random and whether a panel effect existed. The test results[14] confirmed that the state-specific characteristics were random. Hence, a panel data analysis was found appropriate. In addition, to choose between a fixed effect and a random effect model, Hausman test (1978) was employed. The results[15] showed that the fixed effect model was more appropriate. Furthermore, the Ramsey Reset test[16] confirmed that the model had no omitted variable bias.

Econometric exercises were conducted for (i) all states; (ii) economically well-off states (based on per capita NSDP); and (iii) economically weaker states. Equations were also tested separately with States' NHM contribution included in their per capita health spending and after excluding NHM contribution. The results were tested for 2005-14 period and 2005-19 period to separate the effects of FC-XIV. The results obtained are discussed in the following section.

6.3 Results and Discussion

Health Spending by States including NHM - All States

We first analyse results with States' contributions to the NHM included in their health spending. Both States' own revenue and unconditional transfers were found to be statistically significant. The elasticity of per capita state's health expenditure in relation to per capita unconditional health transfers (0.21) was greater than that of per capita state's own revenue (0.14). This means that an increase in total unconditional transfers translated into per capita state health expenditure slightly better than an increase in the States' own revenue. Specifically, a one per cent increase in per capita unconditional transfers raises per capita state health expenditure by States by 0.21 per cent, while a

one per cent increase in States' own revenue increases per capita state health expenditure by 0.14 per cent. Interestingly, the impact of States' own revenue was greater than that of unconditional transfers during the pre- FC-XIV period.

The coefficient of the Centre's health-specific transfers was not found to be statistically significant, suggesting that the States did not substitute or complement their own health spending with that of the Centre's health transfers. The concepts of substitution and complementarity are critical to understand this context. Substitution needs to be interpreted in a broad sense that the States do not spend on health as much as they should have had they not been receiving health transfers from the Centre. Likewise, complementarity means that States spend more on health with an increase in health-specific transfers than otherwise. The coefficient for the Centre's health-specific transfer was also not found significant, possibly for the reason that some states, especially economically weaker states, may not be able to meet the matching contributions, required under the NHM. Apart from variables of interest, income (NSDP) and female proportion in population were also found to be important determinants of health spending by all States.

Table 1: Regression Results: All States

Dependent variable: Per capita state health spending (Including NHM Contribution)

Variable	2005-19	2005-14
Per capita NSDP	0.682***	0.726***
Per capita centre's health-specific transfer	0.005	0.008
Per capita State's own revenue	0.144**	0.156**
Per capita Unconditional transfers	0.211***	0.128*
Δ Female Prop	0.051	0.049*
Δ Urban prop	0.001	0.001
Constant	- 4.177***	- 4.083***
R^2	0.93	0.88

Source: Authors' calculations. Note: * denotes 10 per cent significance level, **5 per cent significance level and *** 1 per cent significance level.

Health Spending by States including NHM - Economically Well-off and Economically Weaker States

Results for economically well-off states were similar to those obtained for all States, with one notable difference: in the case of economically well-off states, their own revenue was found to be more important in explaining their health spending than unconditional transfers. The elasticity coefficient of economically well-off states' own revenue was 0.20, compared with 0.17 for unconditional transfers (Table 2). However, it is significant to note that the impact of States' own revenue weakened after the award period of FC-XIV, while the impact of unconditional transfers increased.

Table 2: Regression Results: Economically well-off States

Dependent variable: *Per capita state health spending (Including NHM Contribution)*

Variable	2005-19	2005-14
Per capita NSDP	0.706***	0.680***
Per capita centre's health-specific transfer	-0.001	0.002
State's own revenue	0.204**	0.293***
Unconditional transfers	0.169**	0.126**
Δ Female Prop	0.051	0.033
Δ Urban prop	- 0.001	0.001
Constant	-4.669***	-11.693***
R^2	0.95	0.92

Source: Authors' calculations. Note: *denotes 10 per cent significance level, **5 per cent significance level and *** 1 per cent significance level

In the case of economically weaker states, it was unconditional transfers, rather than their own revenue, that influenced their health spending, as the coefficient of latter variable was statistically insignificant. The elasticity coefficient of unconditional transfers was 0.28, implying every one per cent increase in unconditional transfers to economically weaker states leads to a 0.28 per cent increase in their per capita health spending. Also, like economically well-off states, economically weaker states did not substitute or complement their health spending with health-specific transfers from the Centre (Table 3).

Table 3: Regression Results: Economically Weaker States

Dependent variable: *Per capita state health spending (Including NHM Contribution)*

Variables	2005 -19
Per capita NSDP	0.585***
Per capita centre's health-specific transfer	0.017
State's own revenue	0.130
Unconditional transfers	0.285**
Δ Female Prop	0.103
Δ Urban prop	0.001
Constant	-3.689***
R^2	0.90

Source: Authors' calculations. Note: *denotes 10 per cent significance level, ** denotes 5 per cent significance level and *** denotes 1 per cent significance level.

Health Spending by States excluding NHM - All States

We now analyse results with per capita health spending by the States, excluding the states' contribution to NHM. In this case, the dependent variable represents States' spending on non-NHM health, excluding expenditures related to NHM.

The findings, as presented in Tables 1-3, indicated that health-specific transfers had no impact on a State's overall health expenditure. However, these transfers may still influence intra-health spending by reallocating expenditure from one health component to another. This is due to the fact that health-specific grants that States receive are intended for centrally sponsored schemes, specifically the National Health Mission (NHM), which follows a funding pattern of 60:40 matching contribution. Therefore, to receive more central funds, states need to increase their spending on NHM, which could lead to a substitution or reallocation of financial resources between NHM and non-NHM health spending.

The results obtained (Tables 4 to 6) included the States' NHM contribution in their health spending, with one notable exception. The Centre's health-specific transfers have a statistically significant and negative impact on non-NHM health spending by States. This implies that as the Centre's health-specific transfers increase, the States reduce their non-NHM health spending. This finding and the earlier results from Tables 1-3, which show that health-specific transfers don't lead to a decline in States' health expenditure, clearly suggest that the substitution is taking place within the health expenditure components. Specifically, States reduce their non-NHM health expenditure to make matching contributions to NHM. Quantitatively, 1 percentage increase in NHM contribution by the States leads to substitution of 0.09 per cent of their per capita non-NHM spending (Table 4).

Table 4: Regression Results: All States

Dependent variable: *Per capita state health spending (Excluding NHM contribution)*

Variable	2005-19	2005-14
Per capita NSDP	0.739***	0.787***
Per capita centre's health-specific transfer	-0.091***	-0.08**
State's own revenue	0.189**	0.201***
Unconditional transfers	0.235***	0.134*
Δ Female Prop	0.061*	0.054**
Δ Urban prop	- 0.001	- 0.001
Constant	- 5.057***	- 4.851***
R^2	0.92	0.86

Source: Authors' calculations. Note: *denotes 10 per cent significance level, **5 per cent significance level and *** denotes 1 per cent significance level.

Health Spending by States excluding NHM - Economically Well-off and Economically Weaker States

As observed earlier, the own revenue of economically well-off states played a more important role in explaining their health spending compared to unconditional transfers from the Centre. Notably, it also significant to mention that economically well-off states were found to be substituting their non-NHM health spending with that of NHM spending (Table 5).

Table 5: Regression Results: Economically Well-off States

Dependent variable: ***Per capita state health spending (Excluding NHM Contribution)***

Variable	2005-19	2005-14
Per capita NSDP	0.757***	0.809***
Per capita centre's health-specific transfer	- 0.066*	-0.069*
State's own revenue	0.222**	0.265***
Unconditional transfers	0.185**	0.106*
Δ Female Prop	0.047	0.037
Δ Urban prop	- 0.003	-0.002
Constant	- 5.334***	- 5.625***
R^2	0.94	0.90

Source: Authors' calculations. Note: *denotes 10 per cent significance level, **5 per cent significance level and *** 1 per cent significance level.

Economically weaker states were also found to be substituting their non- NHM health spending with NHM spending (Table 6). Notably, the substitution effect in respect of economically weaker states was more than twice on the size of economically-well off states. One possible explanations for this could be that economically weaker states may struggle to make matching contributions to NHM grants. Although the Union government estimates the resource envelope for each state under NHM, actual disbursal only occurs after the State fulfils the Centre's conditions, such as providing utilisation certificate and making matching contributions. We also tested the model for the period from 2005-2014 to separate the effects of FC-XIV. However, this model did not fit well.

Table 6: Regression Results: Economically Weaker States

Dependent variable: ***Per capita state health spending (Excluding NHM Contribution)***

Variable	2005-19
Per capita NSDP	0.687***
Per capita centre's health-specific transfer	-0.136***
State's own revenue	0.174
Unconditional transfers	0.328**
Δ Female Prop	0.131
Δ Urban prop	- 0.001
Constant	- 4.891***
R^2	0.89

Source: Authors' calculations. Note: *denotes 10 per cent significance level, **5 per cent significance level and ***1 per cent significance level.

The following points emerge from the above analysis,

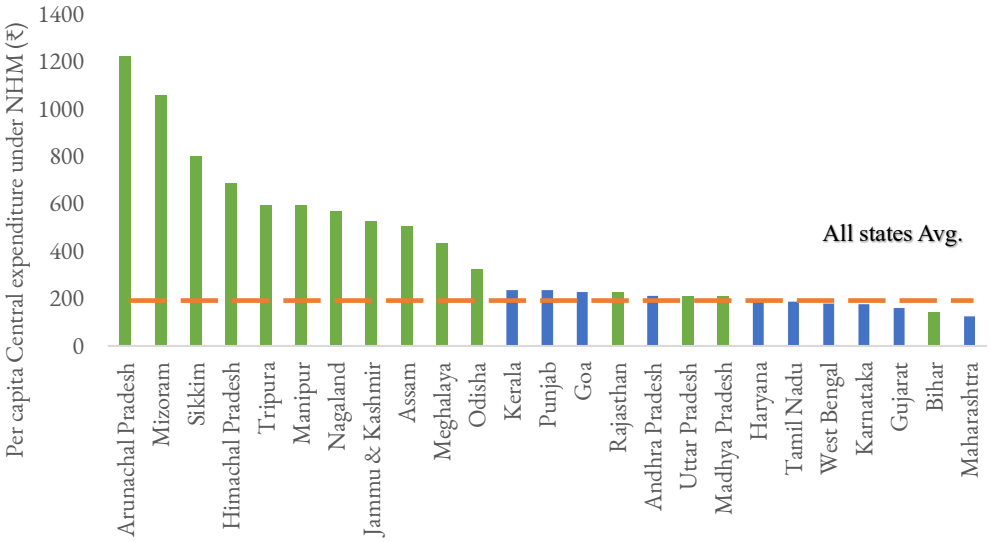
- First, in respect to all States, own revenue and unconditional transfers by the Centre influenced the health spending by all States. However, the economic impact of unconditional transfers was greater than that of the States' own revenue. In the pre-FC-XIV period, however, the impact of the States' own revenue was more important than that of unconditional transfers.
- Second, some significant differences were observed when the States were split into economically well-off and economically weaker states. Own revenue turned out to be more important than unconditional transfers for economically well-off states, though its impact weakened post the award period of FC-XIV. Unconditional transfer was the only determinant of health spending for economically weaker states, with no role of their own revenue.
- Third, both economically well-off states and economically weaker states were found to be substituting their non-NHM health spending with their spending on NHM. However, the substitution effect in respect to economically weaker states was much lesser than that of economically well-off states. It is also significant that even economically well-off states substituted their non-NHM health spending with that of NHM spending before the award period of the FC-XIV.

The above results are quite consistent in that economically well-off states depend more on their own sources for health spending. They are, therefore, in a position to make matching contributions to NHM. However, economically weaker states depend entirely on general purpose transfers from the Centre for financing their health-related spending. Therefore, given the limited financial resources, economically weaker states are tempted to reduce their non-NHM health spending when they are required to make increased matching contribution to NHM.

7. Horizontal Inequalities in Health Spending

In this section, we examine the question whether horizontal inequalities in health spending have declined post-NHM. One of the key features of the NHM has been the categorization of states into high focus states (with low health indicators) and non-high focus states for allocation purposes. The Union government has consistently allocated more resources, on a per capita basis, to high focus states *vis-a-vis* non-high focus states. Of the total allocations under NRHM/NHM, about 60 per cent are transferred to 18 high focus states (Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal, Jharkhand, erstwhile Jammu and Kashmir, Manipur, Mizoram, Meghalaya, Madhya Pradesh, Nagaland, Odisha, Rajasthan, Sikkim, Tripura, Uttarakhand, Uttar Pradesh) and 40 per cent to non-high focus states. Reflecting this, per capita allocation under the NHM has been consistently higher in high-focus states vis-à-vis non-high focus states. On a per capita basis, Arunachal Pradesh receives the highest health transfers from the Centre under the NHM, while Maharashtra the lowest (Figure 12).

Figure 12: Central Transfers to States Under NHM (2019-20)



Source: Union Budget documents and Indiastat.
Note: Green represents High Focused States; Blue represents non-focused states

Reduction in inequalities also means convergence in per capita spending on health amongst states. Two types of convergence, *viz.,* sigma (σ) or absolute beta (β) convergence have been tested in this section. While σ convergence tells us whether dispersion or inequalities have narrowed down over a period of time, β convergence tells us whether States with initial low per capita health spending are catching up with States with initial high per capita health spending. Both these terms are related. β convergence will result in σ convergence until the point when a low health spending state has caught up with initial high health spending state. σ convergence may begin to widen again if after catching up, the state with initial low health spending continues to outperform leaving behind the state with initial high health spending.

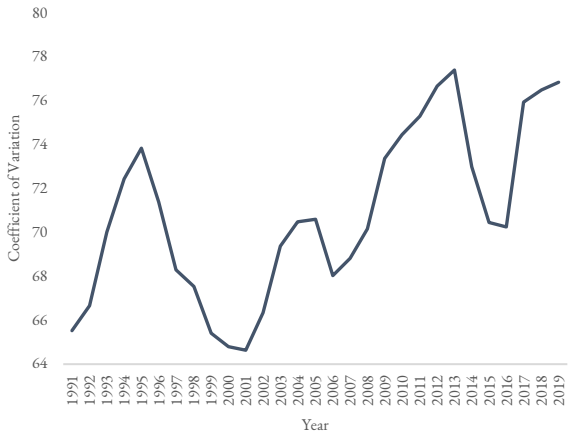
We study convergence for two periods, *viz.*, 1991-2004 (pre-NHM) and 2005-2019 (post-NHM) for 25 States and one union territory (UT) based on per capita public health spending (PHE), both in nominal terms and real terms; the real per capita state health expenditure based on 2015 prices. Convergence is also examined across all States and also separately for high focus states.

Sigma (σ) Convergence or variability

The Coefficient of Variation (CV) based on per capita income in nominal terms of all States as well as high focus states increased over the years [Figure 10 (a) (b)]. In real terms, CV broadly mirrored the CV in nominal terms for all states as well as high focus states [Figure 13 (c) and (d)]. These suggest that inequalities in health spending both in nominal and real terms have widened over the years.

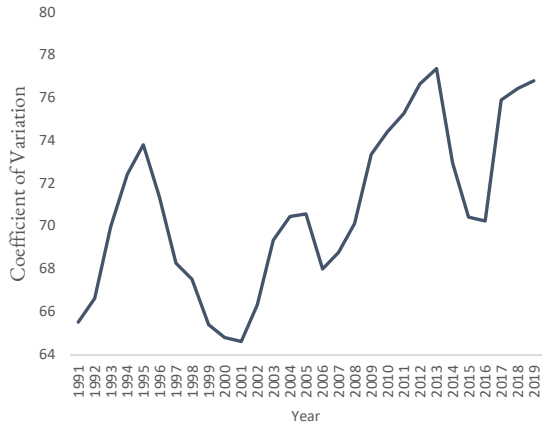
Figure 13: Per capita Real and Nominal PHE

(a) CV for all states (Nominal Terms).

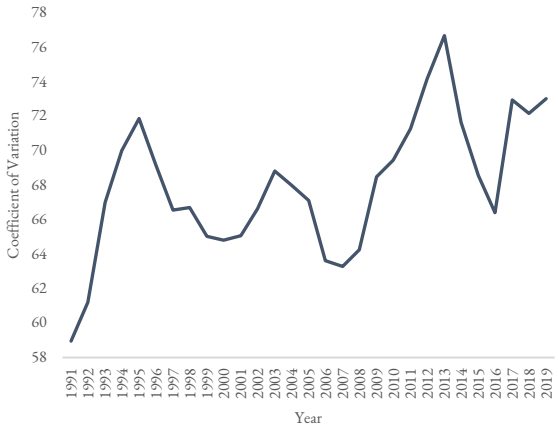


(b) CV for high focus states (Nominal Terms)

(c) CV for all states (Real Terms)



(d) CV for high focus states



Source: State Finances, A Study of Budgets, RBI.

Sigma (σ) convergence for per capita PHE (in real terms) has also been tested econometrically using the following model:

$$CV = a + bt + ut$$

Where a is the intercept term, b is the slope or the rate of change of Coefficient of Variation (CV) over time (t) and u_t is random error term. For σ convergence to hold b should be negative.

Absolute β Convergence

Absolute β convergence can be tested with the following equation:

$$log\ (h_{it}/hi_{it-1}) = a + b\ log\ (h_{it-1}) + u_{it}$$

Where h_{it} is per capita real health expenditure of state i, in time period t, while the subscript $t-1$ indicates lagged value. The left-hand side of the equation is the growth rate of real per capita health expenditure, which is a function of level of per capita real PHE in time $t-1$, which is used in place of initial level. The intercept and slope coefficient are a and b, respectively, and u_{it} is the random disturbance term. The slope coefficient (b) should be negative for absolute β convergence to hold.

7.1 Results and Discussion

Absolute or (β) convergence

Results for absolute (β) convergence for both the periods—pre-NHM and post-NHM—are set out in Table 7. Lagged co-efficient of per capita real PHE (slope coefficient) for **all States** was statistically insignificant for both the periods, *i.e.,* pre-NHM and post-NHM, suggesting no evidence of convergence or divergence.

Table 7: Absolute (β) Convergence: Results – All states

Variable	1991-2004 (Pre-NHM)	2005-2019 (Post-NHM)
Constant	-0.015	0.104***
L1. Per capita real PHE	0.005	-0.006

Source: Authors' calculations. Note: *** denotes 1 per cent level of significance and ** denotes 5per cent level of significance

However, for **high focus** states, the co-efficient of lagged per capita PHE (the slope co-efficient) was statistically significant for the pre-NHM period, but with a wrong sign, suggesting divergence in the pre-NHM period. However, the slope co-efficient was statistically insignificant for the post-NHM period. This suggests that β divergence in health spending that was occurring in the pre-NHM period, ceased to exist in the post-NHM period (Table 8).

Table 8: Absolute (β) Convergence: Results – High Focus States

Variable	1991-2004 (Pre-NHM)	2005-2019 (Post-NHM)
Constant	-0.040*	0.109***
L1. Per capita real PHE	0.008**	-0.007

*Source: Authors' calculations. Note: *** denotes 1 per cent level of significance, ** denotes 5per cent level of significance and * denotes 10 per cent level of significance.*

Thus, while there was absolute divergence of high focus states in the pre-NHM period, there was no such evidence for the post-NHM periods. Overall, there was no evidence of any absolute convergence or divergence in the post-NHM period.

Sigma convergence/divergence

The slope coefficient (σ) of per capita PHE for **all States** was statistically insignificant for the pre-NHM period. Though the coefficient was statistically significant for the post-NHM period, but it had the wrong sign, suggesting increased inequalities in health spending in the post-NHM period (Table 9). This finding is consistent with the finding based on graphic representation of per capita health spending.

Table 9. Sigma Convergence: Results (All states)

Variable	1991-2004 (pre-NHM)	2005-2019 (post-NHM)
Constant	319.035	-795.129**
Slope coefficient	-0.125	0.431**

*Source: Authors' calculations. Note: *** denotes 1 per cent level of significance, ** denotes 5per cent level of significance and * denotes 10 per cent level of significance.*

Similar results were also found for high focus states (Table 10).

Table 10. Sigma Convergence: Results (High Focus states)

Variable	1991-2004 (pre-NHM)	2005-2019 (post-NHM)
Constant (a)	-441.075	-1078.925**
Slope coefficient (b)	0.254	0.571**

Source: Authors' calculations. Note: *** denotes 1 per cent level of significance, ** denotes 5 per cent level of significance and * denotes 10 per cent level of significance.

To sum up, there is no evidence of states with initially low health spending catching up with those with high health spending post-NRHM. Overall, however, horizontal inequalities in health spending widened in the post-NHM period in the case of all States as well as high focus states.

8. Summing Up and Policy Implications

This study examined holistically the impact of fiscal federalism on health spending by States in India. The study sought to answer the five key questions. First, how have overall finances of States—States' own revenue and fiscal transfers from the Centre—evolved in recent years? Second, how did States prioritise their health spending, given their financial resources, including transfers from the Centre? Third, how far did States' own revenue, untied transfers and health-specific transfers from the Union influence health spending by States? Fourth, whether states substituted their non-NHM health spending with that of their NHM contribution? Fifth, how did horizontal inequalities in health spending evolve post-NHM? There were two reference periods of the study. One, 2004-05*, i.e.,* when the NHM was introduced and second 2015-16 onwards, *i.e.,* the first year of the award period of the FC-XIV. The study also took a longer-term view, wherever relevant.

The study provided some important insights. First, finances of state governments have undergone significant changes over the years. The share of tax devolutions (in States' revenue receipts) increased in the first four years of the award period of the FC-XIV, but declined from 2019-20 onwards, *i.e.,* even before the Covid-induced economic slowdown set in. By 2020-21, the share of tax devolutions declined almost to the pre-award period of FC-XIV. Second, the relative significance of States' own revenue in their revenue receipts declined sharply from 2014-15 due to a surge in fiscal transfers from the Centre so much so that the share of States' own revenue in their revenue receipts (52.2 per cent) and fiscal transfers (48.3 per cent) almost converged in 2020-21. As a percentage of GDP, States' own revenue remained flat from 2004-05 onwards. Within fiscal transfers, while the share of tax devolutions in revenue receipts of states remained broadly unchanged between 2014-15 and 2020-21, that of tied transfers (CSS and others) increased sharply, which the FC-XIV tried to reduce. As a result, the gap between the share of tax devolutions in States' revenue receipts and CSS transfers significantly narrowed down. Though CSS transfers increased sharply, the share of health transfers in CSSs declined, suggesting that health transfers did not keep pace with overall CSS transfers.

How did these changes in state finances impact health spending? Health spending both by the Centre and the States increased post-NHM, but it slowed down post FC-XIV. Most of the increase in health spending as percentage of GDP post-NHM was contributed by the States (0.23 percentage points of GDP), though over the 30-year period, health spending by States remained unchanged. Overall, health remains a low priority in state budgets, with health spending constituting just 5 per cent of States' total expenditure, with large inter-state variations. Some significant changes were observed in the relative position of some States when health spending was measured based on States' discretionary capacity (revenue receipts adjusted for committed liabilities) rather than total expenditure. The relationship between income and health spending showed diverse patterns, with some low-income states spending more on health (relative to their income), while some economically well-off states spending less on health (relatively to their income), such as Punjab and Maharashtra. The Union has expanded its footprints in health in recent years. However, the nature of intervention in health by the Union changed over the years. While in the first five years after the roll out of NRHM,

health spending by the Union increased sharply through CSSs, thereafter it increased largely through central sector schemes.

After having analysed the data on fiscal transfers and health spending by States, we sought to answer the following three questions: (i) How far has States' own revenue, unconditional transfers, and health-specific transfers from the Centre influenced their health spending? (ii) Whether States substituted their non-NHM health spending with NHM spending? (iii) How far health transfers by the Centre were able to reduce horizontal inequalities in health spending post-NHM?

Some important findings emerged from the study. **One**, States' own revenue and unconditional transfers were found to be impacting health spending positively. The impact of unconditional transfers for all the States, however, was greater than that of their own revenue in explaining health spending, unlike the period prior to award period of FC-XIV, when own revenue was more important than unconditional transfers. Results were strikingly different when States were split into economically well-off and economically weaker states (based on average per capita income). In the case of economically well-off states, their own revenue was more important than unconditional transfers in explaining their health spending, though the impact of their own revenue weakened post the award period of FC-XIV, while that of unconditional transfers increased. In the case of economically weaker states, only unconditional transfers were found to be contributing positively to health spending, with no impact of their own revenue. Both economically well-off and economically weaker states substituted their non-NHM health spending with NHM spending, though the extent of substitution was much lower in the case of latter. In other words, they did not spend on non-NHM healthcare as much as they would have in the absence of NHM. Also, even economically well-off states substituted their non-NHM health spending with their matching contribution to NHM before the award period of FC-XIV. Horizontal inequalities in health spending generally widened for all States and high focus states post-NHM, despite greater allocations to high focus states. This should not be surprising when we see this finding in conjunction with the earlier finding that economically weaker states substituted their non-NHM health spending with NHM spending.

The results suggest that economically well-off states behave differently from economically weaker states insofar as health spending is concerned. Economically well-off states depend more on their own sources for health spending, unlike economically weaker states, which depend entirely on general purpose transfers from the Centre for financing their health-related spending. It should, therefore, not be surprising that horizontal inequalities in healthcare widened over the years.

The above findings have several policy implications. First, fiscal union-state relations do matter for health spending. Our findings clearly suggest that unconditional transfers are extremely important from the health spending standpoint. That is, more than health-specific transfers, it is general transfers which matter more for health spending. This should not be surprising as the more resources states have at their disposal, more they will spend, including on health. It seems health-specific transfers do not hold any special appeal for States. In fact, the finding that both economically well-off and economically weaker states even substitute their non-NHM health spending with NHM

spending raises the question about the effectiveness of NHM in improving the overall health spending in the country. To reduce the tendency of substitution, there is a need to change the design of NHM. We do not have a contrafactual. However, going by our results, it would not be wrong to infer that if instead of health-specific transfers, had unconditional transfers been increased, health spending outcomes by States perhaps could have been different.

Second, though the findings of this study are not encouraging about the role of NHM in improving overall health spending, it should be the endeavour to maximise its impact by harmonising the role of the Central Government and States in healthcare. States make significant matching contributions to NHM. States often complain about the 'one size fits all approach' of the NHM. The Union government therefore needs to give much greater flexibility to States. Furthermore, the Union needs to follow a differentiated strategy for economically richer and economically weaker states.

Policymakers in many countries, including the United States and Canada, struggle to determine the appropriate roles of federal and state governments with respect to health funding, priority setting, and the design of health care systems. Though there are no easy answers, some areas could be identified in the Indian context. (i) States, in general, appear to lack ownership of healthcare schemes designed and sponsored by the Centre. In fact, a recent study does suggest that many States feel that they are mere implementing agencies (Kapoor, *et al.*, 2023). There could also be an issue of a moral hazard. The greater role of the Union government in healthcare may be making some States take the back seat when it comes to health spending. For health scheme to succeed, it is important that States own the schemes, and that they are actively involved in health schemes of the Centre at the design stage. (ii) States need greater flexibility in health schemes framed by the Centre to innovate and adapt. The Union has done well to merge various categories of flexi-pools under NHM to provide greater flexibility to states[17]. However, the Union needs to examine areas where more flexibility could be extended. (iii) There is a need to change the incentive structure, whereby States are encouraged to complement rather than substitute their health spending for every single rupee spent by the Union.

Third, while financial capacity in general does matter for health spending, it is not the only factor which influences health spending. If that was the case, then economically well-off states such as Maharashtra and Karnataka should spend much more than they have on health. It is also a question of how states prioritise health in their overall budgetary operations. A recent study has suggested that critical leadership plays a key role in determining health as a priority (Kapoor, *et al.*, 2023). Health, therefore, needs to be brought at the centre-stage by political leadership.

Fourth, the current thrust of NHM on high focus states has not served its intended purpose. It is true that NHM helped reverse the declining trend in health spending by the States. However, the thrust was not strong enough for horizontal inequalities in health spending to decline, let alone vanish. There will be a need to provide for a much greater thrust on health spending by high focus states. It is indeed puzzling that large inter-state variations exist in health spending, and this could be an important area of future research.

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Appendix I

Federal Structures and Healthcare – Cross-country Experiences

United States

The U.S. Constitution does not expressly address which level of government has authority over health matters or whether such authority is shared between the federal and state governments. However, the federal government justifies its involvement in healthcare through its power to spend for the general welfare and levy taxes to raise revenues to underwrite such programs (Tarr, 2011). Medicaid, a government programme in the U.S., provides health benefits for low-income individuals, including children, pregnant women, parents of dependent children, the elderly, and individuals with disabilities. Medicaid is jointly funded by the federal government and the States. The federal payments are structured as a match of state spending, with the matching rate (which by law must be at least 50 per cent) varying based on the per capita income of the States. Medicaid plays a crucial role in state budgets, with states spending about 20 per cent of their budgets on Medicaid (Schapiro, 2020). Medicare, another health programme, is fully funded by the federal government. The Children's Health Insurance Program (CHIP) is funded through matching grants provided by the federal government to States.

Germany

In Germany, healthcare is a responsibility shared by the federal government and States. While the federal level sets the overall legal framework, the state governments are responsible for hospital planning and public health services (Health Systems Review, 2020). Health policy execution is predominantly a federal responsibility, with most fiscal transfers provided by the federal government. The responsibilities for health expenditure lie with the provinces (Field and Hagen 2007). The 16 state governments in Germany also play a significant administrative role, determining hospital capacity, financing hospital investments, and supervising public health services (Bluemel and Busse, 2020).

Canada

Canadian provincial governments have primary responsibility for financing, organising, and delivering health services and supervising providers. The federal government co-finances provinces/territorial universal health insurance programs and administers a range of services for certain populations (Allin, S. *et al.* 2020). Over 20 per cent of PT (provinces and territories) health financing is from the Canada Health Transfer, a cash transfer from the federal governments to the PTs. Since 2014, the Canada Health Transfer is provided on a purely per capita basis and does not account for differences in population needs or costs of delivering health care (Health Systems Review, 2020).

Australia

In Australia, health was originally the responsibility of the States, and the federal government's involvement was limited to matters of quarantine. In 1921, a Commonwealth department of health was established, through which the federal government started to help the States with the provision of public health services. A constitutional amendment in 1946 gave the federal government broad powers in all aspects of health policy. Thereafter, policymaking processes have been dominated by the Commonwealth (Healy *et al.* 2006*)*

The federal government provides funding and indirect support for inpatient and outpatient care. The federal government is also responsible for regulating private health insurance, pharmaceuticals, and therapeutic goods. However, it has a limited role in direct service delivery. States own and manage service delivery for public hospitals, ambulances, public dental care, community health (primary and preventive care), and mental health care. They contribute their own funding in addition to that provided by the federal government (Health in Australia, 2013).

Brazil

In Brazil, health is in the concurrent list. Health transfers in Brazil are conditional transfers by the federal government. The constitution amendment (No. 29 in the year 2000) mandates that health financing be increased in alignment with GDP growth and and requires it to be higher than the financing in previous years. The amount transferred to States is not fixed, it is determined on a per capita basis for basic health services. The other component of transfers is based on services provided in the region. Overall, the federal government covers about 60 per cent of the health care bill. States and municipalities split the rest on a more or less equal basis. Financial cooperation in health care is assured by earmarking 12 per cent of state revenues and 15 per cent of municipality revenues for health care spending (Rezende, 2007).

Malaysia

The Malay Constitution details the distribution of legislative powers and responsibilities between the federal and State governments. The States have no control over crucial issues that have a bearing on its developmental progress. Important issues such as education and health are entirely beyond the scope of the States (Nambiar, 2007).

Public sector health services in Malaysia are centrally administered by the Ministry of Health through its central, state, and district offices. Policies and programmes are centrally formulated, funded, and administered with the Ministry of Health state offices directing service delivery by their district offices, hospitals, and centres. A health facility receives a fixed annual budget, organised under standard budget lines and linked to performance indicators and targets. The Ministry of Health's rationale is that standard programmes facilitate similar and equitable practices across the country and thus help achieve national goals (Health Systems Review, 2012).

Argentina

Provincial governments in Argentina enjoy authority over vital areas of public policy such as health and education and they have liberty to execute their own social welfare programs. This policymaking authority of provinces is complemented by the Constitution's residual power clause: provinces reserve all powers not delegated to the federal government. Theoretically, provinces have powers over health in Argentina. However, in reality federal government drives the health through funds. Sub-national governments are responsible for almost 50 per cent of the total consolidated public sector expenditures. Despite that, the national government maintains significant regulatory powers in many of these areas and directly manages many programs within these sectors (Inter-American Development Bank, 2012).

Appendix II

State Finances – How have they Evolved in the Recent Period?

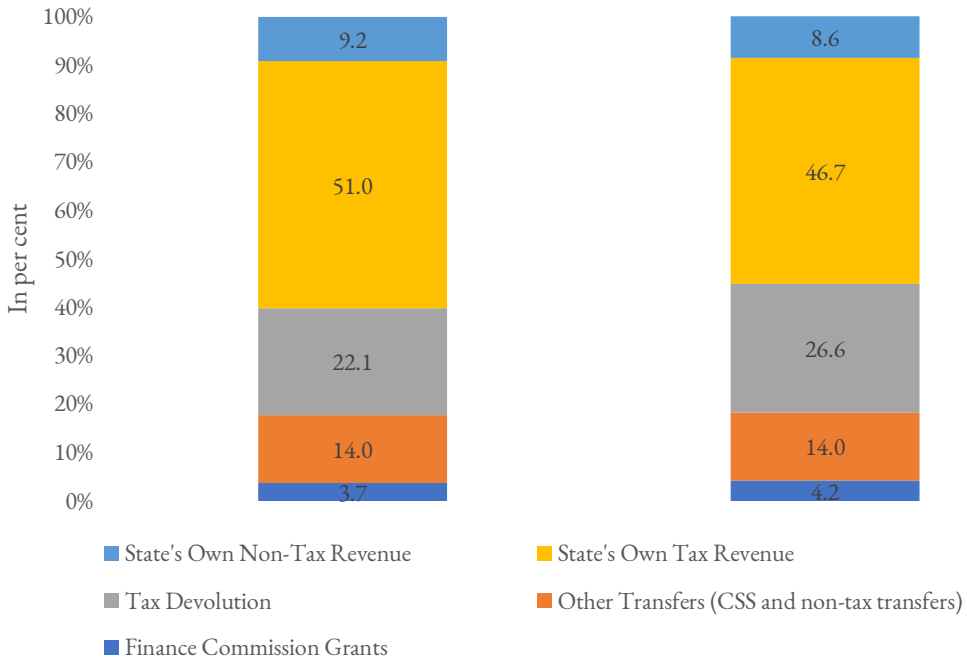
Revenue receipts of States contain two components, *i.e.,* their own revenue (tax and non-tax) and transfers from the Centre, which, in turn, contain two components, *viz.,* Finance Commission transfers (tax devolutions and grants) and transfers from the administrative ministries of the Union government's CSSs.

After the recommendation of the FC-XIV, the share of tax devolutions in revenue receipts of the States increased to 26.6 per cent during the award period of the FC-XIV vis-a-vis 22.1 per cent during the award period of the FC-XIII. With this, the share of States' own tax revenue declined more or less by the same percentage points. The shares of CSS and other non-tax transfers from the Union and other components remained broadly unchanged (Figure A1 and Table A1).

Table 11: Revenue Receipts of the States – FC-XIV vis-à-vis FC-XIII

Year	Finance Commission grants	Other Transfers (CSS and non-tax transfers)	Tax Devolution	State's Own Tax Revenue	State's Own Non-Tax Revenue
2010-11 to 2014-15	3.7%	13.9%	22.1%	51.0%	9.2%
2015-16 to 2019-20	4.2%	13.9%	26.6%	46.7%	8.6%

Figure A14: Revenue Receipts of the States – FC-XIV vis-à-vis FC-XIII



Source: State Finances, A Study of Budgets, RBI. Note: Back-to-back loans by the Union are reflected in other transfers. Transfers under FC-XIV includes GST revenues.

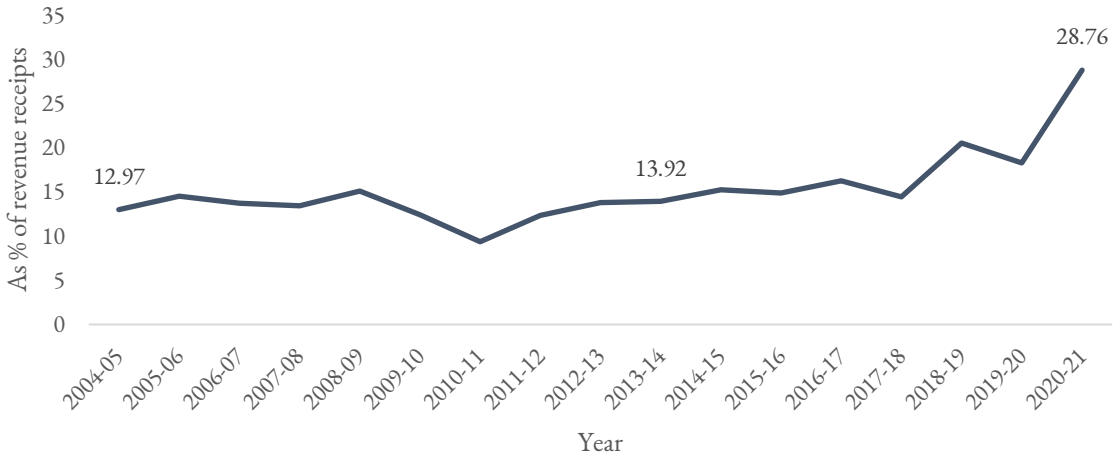
However, some disturbing developments were observed from 2019-20 (the last year of the award period of the FC-XIV). The share of tax devolutions in 2019-20 and 2020-21 (the first year of the award period of the FC-XV) declined sharply[18]. The compensation cess collections were sufficient for the Union to cover the shortfall in GST collections of State governments in 2017-18 and 2018-19. GST compensation for the financial years 2017-18, 2018-19, and 2019-20 was paid to the States even as there was a shortfall in cess collection in 2019-20 due to the slowdown in economic activity. However, for 2020-21, the Union gave GST compensation cess to States in two forms: (i) grants of Rs. 0.91 lakh crore under revenue receipts as in previous years; and (ii) as back-to-back loans of Rs. 1.10 lakh crore. For 2021-22, the Union released Rs. 1.59 lakh crore to States/UTs. Besides, the Union also paid compensation cess of Rs. 60,000 crore for 2021-22 (RBI, 2022). For 2022-23, the Central Government provided Rs.1 lakh crore toward interest free loans to States. The Central Government also released compensation of Rs. 1.16 lakh crore. The total cess collection till October 2022 was only Rs. 72,147 crore and the balance of Rs. 43,515 crore was released by the Central Government from its own sources.

The need for back-to-back loans rose for two reasons. One, GST collections declined due to the pandemic, warranting higher compensation. Second, GST compensation cess collections also declined, widening the gap with the requirement for compensation. The GST Council decided to extend the levy of compensation cess until March 2026 to enable the Union to repay loans taken for compensating States for the GST collection shortfall. However, the accounting treatment of loans raised can have an impact on the gross fiscal deficit (GFD) and liabilities of States (RBI, 2022).

The provision of revenue compensation in GST helped the States to cope with a shortfall in GST collection and sustain public spending on health, among other social sectors. While the GST Council decided to extend the levy of compensation cess until March 2026 to enable the Union government to repay loans taken to compensate States for the GST collection shortfall, the question remains: What will happen if the GST revenue shortfall of States continues beyond the transition period?

One of the reasons for a decline in general purpose transfers has been the increased reliance of the Union government on cesses and surcharges. The Union Government in the last few years has been collecting a large amount of revenues through cesses/surcharges, which are not shared with the States. In the face of a shortfall in GST collection and a decline in oil prices, the Union government raised "non-shareable taxes" and "cesses on commodities" on excisable goods under the Union Excise Duty (UED)—petroleum products, tobacco etc. (Mukherjee, 2022). Cesses and surcharges (other than GST compensation cess) increased from about 12 per cent of centre's total revenue receipts in 2012-13 to around 29 per cent in 2020-21 (Figure A2). Increasing recourse to cess and surcharge by the Union government, which are not shareable with the states, has become a permanent instrument of resource mobilisation. Denying the share of the States in cess and surcharge is against the spirit of federalism (Chakraborty and Gupta, 2016). This development has also reduced the impact of an increased percentage of sharable taxes with the States as recommended by the FC-XIV.

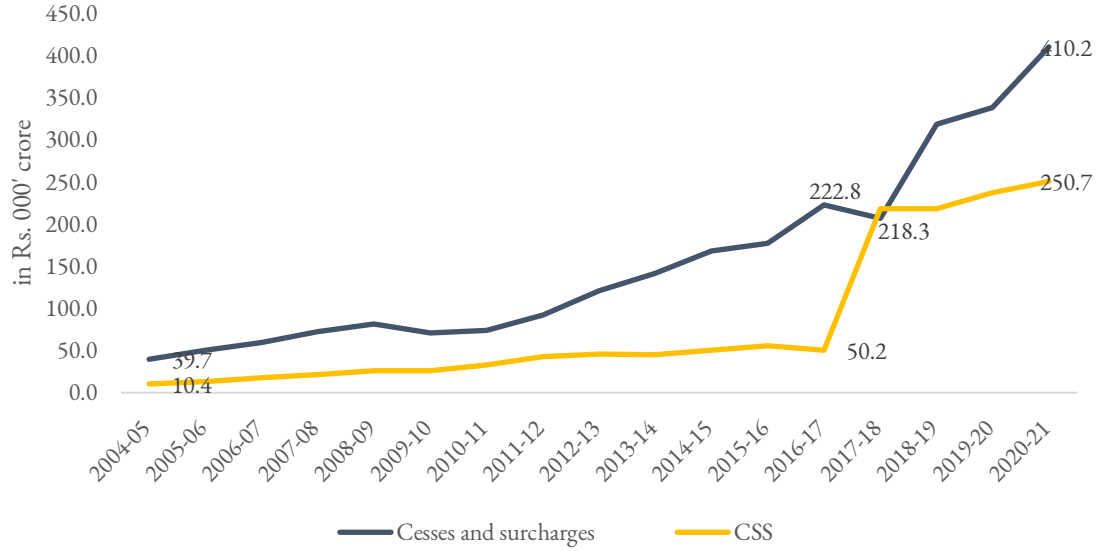
Figure A15: Share of Cesses and Surcharges in Revenue Receipts of the Central Government



Source: Union Budget. Note: Excluding GST compensation cess.

Thus, while the States faced revenue shortfalls due to a decline in tax devolutions, the Union government was able to protect itself to a large extent through cesses and surcharges. An increased collections by way of cess and surcharges enabled the Central Government to expand its footprints through centrally sponsored schemes (Figure A3).

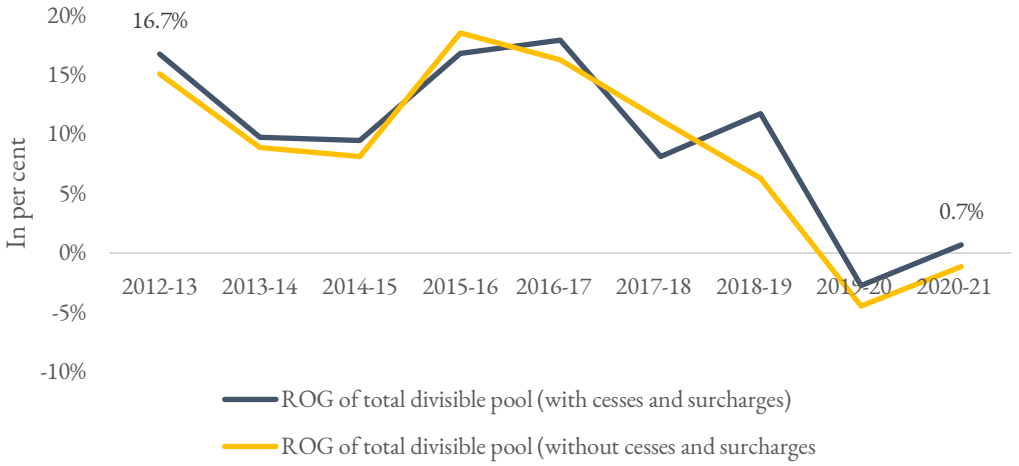
Figure A16: Cess and Surcharges and CSS Expenditure by the Union Government



Source: Union Budget; RBI State Finances.

It is significant that the growth rate of the divisible pool was negative in 2019-20 and 2020-21[19]. However, adjusted for cesses/surcharges, the growth rate in the divisible pool was less negative in 2019-20 and positive in 2020-21 (Figure A4).

Figure A17: Growth Rate of the total Divisible Pool of the Central Government (With and without cesses and surcharges)

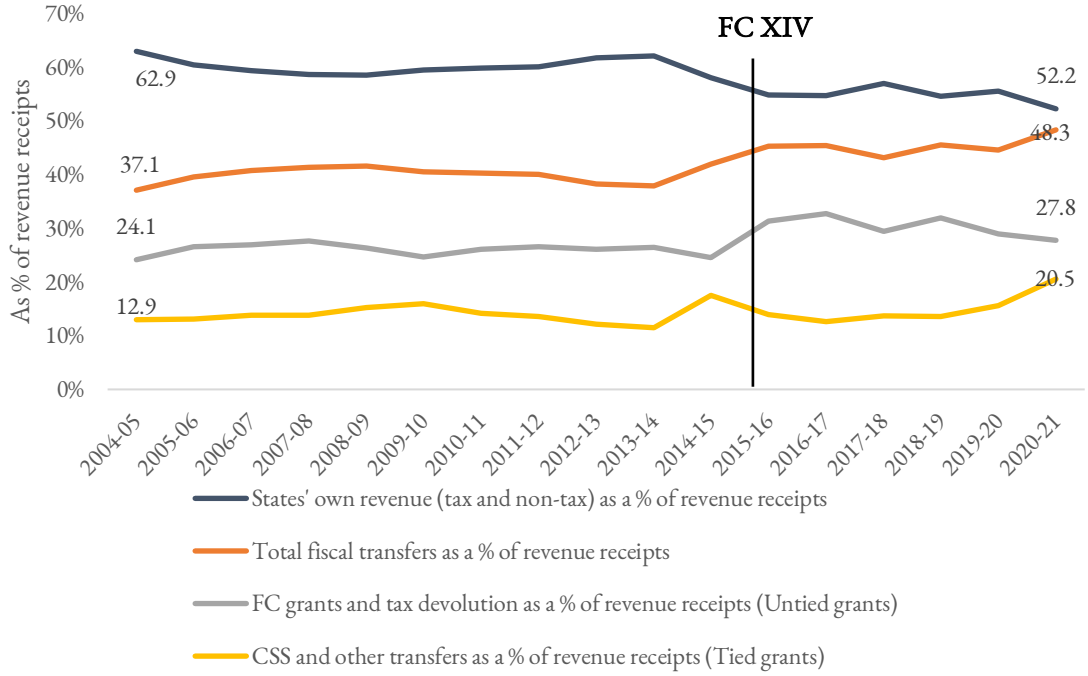


Source: Handbook of Statistics on Indian Economy (RBI) and Union Budget documents.

Overall, the share of fiscal transfers from the Union increased from 2014-15, while that of the States' own revenue declined such that both almost converged by 2020-21; the share of fiscal transfers was at 48.3 per cent and the States' own revenue was at 52.2 per cent in 2020-21. The gap between the States' own revenue and fiscal transfers, which was 20.0 percentage points of revenue receipts in

2013-14, narrowed down to almost 4 percentage points in 2020-21 (Figure A5 and Table A2). It is significant that this convergence had occurred largely due to the increase in tied transfers. It is also noteworthy that the states' own revenue, both in nominal and real terms, which was rising from 2004-05, turned almost flat from 2018-19 onwards (in nominal terms) and from 2017-18 onwards (in real terms).

Figure A18: States' Own Sources of Revenue and Fiscal Transfer



Source: State Finances, A Study of Budgets, RBI. Note: Some grants provided by the Finance Commission may also be tied.

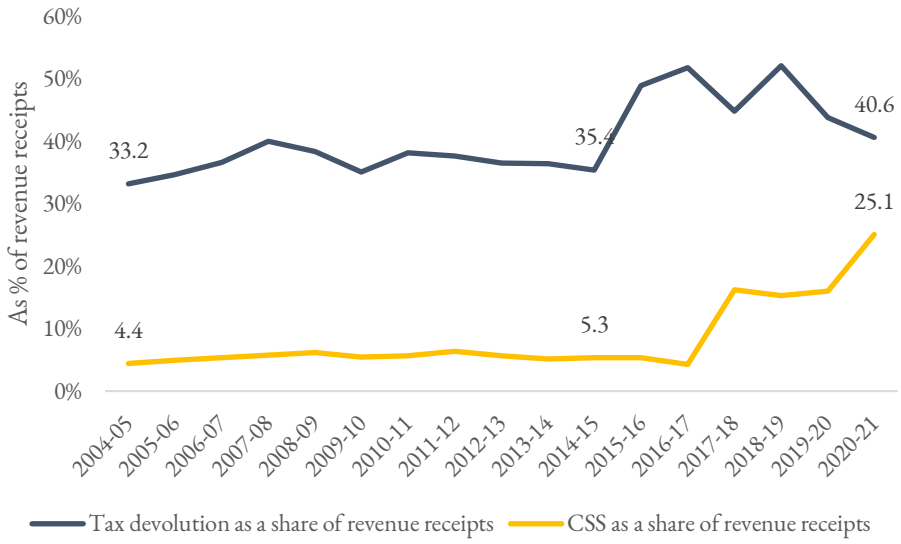
Table 12: States' Own Sources of Revenue and Fiscal Transfer

Year	States' own revenue (tax and non-tax) *as a % of revenue receipts*	Total fiscal transfers *as a % of revenue receipts*	CSS and other transfers as a % of revenue receipts (Tied grants)	FC grants and tax devolution as a % of revenue receipts (Untied grants)
2004-05	62.92%	37.08%	12.94%	24.13%
2005-06	60.43%	39.57%	13.06%	26.51%
2006-07	59.26%	40.74%	13.84%	26.89%
2007-08	58.62%	41.38%	13.75%	27.63%
2008-09	58.46%	41.54%	15.25%	26.29%
2009-10	59.48%	40.52%	15.92%	24.60%
2010-11	59.77%	40.23%	14.11%	26.11%
2011-12	59.98%	40.02%	13.52%	26.50%

2012-13	61.74%	38.26%	12.18%	26.08%
2013-14	62.08%	37.92%	11.48%	26.44%
2014-15	58.03%	41.97%	17.46%	24.52%
2015-16	54.78%	45.22%	13.95%	31.27%
2016-17	54.63%	45.37%	12.65%	32.72%
2017-18	56.91%	43.09%	13.69%	29.39%
2018-19	54.50%	45.50%	13.55%	31.96%
2019-20	55.48%	44.52%	15.58%	28.94%
2020-21	52.21%	48.30%	20.54%	27.76%

Interestingly, after an initial rationalisation and decrease in CSS, the Union government continued to increase its transfers to the States through CSS. During both the years when tax devolutions declined, the share of CSS transfers increased in revenue receipts of the States (FigureA6 and Table A3). Thus, despite the Central Government discontinuing the support of eight CSS and the change in the funding pattern of many CSSs, transfers to the States under CSS surged, which the FC-XIV had tried to address.

Figure A19: Tax Devolution and CSS as a Share of Revenue Receipts of States



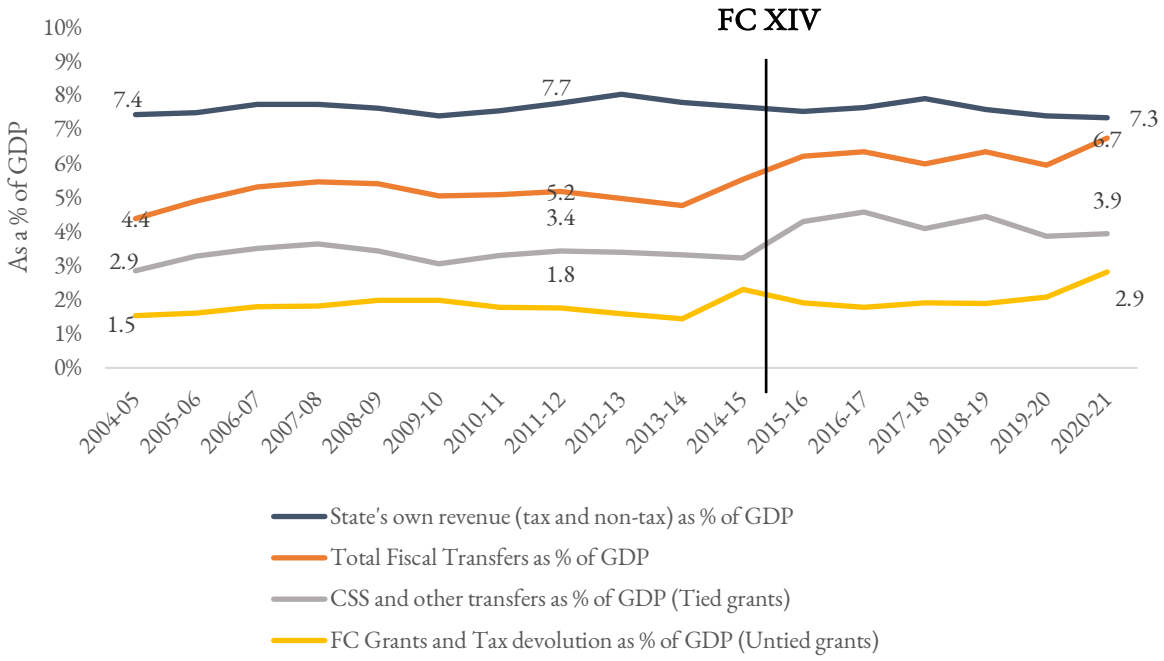
Source: State Finances, A Study of Budgets, RBI.

Table 13: Tax Devolution and CSS as a Share of Revenue Receipts of States

Year	Tax devolution as a share of revenue receipts	CSS as a share of revenue receipts
2004-05	33.2%	4.4%
2005-06	34.6%	4.9%
2006-07	36.6%	5.3%
2007-08	40.0%	5.8%
2008-09	38.4%	6.2%
2009-10	35.1%	5.5%
2010-11	38.2%	5.7%
2011-12	37.7%	6.4%
2012-13	36.5%	5.7%
2013-14	36.4%	5.1%
2014-15	35.4%	5.3%
2015-16	48.9%	5.4%
2016-17	51.8%	4.3%
2017-18	44.8%	16.2%
2018-19	52.1%	15.2%
2019-20	43.8%	16.0%
2020-21	40.6%	25.1%

Relative to GDP, the States' own revenue has remained flat in the last 15 years, while the share of fiscal transfers from the Union increased by more than 2 percentage point of GDP from 4.4 per cent of GDP to 6.7 per cent of GDP (more than 50 per cent increase in the share), driven both by tied and untied transfers (Figure A7 and Table A4).

Figure A20: States' Own Revenues and Fiscal Transfers (As per cent of GDP)



Source: State Finances, A Study of Budgets, RBI. Note: Some grants provided by the Finance Commission may also be tied.

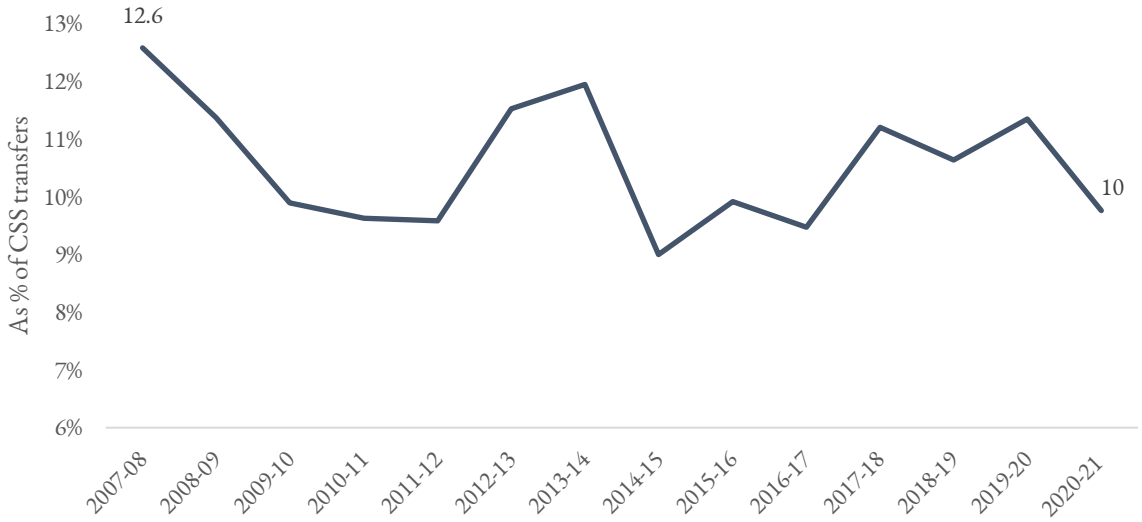
Table 14: States' Own Revenues and Fiscal Transfers (as % of GDP)

Year	State's own revenue (tax and non-tax) as % of GDP	Total Fiscal Transfers as % of GDP	CSS and other transfers as % of GDP (Tied grants)	FC Grants and Tax Devolution as % of GDP (Untied grants)
2004-05	7.4%	4.4%	2.8%	1.5%
2005-06	7.5%	4.9%	3.3%	1.6%
2006-07	7.7%	5.3%	3.5%	1.8%
2007-08	7.7%	5.5%	3.6%	1.8%
2008-09	7.6%	5.4%	3.4%	2.0%
2009-10	7.4%	5.0%	3.1%	2.0%
2010-11	7.5%	5.1%	3.3%	1.8%
2011-12	7.8%	5.2%	3.4%	1.8%
2012-13	8.0%	5.0%	3.4%	1.6%
2013-14	7.8%	4.8%	3.3%	1.4%
2014-15	7.6%	5.5%	3.2%	2.3%
2015-16	7.5%	6.2%	4.3%	1.9%
2016-17	7.6%	6.3%	4.6%	1.8%
2017-18	7.9%	6.0%	4.1%	1.9%
2018-19	7.6%	6.3%	4.4%	1.9%

2019-20	7.4%	5.9%	3.9%	2.1%
2020-21	7.3%	6.7%	3.9%	2.8%

The share of NHM transfers in total CSS transfers declined from 12.6 per cent in 2007-08 to 10 per cent in 2020-21, suggesting that NHM transfers have become relatively less significant in overall CSS transfers in recent years (Figure A8).

Figure A21: Share of NHM Transfers in CSS Transfers



Source: Union Budget documents and India Stat. Note: Figures between 2007-08 and 2011-12 are budgeted figures.

Appendix III

Table 15: Growth in per capita Public Health Expenditure

Year	Growth in health PC	Year	Growth in health PC
1991-92	11.1	2006-08	16.4
1991-93	9.8	2007-09	22.4
1992-94	11.2	2008-10	17.7
1993-95	15.0	2009-11	18.6
1994-96	4.7	2010-12	7.2
1995-97	9.6	2011-13	14.9
1996-98	12.8	2012-14	10.2
1997-99	18.2	2013-15	9.7
1998-00	10.9	2014-16	12.7
1999-01	6.1	2015-17	14.2
2000-02	3.8	2016-18	13.2
2001-03	2.0	2017-19	12.2
2002-04	7.1	2018-20	7.1
2003-05	6.3	2019-21	19.9
2004-06	22.4	2020-22	10.5
2005-07	15.5		

Table 16: Public Health Expenditure (as a per cent of GDP)

Year	Total health expenditure to GDP	Centre health expenditure to GDP	State health expenditure to GDP
1990-91	0.90	0.20	0.70
1991-92	0.89	0.21	0.68
1992-93	0.87	0.23	0.63
1993-94	0.86	0.24	0.62
1994-95	0.86	0.23	0.62
1995-96	0.78	0.22	0.56
1996-97	0.75	0.20	0.55
1997-98	0.78	0.20	0.58
1998-99	0.82	0.22	0.60
1999-00	0.83	0.25	0.58
2000-01	0.83	0.24	0.59
2001-02	0.81	0.25	0.56
2002-03	0.78	0.26	0.52
2003-04	0.76	0.26	0.50

2004-05	0.72	0.25	0.47
2005-06	0.78	0.26	0.52
2006-07	0.79	0.25	0.53
2007-08	0.80	0.29	0.51
2008-09	0.88	0.31	0.57
2009-10	0.91	0.32	0.59
2010-11	0.91	0.31	0.60
2011-12	0.90	0.31	0.59
2012-13	0.92	0.28	0.64
2013-14	0.91	0.27	0.64
2014-15	0.91	0.26	0.65
2015-16	0.94	0.26	0.68
2016-17	0.97	0.26	0.71
2017-18	1.00	0.32	0.67
2018-19	1.02	0.31	0.71
2019-20	1.03	0.32	0.70
2020-21	1.30	0.42	0.89
2021-22	1.23	0.37	0.86

Table 17: State-wise Health Expenditure - 2019

States	Total Health Exp	GDP	THE /GDP	States	Total Health Exp	GDP	THE/ GDP
Andhra Pradesh	7538.37	966099.1	0.78	Meghalaya	865.817	34770.4	2.49
Arunachal Pradesh	1003.40	30033.97	3.34	Mizoram	583.207	21128.48	2.76
Assam	5334.26	346850.7	1.54	Nagaland	667.948	29715.87	2.25
Bihar	7673.822	582516.5	1.32	NCT Delhi	5744.541	794030.1	0.72
Chhattisgarh	4671.334	344955.4	1.35	Odisha	6185.323	532432	1.16
Goa	1097.359	75032.09	1.46	Puducherry	731.9673	36723.84	1.99
Gujarat	10283.42	1617143	0.64	Punjab	3518.746	537031.1	0.66
Haryana	4982.596	762043.6	0.65	Rajasthan	12143.86	999050.4	1.22
Himachal Pradesh	2306.829	159161.7	1.45	Sikkim	425.1934	31441	1.35
Jammu and Kashmir	4244.396	164134.9	2.59	Tamil Nadu	12320.83	1743144	0.71
Jharkhand	3138.488	310305.4	1.01	Telangana	6181.878	950286.8	0.65
Karnataka	9160.488	1615457	0.57	Tripura	899.746	54151.12	1.66
Kerala	7538.815	824374.2	0.91	Uttar Pradesh	19957.28	1700273	1.17

Madhya Pradesh	9580.435	938602.1	1.02	Uttarakhand	2100.908	236987.9	0.89
Maharashtra	14692.13	2734552	0.54	West Bengal	10738.8	1207823	0.89
Manipur	662.6902	31297.02	2.12				

Table 18: Health Expenditure as Percentage of Total Expenditure (2019-20)

State	Share of total expenditure - 2019-20	State	Share of total expenditure - 2019-20
Andhra Pradesh	4.3	Nagaland	4.9
Arunachal Pradesh	6.1	Odisha	4.9
Assam	6.5	Punjab	3.3
Bihar	5.3	Rajasthan	5.7
Chhattisgarh	5.1	Sikkim	5.8
Goa	7.7	Tamil Nadu	4.8
Gujarat	5.6	Telangana	4.3
Haryana	4.5	Tripura	6
Himachal Pradesh	5.8	Uttar Pradesh	5.2
Jharkhand	4.4	Uttarakhand	5.2
Karnataka	4.1	West Bengal	5.3
Kerala	6.1	Jammu and Kashmir	6.5
Madhya Pradesh	5	NCT Delhi	11.2
Maharashtra	4	Puducherry	9.2
Manipur	5.5	All States and UTs	5.1
Meghalaya	7.9	All States and UTs (per cent to GDP)	0.9
Mizoram	5.2		

Table 19: Central Government Budget – Health Spending (As per cent of Total Budget)

Year	Central health expenditure as a share of central budget	Year	Central health expenditure as a share of central budget
1990-91	1.12	2006-07	1.88
1991-92	1.25	2007-08	2.02
1992-93	1.46	2008-09	2.00
1993-94	1.50	2009-10	2.05
1994-95	1.52	2010-11	2.04
1995-96	1.48	2011-12	2.09

1996-97	1.43	2012-13	1.98
1997-98	1.37	2013-14	1.93
1998-99	1.45	2014-15	1.93
1999-00	1.70	2015-16	1.97
2000-01	1.61	2016-17	2.05
2001-02	1.64	2017-18	2.59
2002-03	1.57	2018-19	2.54
2003-04	1.54	2019-20	2.46
2004-05	1.62	2020-21	2.36
2005-06	1.91	2021-22	2.29

Appendix IV

Table 20: Unit Root Test (2005-19): All States

H0: Panels contain unit roots		
Variables	**At level (Adj. t-stat)**	**At first difference (Adj t-sat)**
Log_Per capita PHE by state	-6.646***	_
Log_Per capita PHE by state (excluding NHM share)	-5.357***	
Log_Per capita NSDP	-9.661***	_
Log_Per capita health-specific central transfer	-6.387***	_
Log_Per capita state's own revenue	-4.492***	_
Log_Per capita unconditional grant	-6.058***	_
Female proportion	-1.138	-7.553***
Urban proportion	0.269	-8.539***

NOTES

[1] https://www.mea.gov.in/Images/pdf1/S7.pdf
[2] Press Information Bureau, 2018.
[3] Indian Fiscal Federalism
[4] The Seventh Schedule of the Constitution of India defines and specifies allocation of powers and functions between Union & States. It contains three lists – Union List, State List and Concurrent List.
[5] https://indiankanoon.org/doc/976795/
[6] https://indiankanoon.org/doc/976795/
[7] This flexi pool system was changed only in 2022 to give greater flexibility to states.
[8] A committee of selected Chief Ministers of the States, with the Chief Minister of Madhya Pradesh as the convenor appointed by the Central Government, recommended the consolidation of the schemes into 28 schemes. These were then classified into 'core of the core,' 'core,' and 'optional' states, with the funding pattern of the Centre and the States in the ratio of 70:30, 60:40, and 50:50, respectively. The NHM and PM-JAY were categorised as core schemes. Following the recommendations of the sub-group of Chief Ministers on Centrally Sponsored Schemes (CSS), the share of the states' contributions to CSSs was increased from 25 per cent 40 per cent[8]. The new funding pattern was implemented from the fiscal year 2015-16 onwards.
[9] Other than collecting GST, the States can collect only parts of indirect tax, *viz.*, professional tax and VAT on items not listed in GST like petrol, diesel, natural gas, and alcohol etc.
[10] Based on the Union Budget for 2023-24.
[11] Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal.
[12] New Delhi
[13] Sourced from Indiastat
[14] $\chi2(1) = 868.97$, $p = 0.0001$ and $\chi2(1) = 744.28$, $p = 0.0001$, it rejects the null hypothesis there is no random effect.
[15] $\chi2(6) = 172.18$, $p = 0.00$ and $\chi2(6) = 193.51$, $p = 0.0001$; it rejects the null hypothesis that difference in coefficients is not systematic.
[16] $F (3, 354) = 2.43$, $p=0.065$ and $F (3, 354) = 2.53$, $p=0.059$; it does not reject the null hypothesis at 5per cent significance level that model has no omitted variables.
[17] RCH-HSS, DCP, NCD and NUHM pools
[18] FC-XV reduced the States' share in tax devolutions from 42 per cent to 41 per cent.
[19] 2020-21 was the first year of the award period of the FC-XV, which reduced the share of states from the divisible pool to 41 per cent vis-à-vis 42 per cent by the FC-XIV.

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IPPR

Reimagining India's Fiscal Architecture

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Abstract

Fiscal credibility in India has increased markedly in recent years underpinned by improved transparency (off-budget liabilities coming on budget), conservativeness (in the budgeting of revenues) and marksmanship (in the attainment of deficit targets). Yet, like around the world, India is left with higher public debt levels post-pandemic, and, despite ongoing fiscal consolidation, Combined Debt/GDP again inched up last year. This note therefore proposes a new, post-pandemic fiscal architecture built on five pillars that is anchored in debt and is holistic (encompassing center and states), dynamic (responsive to changing macro conditions) and conservative (creating fiscal space for future shocks).

Keywords: Fiscal Credibility, Marksmanship, Public debt, Fiscal architecture

Publication Date: 10 November 2024

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As The Dust Settles

The pandemic upended fiscal dynamics all around the world. The sheer quantum of the shock alongside the realization in many advanced economies that their fiscal response after the 2008 crisis was initially inadequate and subsequently pro-cyclical, deepening the hysteresis, meant advanced economies went all-in this time. Lacking "exorbitant privilege," emerging markets were more constrained. Yet, public debt surged around the world in the pandemic. To be sure, high inflation and catch-up growth of the last few years, has partially reversed some of the increase. But as the dust settles, policymakers must contend with much higher levels of public debt in a shock-prone world.

This is therefore a good time to re-examine the fiscal architecture across countries. What will it take to progressively reduce public-debt and create fiscal space to respond to future shocks? Are pre-pandemic fiscal rules applicable in a post-pandemic world? In a large federal system, how should the burden be shared between the centre and states? How can one inject greater market discipline to facilitate the needed adjustment? We examine these questions in the case of India.

Correctly Focusing on Debt

Until 2017, India's fiscal architecture was centred around a path of fiscal deficits. That changed when public debt became the anchor in 2018, underpinned by the recommendations of the N.K. Singh Committee Report. This was necessary because debt dynamics are the ultimate measure of medium-term fiscal sustainability -- or lack thereof. Fiscal deficits, while playing an important counter-cyclical role, are – from the perspective of inter-temporal fiscal sustainability – simply a means to the end.

Focusing on debt is even more important in a post-pandemic world. India's Public Debt/GDP gapped up from 70% in 2018 to 89% in 2021, before re-tracing to 82% last year. To be sure, there is no sacrosanct *level* of debt in a post-pandemic world. Instead, what matters is how debt-dynamics evolve over time. A monotonic increase in debt ratios is a tell-tale sign of fiscal unsustainability. Conversely, making fiscal space for future shocks, entails putting debt/GDP on a firmly declining path.

The Centre's bar is not high

It's against this backdrop that the Centre's budget announcement that it will calibrate fiscal policy to ensure Central Government Debt/GDP is on a declining path must be welcomed. So what will this entail for the future path of central deficits? Recall, the central deficit is pegged at 4.9% of GDP this year and targeted to go below 4.5% of GDP next year. Prima facie, the Centre may not need to consolidate very much beyond that if the objective is to put Central Debt/GDP on a declining path. At the end of 2023-24, central government debt is estimated at 58% of GDP. If the Centre's deficit stabilizes just below 4.5% of GDP (say, 4.4%) and assuming nominal GDP grows at 10% a year (which

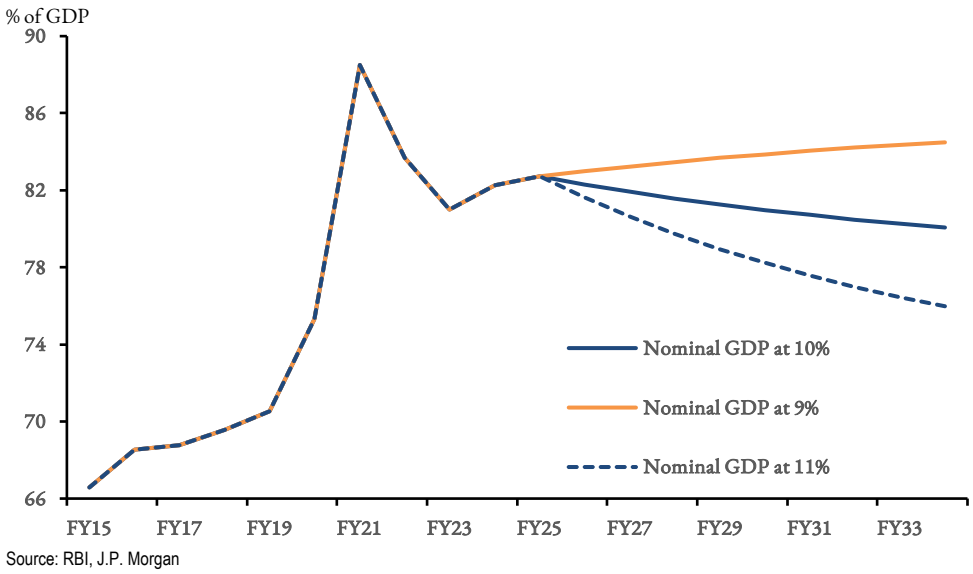
was the five-year average before the pandemic) Central Debt/GDP will decline to about 52% of GDP over the next decade.

But the bar for consolidated debt is higher

But this is only half the story. What matters for the economy is how consolidated public debt (centre and state) evolve. And here the picture is quite different.

If the centre's deficit stabilizes at 4.4% of GDP and state deficits remain at their current level of 3% of GDP the combined deficit should be close to 7.1% of GDP (because central capex loans to the state are counted both as central and state capex and therefore add to both deficits and must be netted out to get the true combined deficit). Now, if the combined deficit is at this level and nominal GDP were to grow at 10% a year, combined debt/GDP barely declines over the next decade inching down from ~82% of GDP in FY24 to about 80% of GDP a decade later (Figure 1).

Figure 1: Debt Dynamics with Combined Deficit at 7.1% of GDP



Source: RBI, J.P. Morgan

And therein lies the nub. Central fiscal settings that are consistent with a gently declining Central Debt/GDP may not, by itself, be enough to put consolidated Debt/GDP on a meaningful declining path, because it is offset by rising State debt/GDP. Why is that? Even though the primary deficit of the centre and states is likely to be similar by next year, the Centre's larger starting debt stock (58% of GDP) means the automatic dynamics that reduce debt ratios (borrowing costs (r) being lower than nominal GDP growth (g)) are more impactful at the centre more than offsetting the primary deficit. In contrast, states start off with a lower debt stock (28% of GDP), so the impact of "r-g" is swamped by the primary deficit.

Therefore, to put Combined Debt/GDP on a declining path, one of two things has to happen. Either nominal GDP growth has to be stronger. Or more fiscal consolidation will be needed.

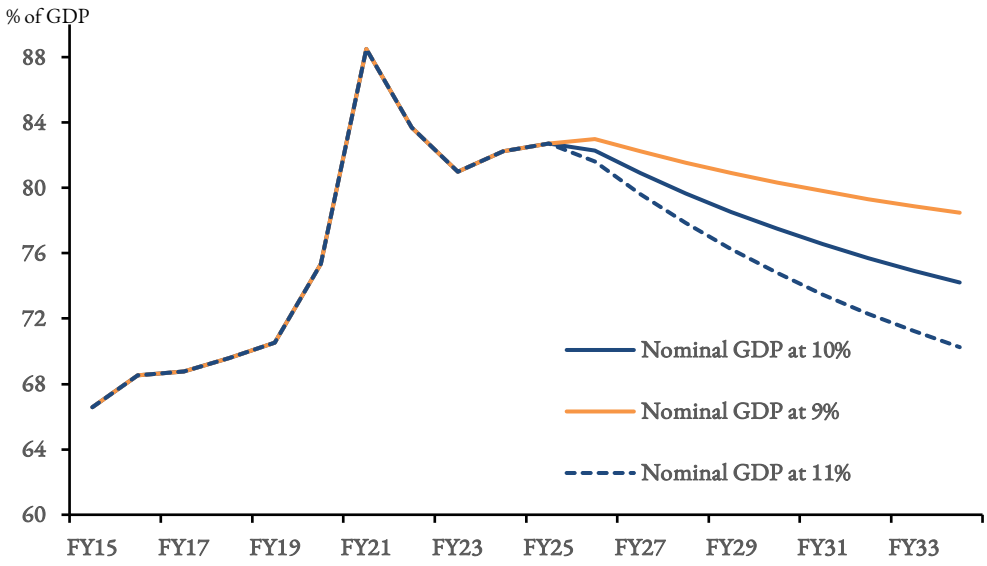
- **Small changes in growth have a large impact on debt dynamics.** If nominal GDP growth were to average 11% a year in the steady state, instead of 10% as assumed, combined

debt/GDP consistently reduces from 82% in FY24 to 76% in FY34, though still discernibly above the 70% of GDP level that existed in 2018-19. Furthermore, India's nominal GDP growth averaged 10% in the five years before the pandemic and has averaged 9.5% over the last 7 quarters. Finally, the sheer quantum of excess capacity in China is likely to weigh on India's Wholesale Price Index – which is the bulk of India's GDP deflator – and therefore weigh on nominal GDP growth. It's therefore prudent to work with a more conservative nominal GDP growth assumption of 9.5-10%.

- **In light of this, at least another percentage point of fiscal consolidation will be required in the steady state** -- below the 7.1% of GDP combined deficit envisaged in 2025-26 -- to put combined Debt/GDP on a declining path. For instance, if the medium -term combined deficit stabilized at 6.4% of GDP, public debt will decline to about 74% of GDP a decade from now, even if nominal GDP growth averaged 10% (Figure 2). This would also mean interest/GDP would be back to pre-pandemic levels a decade from now.

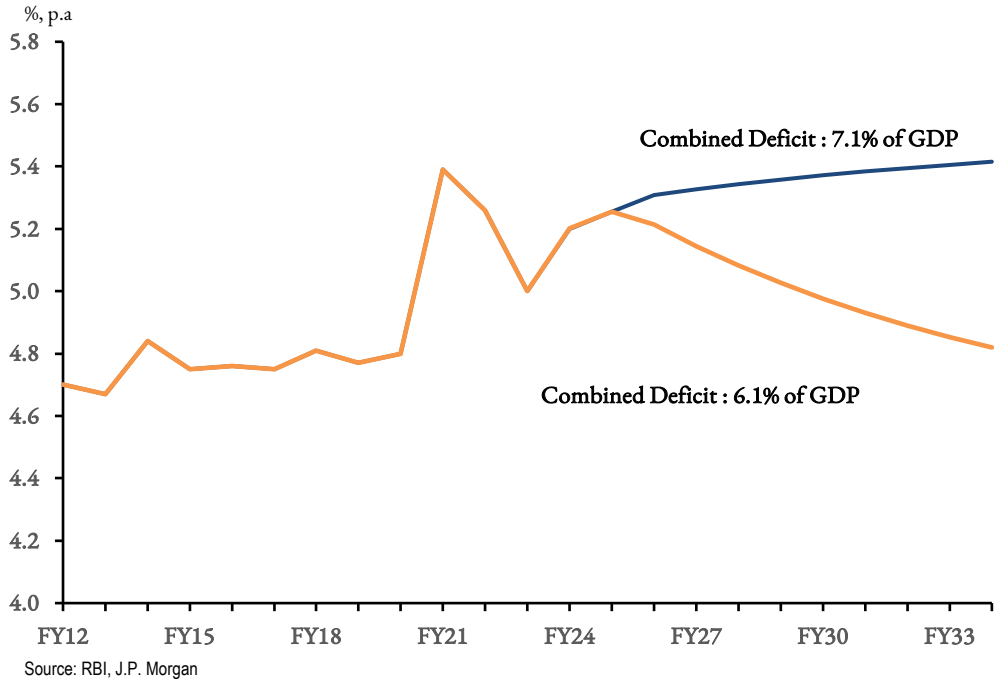
But if more fiscal consolidation is required, where should it come from? Centre or States?

Figure 2: Debt Dynamics with Combined Deficit at 6.1% of GDP



Source: RBI, J.P. Morgan

Figure 3: Total (Center + state) Interest Costs



Fiscal Burden Sharing

This brings to the fore several delicate questions on fiscal federalism:

- The Centre's Debt is much more than the states. So, should the Centre take on the bulk of the additional consolidation?
- On the other hand, even if the Centre consolidates only modestly from here, Central Debt/GDP will still be on a declining path, as shown. In contrast, if state deficits remain at current levels (3% of GDP), state debt will continue to increase, albeit slowly. So, should states take on some of the extra adjustment to stabilize their own debt dynamics?
- Or should central debt be reduced and state debt be allowed to increase so that they converge at some mid-point?
- More fundamentally, however, shouldn't the quantum of debt be a function of repayment capacity? With the Centre having more taxation powers, shouldn't it be allowed to carry a higher level of debt?

One can imagine a robust debate between the Centre and the States on these delicate fiscal issues. For now, we assume the extra fiscal consolidation of 1% of GDP to take the combined deficit to ~6.5% of GDP is equitably distributed between the Centre and States. This will simultaneously ensure state debt/GDP stabilizes and begins to gently decline even as consolidated public debt trends down more convincingly.

But just because the state deficits have to narrow, it doesn't mean that all states must retrench in tandem, as we discuss next.

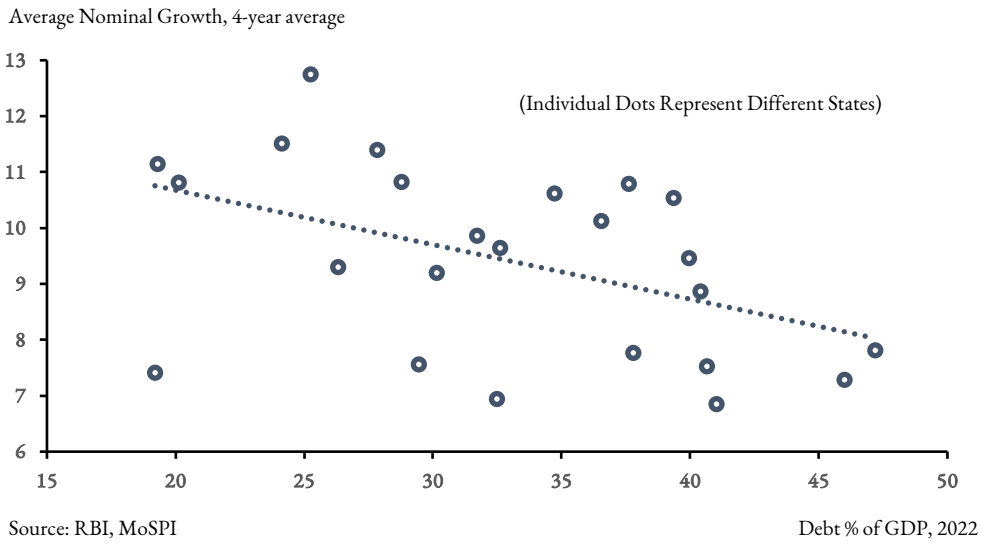
One Size Does Not Fit All?

Debt can only serve as an anchor for the economy if that logic is applied equally to the Centre and States. Else, as shown above, Central Debt/GDP could decline only to be offset by rising State Debt/GDP. Like with the Centre, therefore, the focus at the state level must be on debt, with deficits again being the means to an end.

The fact that all states face the same fiscal deficit threshold of 3% of GDP may suggest they have similar debt levels and dynamics. Such impressions are deceptive. Significant heterogeneity exists in debt levels across states ranging from 19% to 46% of GDP alongside very different debt dynamics.

This should not be a surprise. If states are subject to the same fiscal deficit rule but have very different underlying growth rates, it's natural to expect a negative correlation between growth and debt (Figure 4). Higher growth states will have lower debt levels and more favourable debt dynamics, while lower growth states will have higher debt and more challenging debt dynamics. This is simply an endogenous outcome of having the same fiscal rule across heterogenous states.

Figure 4: States Debt Inversely Correlated With Growth



In fact, a debt sustainability analysis (DSA) throws up four clusters of states:

- A group of states with high debt levels and relatively low growth rates where, if fiscal deficits of 3% of GDP continue to be permitted, debt levels will remain sticky, elevated and much above the state average over the next decade

- A second group of states where debt levels are elevated, but the problem is not the fiscal rule but its compliance. Deficits tend to be above 3% of GDP and if that continues, debt levels will remain elevated and sometimes even increase further.
- A third group of states with the opposite problem. Debt levels are low, and deficits have always averaged much below 3% of GDP. If this continues, Debt/GDP will remain very low, suggestive of unused fiscal space which, in principle, can be used to for more developmental spending.
- Finally, a fourth group of states in a healthy equilibrium where debt is close to the 30% of GDP average and expected to stay that way

In other words, there is a lot of heterogeneity across states. Going forward the objective must be to ensure debt levels are inter-temporally sustainable for every state and eventually converging across states. To achieve this, however, state fiscal rules may need to be risk-based and therefore differentiated reflecting state fundamentals. For instance, one can envision two sets of risk-based fiscal rules across states:

- A group of higher debt and lower growth states will potentially need to have more austere fiscal rules for sustainability. Here the fiscal threshold may need to be reduced to below 3% of GDP to ensure debt is sustainable over time.
- For states where debt is deemed to be sustainable under the current fiscal rule, the current threshold can continue. But compliance is crucial. Deficits in some states consistently remain above the threshold and will need to aligned lower towards 3% of GDP. Conversely, in states with a lot of unused fiscal space, incentives will be needed to productively use that space.

Such differentiated rules can be developed subject to the overall constraint (i) that the combined state deficit/GDP is lower than current levels and therefore combined state debt ratios do not keep rising, and (ii) total public debt (centre and states) is on a downward trajectory, creating space for future shocks for the economy as a whole.

Finally, any such framework will need to be dynamic and responsive to changing circumstances. As debt levels and underlying fundamentals (e.g. trend growth) change at the state level, debt dynamics can be recalibrated every 5 years (say by the Finance Commission) and states can be moved from one fiscal bracket to another.

The immediate objection to such an architecture will be "equity". Some states where debt levels are high – and where fiscal rules need to be more austere – may be lower growth or lower income states. Why are they being asked to tighten more? Isn't that a form of pro-cyclicality? But it's important not to confuse "equity" with "sustainability". Equity needs to be addressed through the quantum of horizontal transfers by the Finance Commission. So, states that need to tighten more can be compensated through higher transfers, if their per-capita incomes warrant as much. But the answer

is not to let lower-growth, higher-debt states run deficits that make their future fiscal positions even more untenable.

Injecting Market Discipline

Another reason why state deficits and debt have diverged so much is that market discipline is not playing its part. The cost of borrowing across states is virtually identically and completely uncorrelated to underlying fiscal health. States with very different levels of deficits and debt experience the same borrowing costs (Figure 5). This is because there are perceptions of an implicit sovereign guarantee of state bonds. Armed with this belief, markets have no incentive to differentiate across states. In turn, there is no incentive for profligate states to tighten or unduly austere states to expand.

But given how debt levels have gapped up post-pandemic, it's imperative to let market signals enable the needed fiscal adjustment. If perceptions of an implicit guarantee are removed and state debt can be independently rated, healthy market forces may emerge. Profligate states will pay a premium on their borrowing and be incentivized to rein in deficits. Disciplined states will see lower borrowing costs and will be incentivized to make use of any unused fiscal space. This should enable increased convergence of debt over time.

Figure 5: State Borrowing Costs Uncorrelated with Debt Levels

Optimizing Over the Cycle

Finally, if the objective is to progressively reduce Debt/GDP, how does one operationalize this? Trying to target an annual reduction in Debt/GDP is undesirable. First, it risks making fiscal policy pro-cyclical. If the economy suffers a growth shock, but Debt/GDP has to be brought down mechanically every year, then the fiscal consolidation needed is even larger that year, making fiscal-policy undesirably pro-cyclical. Second, it creates increased uncertainty about annual fiscal deficits,

because they have to respond to contemporaneous changes in the macro-environment, with the increased uncertainty likely to eventually drive-up risk-premia in interest rates.

Instead, the optimization should occur over the course of the cycle. So, under a set of macro assumptions, a path of fiscal deficits should be laid out for a few years that are consistent with declining Debt/GDP. If those assumptions are subsequently belied, the path is accordingly re-calibrated.

Five Pillars of a Post-Pandemic Fiscal Architecture

Fiscal credibility in India has increased markedly in recent years underpinned by improved transparency (off-budget liabilities coming on budget), conservativeness (in the budgeting of revenues) and marksmanship (in the attainment of deficit targets). Yet, like around the world, India's is left with higher public debt levels post-pandemic, with Combined Debt/GDP again inching up last year. This calls for a post-pandemic fiscal architecture that is anchored in debt and is ***holistic*** (encompassing centre and states), ***dynamic*** (responsive to changing macro conditions) and ***conservative*** (creating fiscal space for future shocks).

We propose such an all-encompassing framework, built on five-pillars:

- **Pillar I:** Re-establishing Debt/GDP as the anchor, so that Consolidated (Centre + State) Debt/GDP is put on a declining path in the coming years
- **Pilar II:** Deciding on burden sharing between the centre and states so that central and state debt dynamics do not offset each-other, which remains a real risk
- **Pillar III:** Establishing risk-based fiscal rules across states to ensure debt is inter-temporally sustainable and cross-sectionally convergent at the state level
- **Pillar IV:** Injecting Market Discipline into State Borrowing Costs to serve as an automatic corrective mechanism
- **Pillar V:** Avoiding trying to target an annual Debt/GDP but instead optimizing over the cycle

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IPPR

No Such Thing as Gender-Neutral Trade Policy

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Abstract

Trade policy is not gender neutral. As a matter of fact, it cannot be. To counter the inherent disadvantages of social, institutional, and structural constructs, as well as access and capacity constraints specific to women, policy, including trade policy, needs to actively and continuously neutralize these disadvantages, and create an ecosystem where men and women are on the same playing field in economic activity, and therefore, in trade. It needs to be gender-balancing, at the very least. It needs to effectively address the inherent gender-specific limitations to access and capacity that women face in participating in trade. This requires better representation from women, effective stakeholder engagement, and continuous collaboration between the public and private sectors, and must leverage the strength, reach, and scale offered by digital technologies and platforms.

Keywords: Trade policy, gender neutral, women representation, gender balancing action

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1. Does Policy Discriminate?

There is no such thing as gender-neutral economic policy. Unless policy recognises the inherent limitations to participation of women in the economy, and actively addresses it to level the playing field, it will always be less favourable to women. Against this backdrop, in the discussion on mainstreaming gender in trade, there are four premises to be established at the outset.

One, women are nearly half the global population. Another 1% are third gender people. Collectively, that represents nearly half the possible economic contribution. In an ecosystem where nearly half the productive, employable demographic is limited by systemic restrictions to effective participation, policy that fails to actively address such restrictions undermines its own purpose. Not doing everything that can be done to ensure that everyone, irrespective of gender, can make that economic contribution effectively and optimally is naturally and evidently counter-intuitive.

Two, trade policy is a derivative or extension of domestic economic policy, and before all else, the ability of women to participate effectively in the workforce.

Three, economic policy, and therefore, trade policy is not gender neutral. Simply because nothing in economic policy de jure discriminates between men and women does not imply that all genders are, in fact, placed equally in economic activity. Until such point that the inherent disadvantages that women face in their effective participation in economic activity are accounted for in economic policy, it will continue to de facto prevent them from being placed at the same footing as me, in the workforce. It is also pertinent to underscore that these disadvantages do not necessarily stem from policy. However, identifying and addressing them is a matter of policy.

Four, women participate in economic activities in various capacities – as producers, sellers, suppliers across the value chain and across the lifecycle of transactions, and as consumers. And in each capacity, the challenges they face in participating in economic activity are diverse: social or societal, physiological, access, capacity, opportunity, consistency and longevity, security, etc. It is when economic activity allows opportunity and capacity to transcend and nullify this myriad of challenges that 'gender in trade' becomes a more substantive conversation.

When national policies ensure that women are participating effectively in economic activity, then trade policy can start looking at the barriers to trade that either only impact women, or those that have a greater impact on the ability of women to engage in cross-border trade. Trade policy, both national and plurilateral/multilateral, can then aide gender inclusivity in trade through four key routes:

- By ensuring space for domestic policy to accommodate specific sensitivities associated with gender parity, including through the promotion of what is known as 'women-intensive sectors' in economic activity;
- Through leveraging trade agreements and economic cooperation to promote trade in women-oriented or women-intensive sectors;
- Through cooperation and dialogue, data collection and analysis, and exchange of best practices; and

- Through harnessing developments that could transcend or neutralize these challenges, such as measures for trade facilitation, or the increasing link between trade and technology, and working to ensure that women across the globe can leverage these developments to participate better in trade.

This brief assumes that domestic economic policy will continue to work to address the issue of effective participation of women in the workplace, and therefore, commences its analysis at the point of passing the baton to trade policy, focussing on the latter three routes.

2. Why are Women not Optimizing Participation in Economic Activity?

That improving the participation of women in trade is a desirable objective is a given. Even then, despite centuries of trade policy, economic cooperation, national reforms, and international conventions and action, progress on eliminating all limitations to participation of women in trade is limited, across geographies, cultures, and levels of economic development, and some challenges are persistent and cross-cutting.

These limitations are largely twofold – access and capacity – and are, by definition, gender-based and gender-differentiated. At the risk of broad generalization, they include, inter alia:

- Social and institutional constructs of generational conditioning positioning women as the fulcrum of domestic establishment – childbearing and raising of children, household care, management of family matters, etc.;
- Persistent and increasingly troubling concerns regarding the safety and security of women, both at and outside the workplace, which render several activities unsustainable for women;
- Social and workplace bias that places aspersions on the management abilities, consistency, and longevity of women in the workplace;
- Barriers to education, skilling, and capacity building for women resulting, from social mindsets and circumstances;
- Legal and institutional constraints and structures; and
- Limited access to finance, technology, and logistics.

Even as international cooperation calls for greater gender equality and empowerment of women and young girls, through eliminating all kinds of discrimination, violence, and harmful practices against women, and their increased participation in decision making and economic and political work, as well as in valuing unpaid domestic work (UN SDG), it is not hard to see how all these goals are the subject matter of domestic policy and reform – social, economic, institutional, and structural.

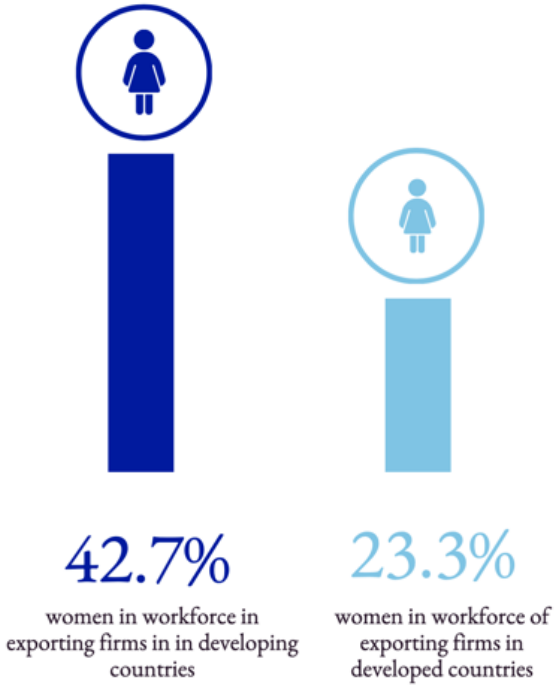
Where governments attempt to address these gaps, both to access and capacity, through domestic initiatives, international cooperation has the ability to support and facilitate these, as well as to foster dialogue and exchange of best practices to strengthen these efforts and enhance their outcome. The

focus then turns to participation of women in trade, and the role of trade policy in facilitating and optimising this participation.

3. Women in Trade: Roles and Challenges

Women participate in trade as both, producers or suppliers of goods and services, and as consumers. As producers and suppliers in trade, women participate directly, as business owners, producers and suppliers (exporters) of goods and services, as well as indirectly, in value/supply chains, adding value to the final exported output, in large and small enterprises and start-ups, in formal and informal economic activity.

This includes businesses with digital component(s) in the supply chain, as well as those where supply chains and delivery are entirely physical. It covers sectors and geographies where paperwork and administrative measures have been digitised, and simplified or streamlined, and those where it is has not. They are also employed in customs agencies and at border posts.



It would be a fair assessment to say that trade has the potential to help better position women in economics and society, and that women contribute productively to trade, in various capacities. Estimates suggest that that more exporting firms hire more women (33% of the workforce in developing countries and 39% in developed countries) than non-exporting firms (24% of the workforce on average), and that firms with foreign investors, or those positioned in global value chains on average hire 11-12% more women than other firms (Rocha and Piermartini, 2023). Women working in export-oriented firms have a higher probability of being in formal employment, with higher wages and more job security.

Global value chains (GVCs) have increased employment and income opportunities for women, especially by enabling the integration of MSMEs to global markets. It has been estimated that women working at various points of GVCs are 10% more likely to be part of the formal workforce (Rocha and Piermartini, 2023). Analysts also suggest a positive link between the participation of women in economic activities and export diversification (Laperle-Forget and Gürbüz Cuneo, 2024). The symbiotic nature implies that addressing barriers to women's participation in trade is just smart economics.

It is also important to reiterate that 'women in trade' are a diverse group, spread across geography, level of economic development, sector, capacity and skills, access to resources, finance and technology, age, social and societal considerations, with an equally diverse spread of barriers to effective participation. While opportunities and roles for participation of women in trade have expanded with the facilitation of cross-border trade through digital platforms and technologies, their effective participation – and the roles, skill and wage levels at which they are able to participate – is limited by access and capacity in varying degrees.

3.0.1 Women in Business

Traditionally, the services sector employs more women than agriculture or manufacturing sectors. ILO estimates that 58% of all service sector jobs employed women in 2020 (Rocha and Piermartini, 2023). This estimate represents an average across developed and developing countries (World Bank Group, 2020). Therefore, as trends indicate a faster growth in trade in services than in trade in goods, with the sector generating more employment, and earlier in the development process, it is safe to say that opportunities for women in trade are expanding (Rocha and Piermartini, 2023).

This has been aided by the growing interlinkages between trade and technology, with digital connectivity and tools making it easier, faster, and more efficient to trade across borders, especially in services sectors. Digital technologies have also neutralized the need for mobility, and brought more agility to the process of service delivery, further aiding the ability of women to participate effectively in trade, transcending traditional impediments to this ability. Digital platforms and the 'gig economy' have also aided the integration of women-owned businesses and women entrepreneurs in global trade, enabling access to international markets at the click of a button, and with limited need for physical mobility.

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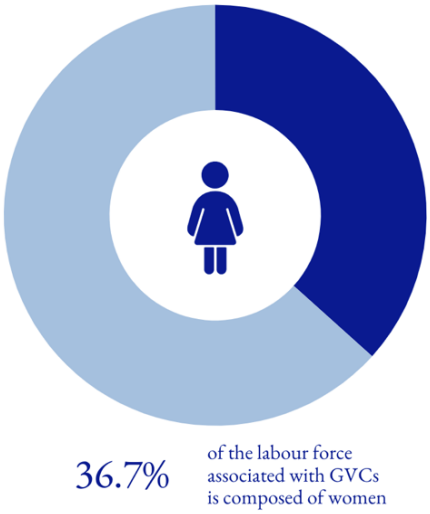
This has also led to an increase in entrepreneurial activities by women, and to women-owned businesses across countries. 40% of new businesses set up in the United States in 2019 were owned by women (WEF, 2022). In India, women own 20.5% of MSMEs (Times of India, 2024). However, this only reveals one side of the story. The statistics differ across countries. Even as one in six women have expressed a desire to start their own enterprise (GEM 2023), estimates reveal that in most countries, women owned businesses are small, and the number of women entrepreneurs decreases proportionately with size of the enterprise. Women are more probable than men to be 'solopreneurs' (GEM 2023). In the Unites States, the ratio of male- to female-owned businesses is still 3-1 (WEF, 2022). Reports also suggest that more women start their own enterprise out of "necessity" than men, and fewer to "pursue an opportunity" (Lesonsky, 2024)

Women in business face a few common barriers to establishing, scaling up and optimizing businesses, and engaging in cross-border trade. Of these, limited access to resources (including finance, logistics and networks) compared to their male counterparts, societal preconceived notions or biases, balancing with household responsibilities (which limits their mobility, consistency and longevity in business) (Laperle-Forget and Gürbüz Cuneo, 2024), and unequal access to skills and training, tend to have the greatest impact. The element of gender in these limitations is undeniable.

3.0.2 Sectors with Higher Participation from Women- Global Value Chains

Women find productive employment across various points of GVCs. While GVCs themselves are estimated to account for close to half of global trade (Barrientos and Pallangyo, 2020), similar estimates suggest that nearly 36.7% of the labour force associated with GVCs is composed of women (World Bank and WTO, 2020). The majority of this employment of women is in what are popularly known as women-oriented or women-intensive sectors – apparel and textile, agriculture and food processing, and transport and tourism. As a matter of fact, women make up 60-80% of the workforce associated with apparel and textile workforce (World Bank and WTO, 2020).

It is also worth noting that even in these sectors, men tend to be positioned in better paid, high-skill managerial roles (Barrientos and Pallangyo, 2020) with higher value-added in production, while women are employed largely in labour-intensive, low-skill, low-wage activities (Laperle-Forget and Gürbüz Cuneo, 2024). As a matter of fact, studies suggest that the low wage of women workers is one of the key factors ensuring competitiveness of manufacturing exports in developing economies (UNCTAD, 2022a). In lower value-added supply chains, women find employment largely in in informal, home-based roles (Barrientos and Pallangyo, 2020).



It has also been observed that limiting women's participation in labour-intensive, low value-added sectors can lower the bargaining power of women in the workplace against their employers, and can therefore exacerbate gender discrimination on wages and working conditions (UNCTAD *SDG Pulse*).

3.1 Access Constraints

3.1.1 Tariffs and Non-Tariff Barriers

Sectors that employ women in larger numbers, especially in developing countries, such as agriculture, food and beverages, textiles and apparel – appear to be placed in higher tariff brackets in most countries (OECD, 2021a). This is not to say that the tariffs themselves are discriminatory, but that these sectors, both on output and input, tend to be more protected by means of tariffs. This "pink tariff" implies that women have to pay more to procure inputs, and tend to be subject to more export restrictions (Rocha and Piermartini, 2023).

Non-tariff measures (also known as behind-the-border measures), including technical specifications, regulatory standards, and qualification and certification requirements, which add a fixed cost to trade, also tend to impact sectors and businesses with participation from women more significantly. This is not because these are imposed in a manner so as to disadvantage women. However, the impact of such measures, on women in trade is greater or unequal. One, because of the nature of sectors that employ women. Two, because of the size of enterprises typically owned by women.

Typically, and on average, women-owned businesses fall in the small- and medium-sized enterprise category. MSMEs tend to have smaller teams, and lesser manpower to assess and manage behind the border measures and customs procedures. In addition, since exports from these enterprises tend to be less frequent, and in smaller consignment sizes than for larger businesses, this adds repetitive burden on the business (Rocha and Piermartini, 2023). Since trade finance is harder to access for women-owned businesses, they are unable to absorb the impact of cost of complexity of procedures, which exacerbates the issue.

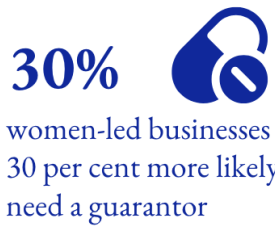
Sectors that are women-oriented also tend to be more impacted by behind-the-border measures. One such sector is services. The limitations to trade in services tend to be inherently behind-the-border in nature, adding cost and complexity to participation in trade. This sector employs the highest number of women across the globe, including in high-skill, high income roles (World Bank and WTO, 2020).

As a matter of fact, the increasing link between trade and technology, and the digitisation of delivery of key services, such as education and health, which offer gainful opportunities of employment for women with less discrimination (Rocha and Piermartini, 2023), including in high-skill and managerial roles, has also opened up possibilities for integration of women in global trade. The advent of the gig economy has also greatly benefited women in trade, as business owners and freelance service providers, as well as through participation in service provision in various types of enterprises.

In this landscape, the increasingly complex web of non-tariff barriers linked to trade in services, the ramen bowl of regulations governing cross-border trade in services (Mode 1) via the digital route, is placing layers of restrictions on trade in services, including digitally. Limited enforcement on accountability of digital services providers additionally complicates this, limiting trust in the ecosystem, and therefore participation of at-risk groups, including women. This has deeper and disproportionate impact on the ability of women to participate in trade, and to optimise the benefits of this participation.

3.1.2 Access to Finance

It has been estimated that 33% of small businesses in emerging markets are women-owned. Yet only 10% of these women entrepreneurs have access to trade finance, or can access critical financial services to support growth of their business (Women in Trade, International Finance Corporation (IFC)). As a matter of fact, nearly 780 million women are reported to lack access to 'formal financial services' (WEF, 2024). Women-led or women-owned businesses are about 30% more likely to need a guarantor, and are less like to receive credit financing. Reports suggest that only 18% of women who apply for trade finance receive necessary approvals (World Bank and WTO, 2020).

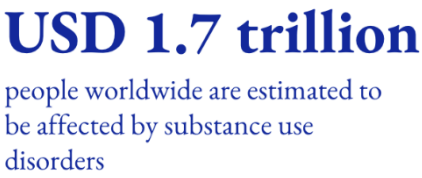


In Vietnam, for example, a survey of 27 banks revealed that only 5 banks were catering to the specific needs of women-owned businesses, and only a small percentage of those banks by formal entities. Of surveyed entities, 14% noted that they were "financially unserved" despite seeking bank finance (Bialus, Thu Hien, and Hong Minh 2022). Similarly, estimates from India show that nearly 90% of women entrepreneurs in India are left to depend on self-financing, even as non-performing

loans are significantly lower (30-50%) in women-owned businesses (IFC, 2022). This is exacerbated by the fact that only 17% of employees in scheduled commercial banks in India are women, limiting the understanding of issues faced by women in accessing finance, and impacting the outlook towards such requests (SME Finance Forum).

These experiences reverberate for women entrepreneurs across countries. In the US, even as women owned businesses constitute 39% of all business in the country, and generate over USD 2.7 trillion in revenues, only 1.9% of venture capital funding is directed towards women-owned businesses (Allard, 2024). In fact, financial sector studies have indicated that men are 60% more likely to receive funding. Globally, the MSME finance gap for women is estimated at USD 1.7 trillion (WEF, 2023), with 70% of women in business, globally, indicating insufficient access to finance to enable growth of their businesses (Women's World Banking (nd)).

Women face more challenges in accessing finance for business, owing to factors such as social biases, requirements of scale of business, collateral requirements, limited knowledge of trade finance instruments (IFC, 2024), as well as administrative requirements and limited access to or familiarity with technological financial tools.



The limitations on access to finance impact women-owned businesses in their ability to invest in necessary resources – both physical and human, including in skill development, training, and capacity building.

3.1.3 Access to Technology

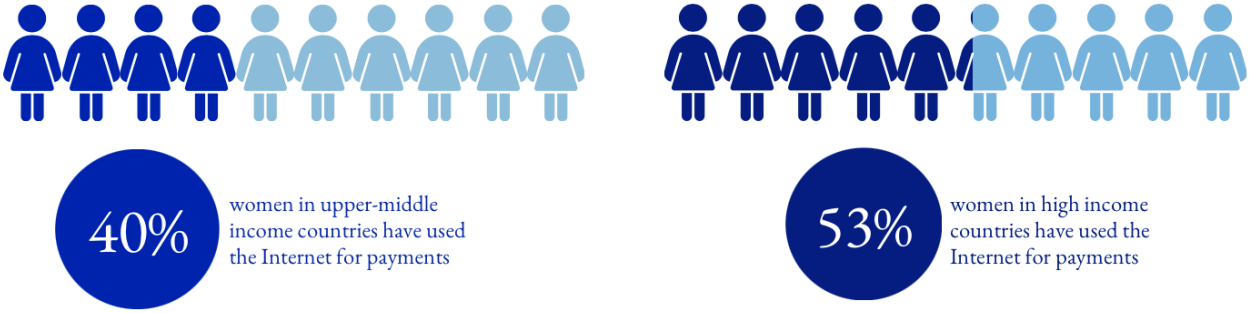
The link between trade and technology, the digitisation of trade, and its ability to transcend mobility-related barriers to trade, offers women immense opportunity to engage in cross-border trade,

including as service providers and participants in trade through digital platforms, and as hubs and spokes in the gig economy.

Economic activity on the digital medium provides women the flexibility of time, place of work (including the option to work from home), as well as direct access to clients and consumers across the globe with this flexibility. Digital platforms have the financial and logistics networks to aid women in their integration into trade. It has been suggested that digital platforms offer an opportunity to reduce the divide in access to jobs, resources, and markets for women, who are 26% less likely to be part of the workforce, and three times less likely than men to be business owners (IFC, 2020).

However, leveraging the benefits of technology in trade requires access, capacity, and security. Technology is less accessible to women than it is to men. UN Women estimates that the gap in access to technology has actually increased over the last few years. Global averages indicate that, relative to 69 % of men, only 63% of women tend to have access to technology, and that women are 12% less likely than men to own a mobile phone.

In least developed countries, this figure is more staggering, where men are 52% more likely to be connected to the internet (UN Women, 2023). In low-income countries, an average of 8% of women use mobile phones or access the internet to create an account (purpose undefined). This number is 28 % for upper middle-income countries, and only 49% for high income countries. Only 40% of women in upper middle-income countries and 53% of women in high income countries have used the internet to make payments in the last few years (Gender Data Portal, World Bank Group). Limited access to technology also prevents women from gaining familiarity with the medium, gadgets, and related digital tools.



Where they have access, women often lack the capacity to leverage the medium fully. Education and skill development in tech-related sectors is largely male dominated. Even in advanced countries like Singapore and Sweden, only 32 and 30% of the ICT graduates and 34 and 35% of STEM graduates, respectively, are women. In Cambodia, these numbers are 8 and 17%, respectively (Gender Data Portal, World Bank Group). UNICEF estimates that women are 35% less likely than men to have digital skills (UNICEF, 2023).

Limited access to technology also prevents women from accessing education and skill development, and vocational training programmes, digitally (Kikore, 2023). This means that women are less likely to know how to best leverage digital tools for trade. UNESCO estimates that women are

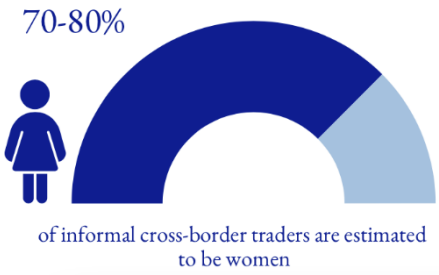
25% less likely to know how to leverage technology, and 13 times less likely than men to file for a patent in the field of information and communication technology (ICT) (UNESCO Women's Access to and Participation in Technological Developments).

Women are also more prone to harassment and tech-based crimes. The deficit in accountability of digital services providers, coupled with the absence of simple, accessible, cross-jurisdictional dispute settlement mechanisms for digitally enabled provision of goods and services, further limits the trust and ability of women in their participation in digital trade. This is why women often remain underrepresented in the development of technological tools (6% of professional software developers are women, and only 12% of researchers in artificial intelligence are women) (UNESCO Women's Access to and Participation in Technological Developments), as well as their use and regulation (UN Women, 2023).

The limited participation of women in digital trade further limits their ability to contribute to development and regulation of technology, leading to further development increasingly biased against women, or at the very least, not gender neutral.

3.1.4 Customs and Border Posts

Participation of women in trade is also limited by lengthy, unduly complicated, and cost-intensive customs and border processes. The time and cost implications impact women more severely than they do their male counterparts. Since 70-80% of informal cross-border traders are estimated to be women (Moyo Mudzingwa, 2022), the impact of such delays and costs on their effective participation in trade is not hard to appreciate.



This is exacerbated by the fact that the majority of customs and border post officials on land and sea trade routes across the globe tend to be men. Only 37% of the customs and border workforce is reported to be women (Hong, Bond, et al, 2022). This opens women in trade up to exploitation, (physical) harassment (Rocha and Piermartini, 2023) and the threat of violence, and creates a feeling of lack of security or safety. In the DRC, for example, an UNCTAD survey reports that 38% of women traders have reported abuse at customs borders. Similar stories have emerged from Gabon, Equatorial Guinea, and other Central and Southern African economies (UNCTAD, 2022). In Brazil, as well, surveys on customs procedures by the World Bank have indicated that 13% of women reported abuse and harassment at border posts, relative to only 3% of men (World Bank, 2021). It is not hard to understand how this might act as a deterrent to women in trade.

3.1.5 Social Factors and Opportunity

Opportunities for women in trade are also limited by pre-conceived notions and biases against the abilities and professional aptitude of women, and discrimination in opportunity, and in compensation. Safety of women at the workplace, including from workplace harassment, is also a challenge that discourages women from entering the workforce. Gender-differentiation in hiring is exacerbated by such concerns related to the safety and security of women, at and outside the workplace, impacting access to opportunity.

3.2 Capacity Constraints

3.2.1 Household Responsibilities

Women have the primary responsibility of bearing and raising children, and of addressing the needs of the household. Women are often in a position of needing to choose between these responsibilities, and their professional opportunities. The time and effort required in fulfilling these responsibilities limits the consistency and longevity of women in economic activity, including trade. The unpaid commitments in the household also constrain the ability of women to accommodate flexibility in work hours (OECD, 2021b). This means that fewer women-owned businesses plug into supply chains and value chains (World Bank and WTO, 2020), and even those that do, do so with impact from these limitations to capacity.

3.2.2 Skills and Education

Relatively limited access and opportunity for skill development and upskilling, education and vocational training of women tends to inhibit their participation in trade to low skill, low-wage, non-managerial roles, and their ownership of businesses to smaller enterprises. It also limits their ability to leverage technology to participate in trade.

There are several reasons for such limitations on skill development, including their responsibilities at home, social biases and discrimination, the biological clock, and its implications for education and limited access to resources. This includes limited access to technology, which – in addition to limiting their ability to participate in trade, using technology, also prevents women from developing the necessary familiarity, comfort, and skills necessary to use technology to participate in trade. It also constrains their access to other skilling, educational, and training materials, relevant to their preferred line of work, available via digital media.

Limited skills also mean that women are employed lower on the value chain, and in certain specific, more traditional sectors, such as agriculture, food processing, and textiles and apparel. Other trading sectors, including services sectors such as education and healthcare, as well as tourism (sectors where women find gainful employment), often require a high skill level, and higher level of education, as well as vocational training for a specific skill set. The lack of sufficient and relevant skills also extends to the digital space, where – owing to the extant, gender-differentiated digital divide – women tend

to have limited skills and training to leverage digital platforms, and digital technologies, effectively, to participate in trade.

As developing and emerging economies seek to restructure their trade baskets, moving from primary sectors to higher-skilled manufacturing and services sectors, digitisation and automation of processes changes how countries trade, it becomes increasingly more critical to ensure that women have the necessary skills and training to participate in economic activities in these sectors. This is true even within traditional sectors, such as agriculture and textiles.

In parallel, insufficiency of capacity-building initiatives targeted to women on digital literacy, digital skilling for women in trade, and financial literacy and skills for women in trade, prevents them from leveraging available tools to upskill, up-finance, and upgrade their participation in trade.

This is exacerbated by the fact that women are often underrepresented in decision making in businesses as well as in policy. Therefore, there is limited understanding of the gender-differentiated challenges and impact of various policy decisions. This may be one of the reasons why there are little to no programs that provide targeted skill development for women traders on accessing, analysing, interpreting, and applying trade related information to their everyday trading activities (including tariff schedules and certification requirements), and compliance with standards and regulation, as well as opportunities offered by value chains and how they can be harnessed – skills and information that are necessary to engage effectively in trade.

3.3 Identifying the Problem Statement

3.3.1 Data and Analytics

If trade policy is to level the playing field and plug gender-differentiated participation in trade, there is first a need to correctly identify the problem statement. Such identification of the problem statement, of representation of women in trade, requires that the contours, structure, and details of this representation be clearly identified and quantified. This requires gender-disaggregated data and information related to cross-border trade, across sectors and geographies, including at the level of value-added output and services embedded.

Availability of such data will allow policy makers to fully appreciate the extent, nature, and effectiveness of participation of women in trade, including the spread of sectors, levels of development, and geographies; skills taught and those needed in specific sectors at the workplace; and the points at which women are facing obstacles to such participation. It will also provide an estimate of the distribution of gains from trade.

Such gender-disaggregated data is not being collected or compiled, and is therefore, not available for analysis. In fact, official statistics linking trade with gender are hard to come by (UNCTAD, 2020). This is true across developed and developing economies. Very few countries compile gender-disaggregated data, and most are limited to ad-hoc compilation. During COVID-19, for example, while it was clear that the crisis and associated restrictions to cross-border trade had a higher impact

on women, both in business as well as in the workforce, the absence of gender-disaggregated data made it harder for governments to identify, and therefore offer assistance to impacted women.

It is also concerning that women are generally underrepresented in data. Across academia, research, policy, technology, urban planning, media, and economic activity, data tends to be biased towards men, because men are substantially better represented (and in some cases, women are not represented at all) in the data that is being used for such analyses. This is true across sectors, including education, health, financial services, technology, skill development, product and service development, and customer services, for example. The underrepresentation of women in the data means that the analyses have an inherent bias (Criado Perez, 2019), and do not accurately reflect the challenges, requirements, and opportunities of women.

Indices compiled by various international organisations such as UNDP, UN WOMEN, and World Economic Forum, for example, focus on specific aspects of the participation of women in economic activity, and often omit the link with international trade (UNCTAD SDG Pulse). The World Bank conducts surveys to support national efforts, but is limited by the high costs of such surveys and their subsequent analyses.

In 2018, UNCTAD piloted its 'Conceptual Framework for the Measurement of Gender Equality in Trade' in six countries. In 2024, UNCTAD released a gender-based trade dataset under the 'UNCTAD in Action: Gender and Trade' initiative" (UNCTAD SDG Pulse). This provides some hope for a way forward in collecting and compiling statistics linking trade with gender, but substantially more work needs to be done, and close cooperation between the private sector, international organisations, and national governments will be necessary.

3.3.2 Representation

Women are underrepresented in trade, in economic activity, in value chains. This prevents women from realising their full economic potential, and prevents economic growth across economies from benefitting from effective participation of nearly half their workforce.

In parallel, women are also underrepresented in decision-making – in management positions in corporate structures, in policy making across governments and in the leadership roles in international organisations and regional development initiatives. This means that decision making fails to accurately account for requirements, opportunities, circumstances, skills, information, and challenges specific to women.

One is impacted by, and exacerbates the other.

Such underrepresentation also makes it harder to accurately identify the problem statement- the actual representation of women in trade by sector, geography, placement in value chains and supply chains, income, opportunity and conditions of participation, gender-differentiated challenges and requirements, and therefore, measures required to close the gap.

4. Levelling the Playing Field: Towards Gender-Balancing Action

Making trade policy effectively gender-balancing requires policy to transcend and neutralise gender -differentiated participation in trade by actively levelling the playing field. This necessitates action on both, domestic reforms (including on trade policy) at the national level, as well as through international cooperation, to create the necessary facilitative ecosystem.

Women participate on the supply side of trade, as business owners and as part of production cycles and value chains. In both, ensuring their ability to participate in economic activity, effectively, safely, and with a level playing field in the first step. This is a matter of domestic policy and reform – social, institutional, structural, and regulatory.

The contours of economic growth and cross-border trade are evolving. In some economies, this means a move away from primary activities to manufacturing and services, in some others, the nature of manufacturing is evolving from lower to higher value-added, and from assembly to component manufacturing. In several economies, there is an increasing role of technology-intensive activities and automation. In most economies, digital technologies are revolutionising how trade is conducted, and the processes associated with trade.

Participation of women in economic activity also needs to evolve in sync. This requires agile policy developments, actively levelling the playing field for women in the workforce, and working with women to help build capacity and skills, to prepare them for the evolving economic landscape. It also requires an appreciation of the fact that 'women in trade' is a diverse group, identifying the various components of this diversity, understanding the impact of barriers to trade on each component, and finding solutions that are inclusive and address issues across this diversity.

It is important to reiterate that trade policy, *per se*, cannot address all the layered challenges that women face in their effective participation in trade. Realistically, participation of women in trade first requires appropriate structural and institutional reforms at the national level to encourage their participation in the workplace. The role of trade policy and international cooperation is to foster an enabling environment that is more conducive to gender-inclusive trade through targeting women-intensive sectors, cross-jurisdictional institutional reforms, trade facilitation, and capacity building, in a manner that offsets some of the limitations that women face in trade. Such efforts will focus on access, capacity, representation, and collection and analysis of gender-disaggregated data.

Domestic measures to increase participation of women in economic activities, including in trade, would include, *inter alia:,*

- Effective, enforceable measures for safety and security of women, at home, at the workplace, and at all points between the two;
- Developing better informed employment policies, and workplace frameworks, including childcare provisions;
- Active elimination of workplace harassment and gender-based discrimination;

- Ensuring access to digital technologies for women, bridging the geographical and gender-based digital-divide;
- Skilling and upskilling women in the use of digital technologies to participate in trade;
- Creating effective opportunity and access for education and skilling of women, in particular to address skills required at the workplace (addressing the gap between education and employable skills); and
- Ensuring effective access to finance for women, including for women in business.

It is also necessary to bring trade closer to women in small towns and rural communities. This requires investing in women-oriented sectors in trade in a manner that creates jobs for women in value chains, for example, closer to their homes; promotion of local handicrafts and traditional methods of production; and skilling women workers in their ability to meet standards and technical regulations in the production of such goods. Linking these chains to the tourism sector can also help promote the participation of women in trade.

5. Making Trade Gender-Balanced: The Role for Trade Policy and Cooperation

Trade policy does not need to be gender-neutral. It needs to be gender-balancing.

There is an urgent need to rethink trade policy to create an ecosystem of frameworks, initiatives, and guidelines that map the diversity of 'women in trade,' identify the common and specific challenges each group faces in participating in trade, and then actively work to address these, to bring women on the same effective playing field as men in trade. This requires deeper cooperation across stakeholders, with inclusive representation of women in the process, to identify opportunities and address these gaps; and better data analytics, with gender-disaggregated inputs and outcomes, to plug gaps to market access where women face unequal limitations, and to build capacity among the diverse groups of women in trade to then leverage these opportunities.

Trade policy should aim to address representation of women in trade through:

- Effective market access for women-intensive sectors, linking women to GVCs;
- Trade facilitation and improving conditions at customs and border posts;
- Access to finance;
- Access to technology;
- Capacity building, skilling and education of women, and access to relevant information and knowledge;
- Ensuring effective representation of women in decision making and effective stakeholder engagement; and

- Improving analytics of participation of women in trade through better collection, mining, and analysis of gender-disaggregated trade data, to collectively create a safe, flexible, enabling ecosystem for women in trade.

To this end, international cooperation can work to leverage trade agreements to address gender-differentiated participation in trade, by reducing barriers to trade in sectors which matter most to women, in increasing the predictability and transparency of trade regulation, in improving border conditions for women in trade in goods, in the harmonization of regulation and the interoperability of digital systems to cut through red tape, in the development of local artisanship and rural traditional production processes through the development of border markets, collection, and analysis of gender disaggregated data, and on rethinking regulation of Mode 1 and Mode 4 of trade in services.

International cooperation can also facilitate capacity building for women in trade, and better use of digital platforms to connect women in cross-border economic cooperation.

5.1 Addressing Access Constraints

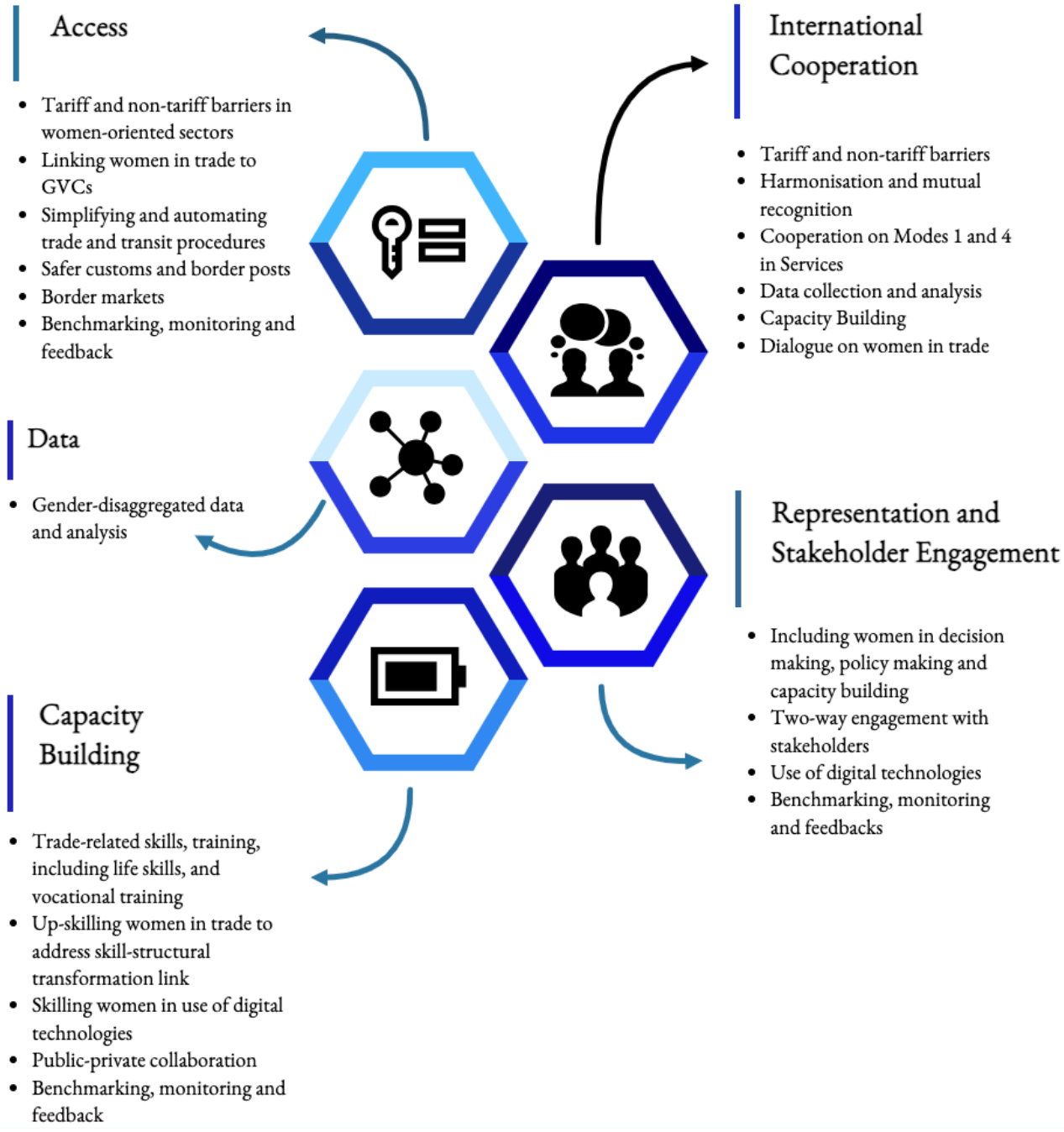
5.1.1 Market Access of Women-Intensive Sectors

Tilting trade policy to specifically promote sectors with greater participation of women is necessary to improve representation of women in trade. This includes structured trade policy to develop, promote, strengthen, and diversify such sectors, and reduce barriers to trade in sectors such as agriculture, food processing, textiles and apparel, and services sectors, as well as sectors where need for mobility is offset by digitisation of trade, where women have a higher probability of engaging in high-skill, high income roles.

This includes reducing behind-the-border / non-tariff barriers to trade, and encouraging harmonisation of standards and regulations and mutual recognition of certification and qualifications. Discussions on prioritizing and facilitating movement of women actors in trade across borders, under Mode 4 (Presence of Natural Persons) of supply of services will also benefit the participation of women in trade in services. The increased transparency and predictability of trade regulation also benefits women.

Economic cooperation agreements/trade agreements can serve as instruments to facilitate effective market access in women-oriented sectors, by addressing the gender dimension of trade between countries (OECD, 2021b), and by providing for preferential trading conditions in products and services produced, supplied, and consumed more significantly by women.

Agreements can be leveraged to encourage trade facilitation, and reduction of behind the border barriers to trade. They can also, with reference to commitments in their various chapters, provide for policy space among trade partners for measures appropriate for balancing the gender divide in trade and trade-related activities. In addition, such agreements can create frameworks to encourage compliance with international norms, in particular those that address circumstances pertaining to women (World Bank and WTO, 2020).



Developing digital trade regulation that is built on trust and accountability, and backed with simplified and robust dispute settlement mechanisms for digital trade, including the accountability of digital platforms and employers in the gig economy, is also critical to increasing trust and accountability in the system, and encouraging participation of women in digitally-enabled trade. Harmonization and interoperability of digital trade regulation, to reduce the cost and complexity for women traders and business owners on the digital domain is also an essential step to facilitating trade using technology.

To this end, international cooperation can help provide ease of trade and transit in Mode 1 (cross-border provision of services) of trade in services. For such efforts to have impact, it will be necessary

to establish, through trade agreements, mechanisms to monitor and review progress in this context, periodically.

Trade cooperation among partners can also actively promote local production methods and artisanal goods, through the now popular concept of 'border markets' which support the participation of women from local communities in trade. Examples of such border markets or 'haats' can be found along the border between Indian and Bangladesh (Kalaichar, Balat, Srinagar and Kamalasagar) where such markets promote the products and services of women suppliers, in particular from rural communities, through physical proximity to a cross-border market. Such markets also allow women producers to access inputs for production from these markets including tools, food materials, fabrics, etc., at reasonable prices and close to their own supply points. This also creates opportunities for two-way interactions among women in trade (Mathew, 2018).

5.1.2 Linking Women in Trade to GVCs

GVCs are providing women with significant opportunity for gainful employment, as well as for participation in international trade. ILO estimates of the more than 453 million jobs created by GVCs in trade in 40 OECD Members and four BRIC countries (Brazil, Russia, India and China) (ILO, 2016), 42% have been taken up by women (ILO, 2015).

This offers unprecedented opportunity for women in trade. Targeted trade policy initiatives could ensure that as economies place themselves at various levels of skill on these GVCs, women are also placed in higher-value-added, higher income jobs, with more job security in this framework.

Such efforts would include strengthening markets for women-oriented sectors, and supporting women with control over resources, and decision-making power (Blackmore and Ajambo, 2022). As export diversification across economies results in progressing to capital-intensive and higher value-added sectors in GVCs, the WTO also underscores the value of enabling more inclusive management practices among businesses, which can then provide more opportunities and roles for the participation of women in GVCs (World Bank and WTO, 2020). Leveraging trade agreements, and other avenues of economic cooperation, to create mechanisms of cooperation to encourage access to resources, including finance and digital technologies, for women, will also facilitate their more effective participation in value chains.

5.1.3 Trade Facilitation

Simplifying and Automating Trade and Transit Procedures

Measures to reduce the cost and complexity of trade and transit require initiatives to simplify documentation and administrative requirements, reduce the complexity and duplication in transit procedures, reduce red tape and cut the time required for administrative and transit procedures. Several measures could contribute to this objective. These include automation of trade and transit processes, moving towards paperless trade and digitalization of trade and transit procedures, and

improving access to accurate and updated trade related information. Prompt, effective implementation of the WTO Trade Facilitation Agreement (TFA) by Members would contribute to this end.

In addition to reducing the cost and complexity of trade and transit procedures, which have an unequal impact on women in trade, this would also serve to reduce the possibility of harassment of women traders at customs posts, and contribute to resolving safety and security concerns of women traders.

Safer Customs and Transit Posts

Safety of women at customs and border posts, and during transit procedures is paramount. In addition to automating and digitising processes to reduce opportunities for harassment and violence against women, it would also be necessary to take steps at customs posts, including increasing the number of women officials at transit and customs posts; improving security at transit posts across trading routes for both, women traders and women officials at these posts; training of women officials deployed at these posts; and developing programs and workshops for gender sensitization of all administrators, customs and border officials, as well as policymakers. This requires efforts both, at the national level, as well as in cooperation with trade partners.

Cooperation among partners can also support such initiatives at the national level, by working on collectively improving the safety and security of border and transit posts, for women, and in conducting collaborative programmes and workshops aimed at ensure gender- sensitization of customs officials.

5.1.4 Access to finance

Improving and facilitating access to finance for women in trade is a matter of both domestic policy as well as international cooperation. At the level of domestic policy, providing clear guidelines to reduce barriers to women's ability to access finance, simplifying procedures, and reducing the need for additional checks and collateral would be necessary. It would also be important to provide women with legal protection of enforceable rights to ensure access to financial infrastructure, including for simple transactions such as seamless opening of bank accounts, and not being denied authorisation to undertaking basic transactions (Thystrup).

Facilitation can be supported with leveraging digital technologies to automate processes, monitor credit histories and digital footprints to foster accountability and trust (for example, by linking it to the national IDs and bank databases), nullifying the need for additional checks and balances required for women seeking access to finance. Digital platforms and repositories can also provide for robust benchmarking, monitoring, and feedback mechanisms, with support from the private sector, to ensure that initiatives towards such access to finance are effectively implemented. It will also be helpful to use digital platforms to provide information, knowledge and guidance to working women on financial instruments, and on leveraging trade finance optimally.

In parallel, trade agreements can also provide effective platforms to develop mechanisms of cooperation to improve access to trade finance for women in trade, and for industries with greater participation of women in the workforce. Triangular cooperation can be leveraged to find additional avenues of providing necessary financial support to women in trade.

Cooperation can also be leveraged to provide women necessary information and knowledge pertaining to financial instruments, and may also be useful in giving women the tools to be self-sufficient in understanding and leveraging available financial tools and resources.

Collaborative action to digitise financial instruments, adopt blended finance approaches, and leverage alternate financing mechanisms such as supply chain finance is essential (IFC, 2024).

5.1.5 Access to technology

For women to be able to use technology to participate in trade, they need to have access to technology, familiarity with platforms and the digital medium, and the skills necessary to harness its potential. This journey begins with access, and bridging the gender-differentiated digital divide.

Making access to technology geographically neutral, to ensure that even the most remotely located communities have access to technological tools; addressing social biases that prevent women from using technological tools and devices; providing financing options for women to own technological tools to enable their participation in the economy, both as consumers and producers; and ensuring that digital regulation accounts for the specific requirements, challenges and opportunities pertaining to women as users and developers of technological tools, will provide the first steps in ensuring that women are not deprived of access to technology. Such efforts would benefit from international cooperation and among trading partners.

In addition, international cooperation can supplement these efforts by working on more effective models of collection of gender-disaggregated data need for better-informed research on barriers on the ability of women to access and harness digital technology (UN Women, 2023).

Cooperation can also address the issue of representation of women in the development of international frameworks for digital security and governance. Gender-considerate digital regulation will reduce barriers women deal with in accessing technology. International cooperation can also support efforts at the national level to ensure more effective, less costly, and more secure access to technological devices and tools.

5.2 Addressing Capacity Constraints

Constraints to capacity are perhaps the most significant in limiting the participation of women in trade. This includes, most significantly, gaps in education, skills, and vocational training; limited digital literacy; limited knowledge or understanding of trade policy and regulations impacting trade; and limited understanding of instruments of trade finance. The scale and diversity of capacity building required to fully, and effectively enable the integration of women in trade necessitates structured collaboration between the public and private sectors in this regard.

The role of such international cooperation is multi-pronged, and would include, inter alia:

- Conducting necessary surveys and research to support the collection and analysis of gender-disaggregated trade and skill data to assess the impact of trade policy on the participation of women in trade;
- Understanding the specific capacity gaps across the diversity of women in trade;
- Working with national governments to develop capacity building programmes, workshops, and platforms; and
- Exchanging knowledge, information and best practices to assist countries in better structuring their capacity-building programmes.

5.2.1 Education, Skills, Training

To be able to engage in trade in more upstream, high-skill, high income roles, with more job security, structured work hours, and with safer work, more sensitive work environments, women need leverage. Leverage comes from education.

Therefore, education, skilling, and training of women must be prioritised. This includes creating opportunities to allow women to pursue higher education, including an increased focus for more inclusion of women in higher-value added, employable academic skills such as STEM (Science Technology Engineering Mathematics) education programmes. It also includes targeted skill development and training programmes catered to their chosen industry or sector, both on skilling for the workplace, as well as skills necessary for trade and trade-related activities. To this end, there is a need to ensure that policy frameworks are designed to ensure that women have access to targeted skill development and vocational training, where skills are mapped to job requirements on the market.

This requires the assessment and identification of the gaps between existing skilling and training programmes, and the skills actually required on the job. This assessment would have to be mapped against the export basket of the national economy, and then mapped back to developing curricula that plugs those gaps. National skill development and vocational programmes would have to prioritise capacity building for women to encourage their participation in trade.

Such capacity building would also include programmes targeted at providing women trade-related skill development, including for women in business, to upskill them towards participation in higher value-added, higher-income activities in trade. It is also necessary to train women in understanding trade regulations, statistics, and tools.

International cooperation can support and supplement these initiatives, and provide inputs from analysis of gender-disaggregated data from global markets, and other markets with similar trade baskets or trajectories. Cooperation could also support the development and delivery of skill development and vocational training programmes for women.

5.2.2 Digital Literacy

There is an urgent need to invest in skill development and technical training programs on the use of digital technologies in trade, for women, in sectors and roles that women can explore, especially in the digitally-enabled platform economy and gig economy. These would also include, inter alia, trainings on the use of digital technologies in trade, skilling women in trade across roles and geographies in the use of digital technologies for economic activity, and in particular for cross-border trade.

International cooperation can support efforts at the national levels to bridge the gender-differentiated divide on capacity to use digital technologies, through capacity building and technical assistance programmes, as well as through exchange of knowledge, information, and best practices on promoting and fostering increased digital literacy among women.

5.2.3 Understanding Trade Policy and Regulation

Programmes, workshops, and training programmes that help women understand and navigate the complex of web of trade policy, regulations, and requirements across various geographies are necessary to ensure their effective participation in trade. In addition, it is important to equip women with the technical knowledge and in-depth understanding of transit requirements, licensing, certification and qualification requirements, as well as the tools to find, analyse and interpret trade statistics, tariff information, and other trade-related information from across potential export markets, to help them economise their businesses and comply with requirements with ease (including with minimal implications for cost and time).

Several governments and international organisations are developing schemes and tools to assist women entrepreneurs as well as MSMEs that employ or collaborate with women in income generating, trade-related activities. Such programmes, often supported by government and non-governmental organisations, as well as by the private sector, are necessary to provide women the toolkit they need to optimise their participation in trade.

International cooperation could support such initiatives through the development and delivery of programmes for targeted skill development and training for participation in trade, including in demystifying the web of regulations and policies impacting trade across geographies, and in understanding and harnessing trade agreements.

It is also important to harness the opportunities and tools offered by digital technologies to allow for international cooperation through exchange of knowledge, sharing of best practices, and to allow women in trade to access resources from across the globe to develop and hone their skills and understanding.

5.2.4 Understanding Trade Finance

For women to access trade finance, and to harness its potential in participating effectively in cross-border trade, women need to have adequate knowledge and understanding of the various instruments

and sources of trade finance. Equipping women with this information and guidance would be a necessary step in enabling them in trade.

Such efforts can be undertaken at the national level, as well as in cooperation with partners internationally, leveraging digital platforms to collate and disseminate knowledge and guidance for women, and to allow them to connect with experts and with other women, and hone their understanding, peer-to-peer, including through shared experiences. International organisations such as WTO, ITC, IFC, and UNCTAD can play a significant role in facilitating such collaborative initiatives.

5.2.5 Public-Private Collaboration + Digital Technologies

Women are nearly half the global population, and can amount, therefore, to half the global workforce. They play diverse roles in economic activity, including in trade, and are differentiated by geography, social and economic placement, skills, interests, opportunities, and access.

This makes capacity building for 'women in trade' a task of unimaginable scale, diversity, and complexity. This is not a task for one entity, or one type of entity. It necessitates, by definition, two things.

One, collaboration across public and private sector as well as international organisations and non-governmental institutions, for a multi-pronged approach.

Two, the need to harness digital technologies for effective development and delivery of capacity-building programmes.

Public-private collaboration can take various forms, including, inter alia, implementation of policy initiatives that enable women in the workforce, and working with industry on management directives to foster the necessary ecosystem to ensure effective, productive participation of women at the workplace, with consistency and longevity. The private sector must also seek to invest in women-owned businesses, and help them connect with GVCs.

Private sector cooperation will also be necessary to map and bridge the gap between skills and job requirements, and in developing and delivering the requisite capacity building, skill development, and vocational training programmes, at the necessary scale and reach, backed by the appropriate infrastructure and logistics.

Robust, scalable, digital platforms must be leveraged for seamless, structured, and standardised delivery of capacity-building programmes. The same platforms can also be used to create an ecosystem of knowledge, cooperation, and support for women in trade to allow them to learn, grow, connect and collaborate - accessing information, connecting with markets, seeking legal and accounting advice, sharing experiences, and receiving and providing trainings and skill development programs, and investing in digital skills for women in trade, for each specific category of women in trade, based on their specific requirements. This will also be a significant area of cooperation among trading

partners, as well as for national governments to mainstream active gender inclusivity in trade policy and related domestic reforms.

5.3 Gender-Disaggregated Data

While processes to capture trade data accurately have evolved significantly over the last few decades, making it possible to capture data on services, e-commerce, value-added components of exports, and even data on services embedded in manufacturing, statistics on trade disaggregated by gender continue to evade experts.

For an accurate understanding of the participation of women in trade, the trends, sectors, activities, formats, and roles, as well as the challenges faced by women in trade (and therefore the nature and content of capacity-building programmes), analysts need gender-disaggregated data from all sources, sectors, geographies, and entities.

This requires standardisation of definitions, formats, classification, and data capture and mining methodologies. It also necessitates cooperation across economies and stakeholders – private and public, at the point of production, value-add, sale, end-use, and transit posts, for all sectors and industries – primary, manufacturing and services, including digitally traded goods and services. Cooperation among trade partners should seek to standardise how the contribution of women is estimated, quantified, or recorded in each transaction, the ratio of women-men in each transaction, and the reasons for the skewed ratio, where that is the case.

There is no question that this is a mammoth task. This is why the WTO Buenos Aires Declaration on Trade and Women's Economic Empowerment places particular emphasis on encouraging Members to capture and collate gender-disaggregated data, and develop analysis of gender-focused trade related statistics, complete with an inventory of data sources (UNCTAD, 2020). OECD also emphasises that, to inform trade policy on gender-differentiated market access, there is a need to "upstream the use of gender-differentiated impact analysis to understand the potential impacts of trade policy changes, or new trade agreements on women, including their indirect effects." (OECD, 2021b)

The private sector will play a key role in this process by collecting better statistics and collating more structured information on women in the workforce, in particular in GVCs, to understand better both the roles women are undertaking in value chains, as well as the impact of GVCs on participation of women in the workforce (Barrientos and Pallangyo, 2020).

Cooperation among trading partners can be built into trade agreements, including on standardisation and harmonisation of specifications, and interoperability of systems and methodologies. Such cooperation can also be leveraged in the actual collection of gender-disaggregated trade data, gender-based studies, and analysis of transit posts. Partners can also build cooperation on impact assessment of trade measures and regulations on women in trade, into the periodic review and monitoring mechanisms of their trade agreements.

5.4 Representation: Need for Inclusive Stakeholder Engagement

For any of these initiative and efforts to actually work, what is most important is representation and inclusive, effective, continuous and structured stakeholder engagement. Gender-balancing trade policy requires effective representation of women at the table, in identifying roles, opportunities, challenges and solutions, in decision making, and policy and regulatory drafting, as well as in the design and implementation of capacity-building programs. Just being at the table is not enough, having the voices of women heard, recorded, and acted on, is critical.

This must include women across roles in trade, across geographies, levels of development, social and economic strata, enterprise size, sector, and industry. Models of engagement can include focus groups, direct interviews and surveys, inputs from civil society (OECD Toolkit for Mainstreaming and Promoting Gender Equality), workshops, conferences and seminars, community discussions, both formal and informal, use of digital platforms, and use of tools to aggregate information and services, and industry-interlinkages (NITI Aayog, 2021), etc. Engagement must be a continuous process, with feedback loops, and structured review, monitoring, and revision. The private sector can, and absolutely must, play a significant role (Bajaj, 2021).

The scale and nature of the challenge also necessitates the use of digital technologies for more inclusive, effective engagement (Bajaj, 2021). Women in trade and related activities can leverage digital platforms to connect, collaborate, and engage, exchange information, experiences, and best practices, provide mentorship and support within the community, collate voices and provide inputs that can then inform decision making, policy, and capacity-building programmes.

6. Conclusion

Trade policy is not gender neutral. As a matter of fact, it cannot be. To counter the inherent disadvantages of social, institutional, and structural constructs, and access and capacity constraints specific to women, policy, including trade policy, needs to actively and continuously neutralise these inherent disadvantages, and create an ecosystem where men and women are on the same playing field in economic activity, and therefore in trade.

This requires trade policy to be gender-balancing (at the very least). In collaboration with other structural, institutional, and social reforms, and supported with international cooperation, gender-balancing trade policy must counter gender-differentiated limitations by ensuring that women have access to resources, finance, markets, support and security, as well as the capacity - skills, training, and knowledge - to engage in cross-border trade and related activities to their fullest potential.

However, these efforts will only work if women have inclusive, adequate, effective representation in the strategy, design, and implementation of each step, and in each effort or initiative.

Public-private cooperation, leveraging digital technologies, will be necessary to drive the scale and diversity of such efforts. The ecosystem would have to be kept continually optimal with continuous monitoring and review of outcomes, built on inclusive feedback loops.

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Decoding the Trends and Composition of Public Expenditure in India

A Book Review of "Public Expenditure in India: Policies and Development Outcomes" by Gayithri Karnam

Jos Chathukulam*

Public finance is vital to effective governance. It encapsulates the aims and policies of the state, and empowers governments to promote development and progress at the national and sub-national levels (including local governments)[i]. Public revenue, public expenditure, public debt, financial administration, and public budgeting are the major areas that fall under the ambit of public finance. In the domain of public finance, two factors – public expenditure policy and public expenditure management – have a direct role in accelerating economic growth, generating employment opportunities, and fostering inclusive socio-economic development.

The administration of public expenditure remains a significant challenge in developing countries, including India, as policy announcements often do not lead to desired outcomes (Kundu, 2022; Karnam, 2022; Saji, 2023). Despite its significance, public finance – particularly the quality of public expenditure –has largely been overlooked by policymakers and economists in India. This is applicable even to performance budgets (Rao and Rajagopalan, 1990).

In this context, ***"Public Expenditure in India: Policies and Development Outcomes"*** by Gayithri Karnam, offers an empirical understanding of historical trends and composition of public expenditure in India at the central and the sub-national levels; the effectiveness of public expenditure control systems and accountability issues; the political economy of spending decisions; public expenditure reforms undertaken in India; and international best practices that can guide the course-correction process in India.

The book is organized into 10 chapters, and it offers a thorough and logically-sequenced narrative on public expenditure in India. Chapter 1 offers an overview of the different conceptual frameworks of public expenditure and budgeting, which is essential to understand the public expenditure analysis presented in the book. Chapter 2 outlines the key concepts, nomenclature, classifications of public expenditure practices, and public budgeting practices within the context of the Indian fiscal federal

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framework. The author has succeeded in establishing a historical and practical sense of the Indian experience of public finance, with the support of extensive literature.

The book offers a coherent understanding of the trends and composition of public spending through a historical and chronological perspective, as seen in Chapter 3, with the support of meticulous evidence-based assessment of the transformations in the structure and patterns of public expenditure in India. Chapter 3 explores the theoretical foundations of public expenditure theories, and delves into the framework and trajectory of public expenditure practices in India.

The author offers a chronological overview to identify the structural changes that took place in the Indian economy, and discusses the fundamental principles of public expenditure in the Indian context. For instance, the abolition of the Planning Commission (formation of NITI Aayog), the Fourteenth Finance Commission recommendation on centre-state resource sharing, the reconfiguration of funding structures for centrally sponsored schemes, and amendments to the Fiscal Responsibility and Budget Management Act, all have led to significant transformations in the federal-fiscal arrangement in India, and had both positive and negative implications for the financial health of the states.

Chapter 4 offers an empirical analysis of expenditure trends and patterns at the sub-national level (states in India), the quality of spending across various Indian states, and its influence on economic growth and development outcomes. The author reiterates that the systematic compilation of public finance data is crucial for enhancing the planning and utilization of public resources. The real-time collection, aggregation, and monitoring of development and fiscal indicators are essential for evaluating the potential effects of government expenditure on specific interventions.

Another major challenge addressed in the book is related to the lack of data/data inadequacies in public spending at the local government level. While the author points out that scarcity of fiscal data presents a significant obstacle for all tiers of governance, it is more evident in the case of local governments. The author admits that though the "*study of local government expenditure incurred by the rural and urban local governments have attracted considerable attention of the academic community",* this book *"...does not undertake a detailed analysis of the spending by local bodies ... due to non-availability of consistent and comparable data."*

The author could have made use of the social audit mechanism, Gram Sabha, Ward Sabha, and Ward Committee meetings, along with public sphere discussions and engagements with elected functionaries, to get a basic understanding of the public expenditure of local governments. Local public action initiatives by citizen-centric forums would also have offered some input on the public expenditure incurred at the grassroots level

Chapter 5 focuses on the management of public expenditure, associated control mechanisms, and challenges faced in this domain. The author has examined various constitutional mechanisms, including Parliamentary Financial Committees such as the Public Accounts Committee (PAC), Estimates Committee (EC), and Committee on Public Undertakings (CoPU). Another important constitutional entity regulating public finance in India is the Comptroller and Auditor General of

India (CAG), and the author has discussed in detail the relevance of the CAG, along with its operational issues and weaknesses.

This is particularly important in the present-day scenario, as states (including Kerala) have been locking horns with the CAG. For instance, the Kerala government dubbed the CAG as a "hunter dog" of the Central government instead of "watch dog" of public finances, when the 2018-19 audit report of the CAG had a remark saying that Kerala Infrastructure Investment Fund Board (KIIFB) violates Art. 293(1) of the Indian constitution, and the CAG further added that state government's off-budget borrowing tactic to raise funds was "unconstitutional" (Unnithan, 2020).

The examination of various constitutional frameworks (including the CAG) is informative and is crucial in generating awareness regarding these control mechanisms in the public domain. Politicians and leading policymakers can use this chapter as a textbook to learn more about the CAG, PAC, CoPU, and EC, and thereby attempt to clear their misunderstandings and misgivings. There are also expenditure control mechanisms at the sub-national level in India. For instance, Karnataka has *Sakala*[ii], *Avalokana*[iii], SDG Barometer, Karnataka Evaluation Authority, and Karnataka Development Programme (KDP). The author of the book has not seriously considered these 'new institutional surveillance mechanisms on public expenditure' at the state and/or sub-state levels in India. The author largely looks through a traditional lens of public expenditure analysis.

A comprehensive analysis of public expenditure is incomplete if it is not placed within the context of political economy (Saji, 2023). Chapter 6 looks into the electoral impacts of changes in government spending, drawing on evidence from 14 states in India, which are classified into low, middle- and high-income categories. The author has applied William Nordhaus's concept of *'electoral business cycle'* across different expenditure categories in the Indian context. Elections in India are one of the most expensive electoral events in the world. It is estimated that around Rs. 1.35 lakh crore was expended during the 2024 general election cycle, while the 2020 US election expenditure stood at Rs. 1.20 lakh crore (Paliwal, 2024). The author has pointed out that the "government spending composition in the election years many a time also depends on the party system[iv]," (Karnam, 2022).

Meanwhile, the "very high cost"[v] of conducting elections in the country also falls under the domain of public spending/expenditure. For instance, deploying officials and armed personnel to set up polling booths, procuring EVMs, and purchasing indelible ink, along with administrative costs (including remuneration to officials and observers for their poll-related work, including training and travelling) is all public expenditure. The author has not made an attempt to cover the expenditure for orchestrating elections in the sphere of public spending. This electoral expenditure should also be placed within the purview of the control mechanism.

The concept of public accountability is explored in Chapter 7, which analyses the internal and external control mechanisms designed to monitor spending behaviours. The book looks at heuristic strategies employed by the Indian government, particularly performance auditing and performance budgeting done by the CAG. Chapter 8 looks into issues that need to be addressed in reforming the public expenditure framework and systems in India.

Chapter 9 offers a comparison between the performance evaluation and outcome budgeting practices in India with the performance review process employed in Organisation for Economic Co-operation and Development (OECD) countries. Chapter 10 is the most unique one in the book, as it discusses the context of public spending during the Covid-19 pandemic in India. The author suggests the need to address the ineffective conversion of expenditures into outcomes through more efficient public spending.

This book is a valuable addition to the literature on public finance in India. For a comprehensive and up-to-date insight into Indian public expenditure, this book is indispensable.

"Public Expenditure in India: Policies and Development Outcomes" by Gayithri Karnam, 2022, Pages 328. ₹1421(Hardcover); ₹1302 (Kindle)

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Notes

[i] Public finance encompasses the analysis of how governments and public authorities manage their financial resources including income, expenditure, and debts, to fund the public programs and initiatives of the respective governments. It offers an empirical analysis relating to aspects such as economic stability, income distribution, and the allocation of resources.

[ii] *Sakala* assures timely delivery of public services to citizens by the different departments of the government of Karnataka, as guaranteed by the Karnataka Guarantee of Services to Citizens Act, 2011. Since public expenditure is manifested at the local level in the form of public goods and services, in many cases *Sakala* works also as a control mechanism to ensure and assess the quality of the delivery of the public goods and services at the grassroots level. The reviewer of the book has witnessed comments from the local communities on the quality of the expenditure on public goods and services, based on the information gathered by *Sakala,* during field visits in many Gram Panchayats in Karnataka while evaluating the performance of *Sakala*.

[iii] *Avalokana* is a software that made all the data for budget allocation and integration available with an external MIS system, for release and expenditure to the lowest drawing-cum-disbursing officer (DDO) of the Taluk /Gram Panchayat. *Avalokana* provides physical and financial data /reports for the review meetings of KDP and review and analysis at all levels from CM Dashboard to citizens.

[iv] Though the Election Commission has set expenditure limits for individual candidates, there is no cap on the expenditure by political parties. Despite measures to monitor spending, much election expenditure remains unaccounted for (Paliwal, 2024).

[v] The government data shows that expenses for conducting elections have increased from Rs.236.6 crore in 2018-19 to Rs. 340 crore in 2023-2024 (Singh, 2024)

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