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FEDERALISM, FISCAL SPACE, AND PUBLIC INVESTMENT SPENDING: DO FISCAL RULES IMPOSE HARD BUDGET CONSTRAINTS?

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Abstract

The core emphasis of rules-based fiscal legislation at the subnational level in India is to achieve debt sustainability through a numerical ceiling on borrowing and the use of borrowed resources for public capital investment by phasing out revenue deficits. Using the Arellano Bond Panel estimation, this paper examines whether the application of fiscal rules has resulted in an increase in the fiscal space for public capital investment spending in major Indian states. This analysis shows that by controlling other factors, there is a negative relationship between fiscal rules and public capital investment spending at the state level during the rules-based fiscal regime.

JEL Classification: H00, H6

Contents

1. INTRODUCTION

India is a federal country of 29 states and 7 centrally administered union territories. It has a highly decentralized federal fiscal structure where state governments spend more than 56% of total public spending although their share in combined revenue is only 38%. Although there are multiple channels of transfers, this gap in revenue and expenditure is met primarily through vertical transfers from the central government to the states through the statutory Finance Commission route.[1] Burgeoning fiscal deficits at the subnational level were a major issue in India's fiscal management during the 1990s and early 2000s. During this period, piecemeal attempts were made to bring in fiscal discipline at the state level at the insistence of the central government and also through state-specific interventions by multilateral institutions, such as the Asian Development Bank and the World Bank.

In order to ensure fiscal discipline, the Twelfth Finance Commission of India (Finance Commission 2005) had recommended rules-based fiscal control at the state level, which created a mechanism to provide performance incentive transfers for better fiscal management.[2] Performance incentives were linked to a reduction in state-level fiscal and revenue deficits relative to gross state domestic product (GSDP) within a rules-based fiscal framework.[3] The Thirteenth Finance Commission (Finance Commission 2010) further reinforced this process of legislative control over deficits by providing separate performance incentive grants.

According to the Twelfth Finance Commission recommendations, if a state enacted a Fiscal Responsibility Act (FRA) specifying 3% of GSDP as the upper bound of the fiscal deficit and eliminating the deficit in the current account of the budget, i.e., revenue deficit, within a specific period (by FY 2008–09), the state became eligible for debt rescheduling. Also, if a state adhered to those targets specified in the act, part of the state debt to the federal government was written off. All states in India now have an FRA. The provisions of the acts across states are similar, particularly with regard to revenue and fiscal deficit reductions.. Since the primary objectives of the acts are to phase out revenue deficits and to put an overall cap on borrowing limits, the core emphasis, on the one hand, is to improve public capital investment at least to the extent of borrowing in the event of no revenue surplus (for state-specific rules, see Table A1). The fixed borrowing limit of 3% of GSDP, on the other hand, is to ensure overall fiscal sustainability of the subnational debt through hard-budget constraints. State-specific acts also imposed limits on government guarantees and associated contingent liabilities and off-budget borrowings.

[1] The Finance Commission is a statutory constitutional body appointed quinquennially by the President of India.

[2] Prior to the recommendations of the Finance Commission in 2004, some states introduced their own Fiscal Responsibility Acts (FRA). A few of them did it as a part of the subnational structural adjustment lending programs support provided by the Asian Development Bank and the World Bank. A review of the subnational adjustment lending programs and its impact of state level fiscal balance is available in Rao and Chakraborty (2007).

[3] Although, state-specific FRAs have other commitments such as reductions in the guarantees given by the state governments, the level of contingent liabilities, and in some cases the level of debt, the incentive structure was linked to the reduction in revenue and fiscal deficits. Thus, this study primarily focuses on these two indicators.

The main objective of this paper is to examine whether the application of fiscal rules has resulted in an increase in the fiscal space for public capital investment spending in Indian states. The focus of the paper is on state-level capital spending reflected in state budgets, not total public sector investment in a state, as data for the latter are not readily available.

Although macroeconomic stabilization is a federal government function, subnational deficit controls have implications for both macroeconomic stabilization and overall fiscal management since the central government and the states are co-equal partners in public spending. Both levels of government have large fiscal imbalances. In other words, fiscal and macroeconomic stability in a large federation like India depends not only on the central government's fiscal deficits but also on states' deficits. In the pre-FRA period, the states together had a fiscal deficit almost equal to that of the federal government. The average fiscal deficit for all states was 4.5% of gross domestic product (GDP) from 1998–1999 to 2003–2004, while the central government's fiscal deficit was 5.2% of GDP for the same period. Since the combined deficits of the states are large, given the multilevel fiscal structure, an overall deficit reduction could not be fully achieved if both levels of government do not control the deficits. From this point of view, this research adds value in understanding the complexities of macro fiscal policies in a large federal system.

2. FISCAL RULES: ARE THEY USEFUL?

Rules may be necessary to restrain governments that engage in discretionary policies that have a deficit bias (Buchanan and Wagner 1977) and to allow for consistency in policy commitments (Kydland and Prescott 1977). Koptis (2001) argued for a well-designed rules-based fiscal policy for mitigating a country's vulnerability in succumbing to a crisis. According to Koptis, inconsistency between fiscal stance and exchange rate rules has played an important role in the currency crisis of many countries (e.g., the Russian Federation, Brazil, and Ecuador). This was also due to the capital outflow where foreign investors' perception about government solvency was an important factor. Khemani and Wane (2008) argued that in decentralized economies, the existence of fiscal rules could be useful for incentivizing the state and local governments for better fiscal performance to maintain fiscal prudence. However, the incentive structure may need to be designed so that local governments do not circumvent transfer conditionality, and hence, do not follow fiscal rules. Extant empirical literature such as Krogstrup and Wälti (2008), Feld and Kirchgässner. (2006), and Schaltegger (2001) show that fiscal rules have a significant impact on budget balances. A few studies carried out on United States data show that the strength of fiscal rules was directly proportional to the reduction in unexpected deficits (Poterba 1995; Alt and Lowry 1994; Alesina and Bayoumi 1996). In the case of provinces in Canada a few studies indicate that provincial legislation against deficits led to stronger budget balances, other things being equal (Tellier and Imbeau 2004). There is limited literature on the impact of fiscal rules on fiscal performance in emerging market economics (Chakraborty and Dash 2013).

3. WHY FISCAL RULES MAY NOT WORK?

Milesi-Ferreti and Moriyama (2004) analyzed the effectiveness of fiscal rules in light of "creative accounting". Milesi-Ferreti and Moriyama (2004) argued that creative accounting may increase in presence of fiscal rules but there is surprisingly little theoretical and empirical work on the subject. Using a two-period model developed by von Hagen and Harden (1996) and assuming that fiscal rules are being imposed on the "measured" fiscal balance and that the penalty must be paid if creative accounting is detected, it is observed that budget transparency is inversely proportional to creative accounting. Additionally, even if the costs of engaging in creative accounting are large, tighter rules may still induce creative accounting. Manasse (2007) discussed the incentive effects of budget limits. According to this study, when limits are imposed on the deficit–output ratio, governments keep the deficit just below the limit to avoid sanctions and have no incentive to practice fiscal consolidation during "good times". These rules then also indirectly have large negative effects on welfare.

Apart from rules-based fiscal control, there have been wide ranging international experiences of structural adjustment lending for fiscal consolidation with mixed outcomes. A World Bank (1992) [4] review observed that adjustment lending was associated with a fiscal deficit reduction and an increase in revenue, but the general spending cuts were often at the expense of critically important operations and maintenance and too much spending on salary relative to non-salary inputs. Mavrotas and Ouattara (2003), while analyzing the effect of development assistance on public sector behavior, observed that official development assistance reduced revenue in the short run but raised them in the long run. The study by Gupta et al. (2003) of foreign aid in 107 countries from 1970 to 2000 observed that while concessional loans were associated with higher domestic revenue, mobilization grants had the opposite effect.

4. APPROPRIATE STRUCTURE FOR FISCAL RULES

The key goal of fiscal rules is to achieve higher credibility for fiscal policy by reducing discretionary intervention in the conduct of macroeconomic policies even though the attainment of such credibility may involve a substantial gestation period. With regard to the design, fiscal rules should be well defined, transparent, focused, consistent with macroeconomic policies, simple, flexible enough to accommodate cyclical fluctuations, enforceable, and supported by efficient policies (Kopits and Symansky 1998). It has been argued that indicators need to be operationally simple, flexible, growth oriented, and easily monitored. In the case of India, the fiscal rules imposed are simple and applied with uniform targets of deficit reduction across states.

Two key components of the design of fiscal rules are to ensure their sustainability and decide on an optimal level of fiscal rules indicators. The literature on sustainable fiscal rules has evolved since the 1990s when rules were considered to be appropriate if they respected the inter-temporal budget constraint. Spaventa (1987) finds that a design where sustainability of a fiscal rules is based on the satisfaction of budget constraints does not take into account the financial situation of the public sector. Using a sovereign debt framework that assumes a government cannot choose the duration of its debt, (Hatchondo, Martinez, and Roch 2012) shows that placing a debt ceiling may prove beneficial for the government as an expectation for a lower debt level would lead to a decline in interest rates. They also find that lower debt ceilings lead to a lower

[4] Cited in World Bank (2005).

responsiveness of interest rates to income shocks and consumption volatility becomes less, as fiscal policy becomes less procyclical. Pappa and Vassilatos (2007) and Poplawski, Beetsma, and Schabert (2008) find that debt ceilings may be better indicators than a ceiling on the government's deficit.

A more recent framework by Bertelsmann (2013) supports the establishment of independent fiscal institutions (IFIs) as an important component of ensuring that fiscal rules are adhered to. The design of the IFIs should include close monitoring and evaluation of the rules on a continuous basis. The IFIs could exercise an advisory role and report the true magnitude of government liabilities and project long-term implications of fiscal policy and fiscal announcements. Arguments in favor of IFIs are that they can lead to better transparency in public finances and can undertake the task of monitoring and compliance of fiscal rules and include sanctions for non-observance of a debt ceiling at a more sophisticated level. IFIs can also encourage and assist governments to publish public finance data on regular intervals.

5. SUBNATIONAL FISCAL RULES IN INDIA

In India, some states introduced fiscal rules prior to the recommendations of the Twelfth Finance Commission at the insistence of the World Bank and the Asian Development Bank. This was done through multilateral structural adjustment lending to the states by these banks (Rao and Chakraborty 2007). The Twelfth Finance Commission's recommendations became operational from the fiscal year (FY) 2005–2006[5]. The states that enacted FRAs prior to this and consequent upon the recommendations of the Twelfth Finance Commission are given in Table A.2.[6] The Twelfth Finance Commission proposed the following incentive structure of an FRA:

Each state should enact a fiscal responsibility legislation, which should, at a minimum, provide for (a) eliminating revenue deficit by 2008-09; (b) reducing fiscal deficit to 3 per cent of GSDP or its equivalent, defined as the ratio of interest payment to revenue receipts; (c) bringing out annual reduction targets of revenue and fiscal deficits; (d) bringing out annual statement giving prospects for the state economy and related fiscal strategy; (e) bringing out special statements along with the budget giving in detail number of employees in government, public sector, and aided institutions and related salaries (Finance Commission 2005, pp. 260–261).

To avail of debt consolidation and relief facility, all the states (except Sikkim and West Bengal) enacted an FRA with uniform deficit targets (both revenue and fiscal deficits) after the submission of the Twelfth Finance Commission Report in 2004. Already existing state-specific FRAs were amended to comply with the prescribed recommendations of the Twelfth Finance Commission. It is important to highlight that the Twelfth Finance Commission emphasized that all states needed only to legislate an FRA as prescribed to receive debt consolidation and relief facility. In addition to adhering to the commission's prescription of numerical deficit targets, different states volunteered to impose different fiscal restrictions on themselves, such as targeting outstanding liabilities, implementing institutional rules for expenditure management, and timely review of fiscal performance (Simone and Topalova 2009). The process of fiscal consolidation continued from 2005–2006 to 2009–2010, the award period of the Twelfth Finance Commission. The Thirteenth Finance Commission (Finance

[5] Indian FY is from April 1st to March 31st. For example, FY 2005-2006 means April 1st 2005 to 31st March 2006.

[6] The Twelfth Finance Commission's report was submitted in November 2004 and recommendations became operational from the FY 2005–2006.

Commission 2010) also proposed an incentive framework to ensure that the states remain within the FRA deficit targets. There was apprehension that after the global financial crisis, maintaining fiscal prudence would be a challenging task.

As articulated in the Thirteenth Finance Commission Report, in 2009–2010 combined (central and states) debt to GDP ratio remained high (82%), despite fiscal correction through the implementation of a fiscal responsibility framework from 2005 to 2010. The Thirteenth Finance Commission proposed a target of 68% for combined central and state debt to GDP ratio to be achieved by the FY 2014–2015 with the central government debt to GDP ratio reaching 45%. The commission had taken the elimination of the revenue deficit as the long-term and permanent target for both the central and state governments. The commission's prescribed fiscal consolidation path for the central government required a decline in the revenue deficit from 4.8% of GDP as projected for the FY 2009–2010, to a revenue surplus of 0.5% of GDP by 2014–2015. These prescriptions of fiscal consolidation in turn allowed for the acceleration in capital expenditure to 3.5% of GDP by 2014–2015. As assessed by the Thirteenth Finance Commission, the proposed fiscal consolidation path was growth promoting as it focused on eliminating revenue deficits to ensure that net public borrowing was exclusively used for growth enhancing public investment.[7]

As observed in the Thirteenth Finance Commission Report, 26 states (under the FRAs) reached their expenditure and debt targets ahead of the scheduled time frame and showed significant fiscal correction. According to the commission, the main reason behind the fiscal correction was the benefit of a higher share of central taxes due to high central tax buoyancies and an improvement in the tax revenues of the states. State debt to GSDP also reduced sharply during this period, to below 30% of GDP. However, there were wide variations in fiscal performance among the states (discussed in Section 6). In order to continue and strengthen the process of fiscal consolidation at the state level, the Thirteenth Finance Commission made the following recommendations:

- The medium-term fiscal plan makes explicit the values of the parameters underlying expenditure and revenue projections and the band within which these parameters can vary while remaining consistent with the targets of the Fiscal Responsibility and Budget Management (FRBM) Act.
- The FRBM Act should specify the nature of shocks that would require the relaxation of the FRBMA targets.
- States should amend or enact FRBM Acts to incorporate the worked-out fiscal reform path. State-specific grants recommended for a state should be released upon compliance (Finance Commission 2010, p. 6)
- All states should set up an independent review and/or monitoring feature under the FRBM Act. Attempts should also be made to prepare statements on revenue consequences of capital expenditure, public–private partnerships and related liabilities, physical and financial assets, and vacant public land and buildings.

[7] "At the same time, we recognise the adjustment period required for exit from the fiscal loosening permitted to states in 2008–09 and 2009–10, as part of the national fiscal stimulus to contain the adverse impact of the international growth breakdown. Accordingly, we allow 2010–11 as a year of adjustment and begin the fiscal consolidation path only from 2011–12." (Finance Commission 2010, p.25, para. 3.24)

6. KEY FISCAL INDICATORS: THE LONG-RUN TREND

This section discusses the long-run fiscal trend. In 1991, a large combined fiscal deficit to the order of 9.9% of GDP (the central government's fiscal deficit at 6.6% and the states at 3.19%), a huge external current account deficit coupled with a dwindling foreign exchange reserve, are considered factors that contributed to the macroeconomic crisis and consequent economic reforms in India. One key component of the big bang economic reform was fiscal consolidation. Fiscal reform was a combination of tax reforms, expenditure rationalization, and the management of public debt reforms. I will discuss these briefly.

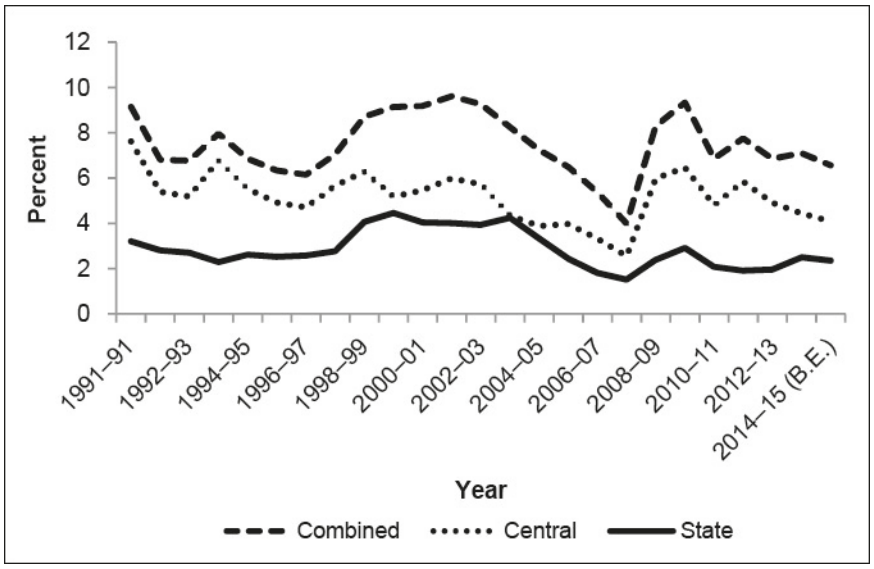
As part of fiscal reform, a major tax reform initiative was undertaken to overhaul India's complex tax system. The main components of the tax reform were simplification, rationalization, moderation in the tax rates, and modernization of tax administration. The peak rate of personal income tax was reduced from 50% in 1991 to 30% in 1997–1998.[8] The reform in indirect taxes comprised reductions in customs tariffs and union excise duties. A sharp rate reduction of indirect taxes contributed to the decline in indirect tax revenue during the 1990s. But direct tax revenue had shown commendable growth during this period. As the share of indirect taxes was much higher than direct taxes, increases in direct taxes could not offset the revenue loss from indirect taxes.

As revenues were not buoyant, fiscal consolidation in the initial years of economic reform was achieved by reducing discretionary development spending by reducing capital expenditure for public investment. However, the success achieved in containing the deficit during the first half of the 1990s was short lived. The impact of the Fifth Pay Commission award created an explosive fiscal imbalance at the central government level as well as in the states, taking the combined fiscal deficit to 9.39% of GDP in 1999–2000 (Figure 1). However, the fiscal deficit started declining gradually from 2002–2003 and reached an all time low of 4% in 2007–2008. This was a spectacular improvement in the fiscal situation of all levels of government since 1991. This phase was also characterized by high buoyancy of revenues. From 2003–2004 to 2007–2008 central revenue grew at the rate of 18.58% per annum, and the states' revenue grew at the rate of 16.46% per annum. The GDP growth during the same period was 8.89% per annum.

In 2003, the central government enacted the Fiscal Responsibility and Budget Management Act (FRBMA). As mentioned earlier, the states also enacted Fiscal Responsibility Acts (FRA) on the recommendation of the Twelfth Finance Commission. All the states, except West Bengal and Sikkim, enacted their respective FRAs during this period. Many public finance specialists attributed the decline in deficits up to 2007–2008 to the FRAs. However, with the global financial crisis, India is again experiencing a high level of fiscal imbalance (Figure 1) especially at the central government level. The movement of the fiscal deficit as a percentage of GDP from 1990–1991 to 2014–2015 (budget estimates, BE) is given in Figure 1. However, the states remained fiscally prudent after the global financial crisis. The outstanding debt to GDP ratio also declined significantly during recent years (Figure 2) and reached well below the targeted level recommended by the Thirteenth Finance Commission for both the central and state governments.

[8] Currently India has one of the lowest income tax rates in the world.

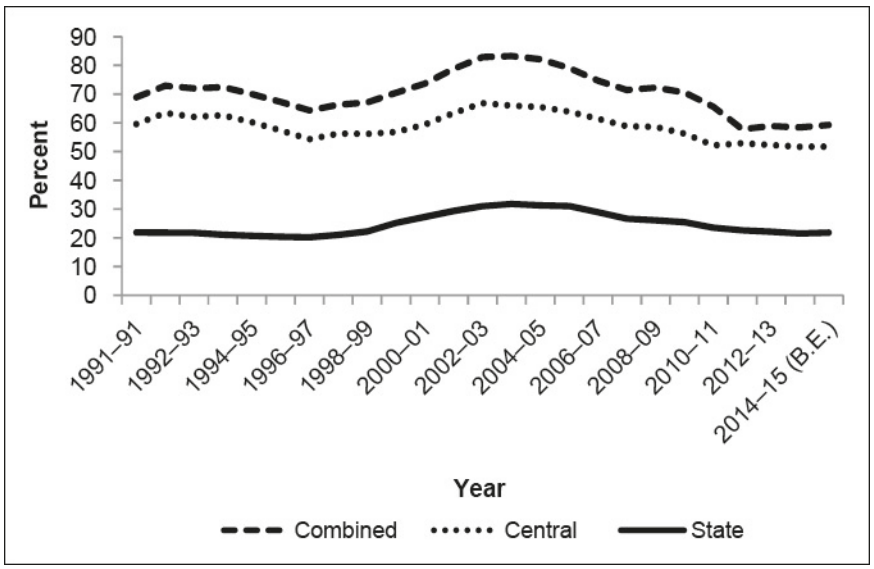
Figure 1: Fiscal Deficit as Percentage of GDP



BE = budget estimates; GDP = gross domestic product.

Sources: Reserve Bank of India. Handbook of Statistics on Indian Economy (various issues); National Statistical Organisation.

Figure 2: Outstanding Debt as Percentage of GDP



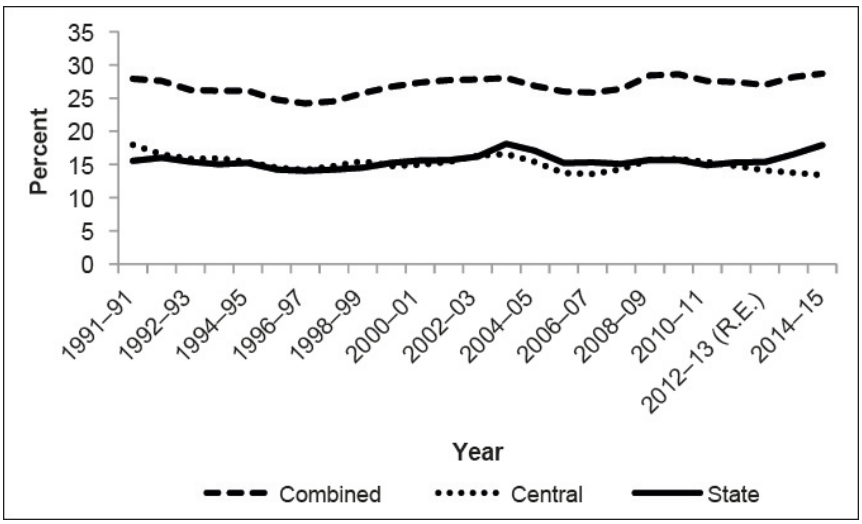
BE = budget estimates; GDP = gross domestic product; RE = revised estimates.

Sources: Reserve Bank of India. Handbook of Statistics on Indian Economy (various issues); National Statistical Organisation.

Although key indicators of fiscal prudence, that is, the deficit and debt as a percentage of GDP have declined for the states over the years, it is important to examine the expenditure profiles of the central government and the states. As evident from Figure 3, aggregate expenditure to GDP ratio (all states) declined gradually until 2011–2012 and started increasing from 2012–2013. If we consider capital expenditure alone, it is evident that there has been a decline in the central government's capital expenditure to GDP ratio from 2003–2004. However, from 2002–2003 capital expenditure of the states in relation to GDP is higher compared to the central government (Figures 3 and 4). In other words, post-FRA, state governments have

become the primary drivers of capital spending for the social and economic sectors, while the central government's capital expenditure to GDP ratio continued to decline during this period. In needs to be highlighted that in the pre-FRA period, the central government was the primary driver of capital spending and this is not true any longer. This shift in capital spending at the state level is an important development. It needs to be examined how this shift plays out in the medium term in terms of the composition and quality of public investment spending.

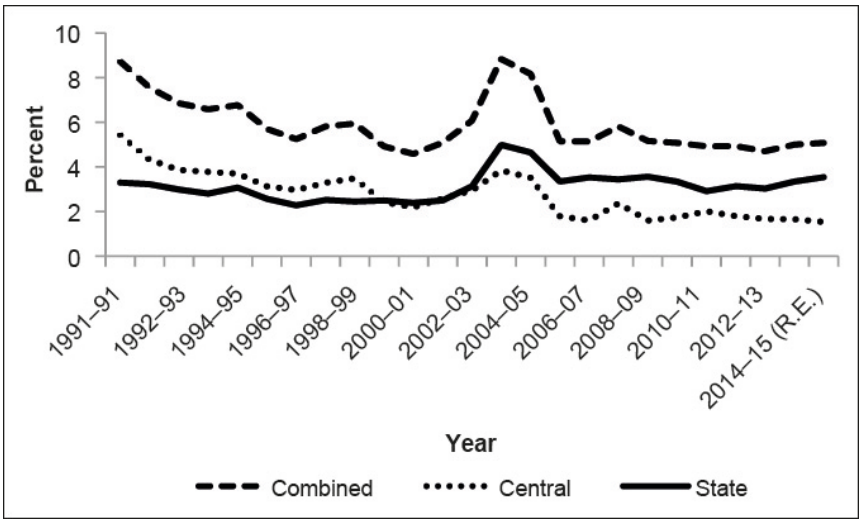
Figure 3: Total Expenditure as Percentage of GDP



GDP = gross domestic product; RE = revised estimates.

Sources: Reserve Bank of India. Handbook of Statistics on Indian Economy (various issues); National Statistical Organisation.

Figure 4: Capital Expenditure as Percentage of GDP



GDP =gross domestic product; R.E. = revised estimates.

Sources: Reserve Bank of India. Handbook of Statistics on Indian Economy (various issues); National Statistical Organisation.

Our analysis shows that the era of rules-based fiscal control witnessed a sharp reduction in the overall fiscal imbalance at the state level. This improvement in fiscal health can be characterized as an inter-temporal reduction in both fiscal and revenue deficits to GDP ratio. The states' fiscal position, as evolved up to 2007–2008,

generated a revenue surplus and brought down the gross fiscal deficit to GDP ratio below the 3% FRA target. This also implies that the states have over adjusted their fiscal deficits. At the state level, fiscal consolidation has been achieved through higher own tax revenue mobilization, largely due to the introduction of value added tax (VAT) in 2005; increased central devolution due to buoyant central government taxes; and the reduction in revenue expenditure to GSDP ratio, primarily due to the decline in economic and social services expenditures and the interest burden.[9] It is argued that the improved fiscal balance has also contributed to the increase in the fiscal space at the state level. Although, in the post global financial crisis years there was fiscal expansion at the central government level, resulting in a sharp increase in the fiscal deficit of the central government, the states continued with fiscal restraints. In aggregate, all state fiscal deficits remained below the FRA target between 2008–2009 and 2014–2015 (before estimates, BE). However, differences were observed in the inter-state fiscal imbalance profile. Although the rate of increase of deficits was different in different states, most states were able to generate revenue surpluses and successfully reduced their fiscal deficits below 3% of GSDP during the post-FRA period. It needs to be emphasized that the states that achieved these targets also had a better history of fiscal management and fiscal prudence (Table 1). A comparison of the fiscal imbalance profile before and after FRA implementation are given in Figures 5.1 to 5.9. In these figures, the states are categorized as high-, middle-, and low-income states. As evident, most states over adjusted their fiscal deficits. My data analysis also suggests that low-income states have adjusted their deficits more compared to high- and middle-income states. In other words, states have borrowed less than the prescribed limit of borrowing under the FRA except Kerala, Punjab, and West Bengal. These three states had to borrow to finance the deficits in their revenue accounts.

The descriptive analysis of fiscal balance also suggests that the overall state-level fiscal balance has improved with the introduction of fiscal rules. However, state-specific fiscal imbalances are different across states especially with regard to revenue deficits. On the one hand, a few states continued to have deficits in their revenue accounts, implying borrowed resources are being used for revenue expenditure purposes. On the other hand, if fiscal deficits are considered, most states remained within the prescribed 3% FRA target.

Table 1: Major Fiscal Indicators
(% to GSDP)

	Revenue Deficit		Fiscal Deficit		Primary Deficit	
	Average before FRBMA	**Average after FRBMA**	**Average before FRBMA**	**Average after FRBMA**	**Average before FRBMA**	**Average after FRBMA**
Group A						
Goa	1.7	–0.5	4.6	2.8	1.7	0.8
Maharashtra	2.4	–0.3	4.1	1.6	2	–0.1
Haryana	1.4	0.5	3.3	2.3	0.9	0.9
Gujarat	3.2	0	5.1	2.4	2.3	0.4
Tamil Nadu	1.7	–0.2	2.8	2	1	0.4

continued on next page

[9] It is observed that the decline in interest burden in the last couple of years is due to the softening of interest rates on government securities. It is also argued that measures like debt swap schemes in a low interest regime have benefited the states in reducing the interest burden.

Table 1 *continued*

	Revenue Deficit		Fiscal Deficit		Primary Deficit	
	Average before FRBMA	Average after FRBMA	Average before FRBMA	Average after FRBMA	Average before FRBMA	Average after FRBMA
Group B						
Kerala	2.7	2.2	4.2	3.4	1.7	1
Punjab	3.3	2.3	4.8	3.3	1.2	0.4
Karnataka	0.9	–0.8	3.1	2.5	1.4	0.8
Andhra Pradesh	1.6	–0.4	4.1	2.4	1.3	0.5
West Bengal	4.9	2.5	5.1	3.3	1.7	0.3
Group C						
Rajasthan	3.3	–0.1	5.7	2.1	2	–0.4
Jharkhand	1.3	–1	6.1	2.7	4.5	0.8
Chhattisgarh	0.4	–2.5	2.7	0.7	0.6	–0.4
Madhya Pradesh	2.3	–2.5	4.9	2.2	2.1	0.1
Odisha	3.7	–2.2	6	0	1.7	–1.9
Uttar Pradesh	3	–0.4	5	3.4	1.7	0.6
Bihar	2.1	–2.6	5.6	2.2	1.2	–0.1

FRBMA = Fiscal Responsibility and Budget Management Act; GSDP = gross state domestic product.

Note: The time frames of state-specific averages differ across states as different states introduced an FRA at different times. For details see Appendix A.2.

"–" sign indicates surplus.

Source: Reserve Bank of India. (2015). Study on State Finances 2014–15. New Delhi: Reserve Bank of India.

Figure 5: Revenue, Fiscal, and Primary Deficits, High-, Middle-, and Low-Income States

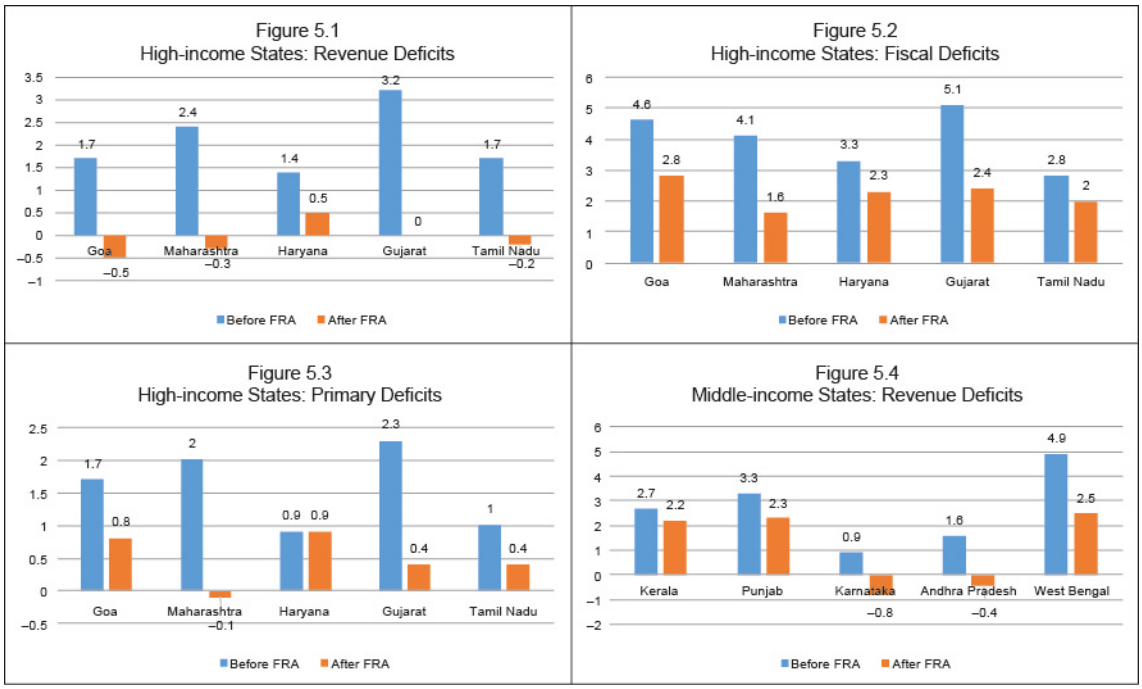


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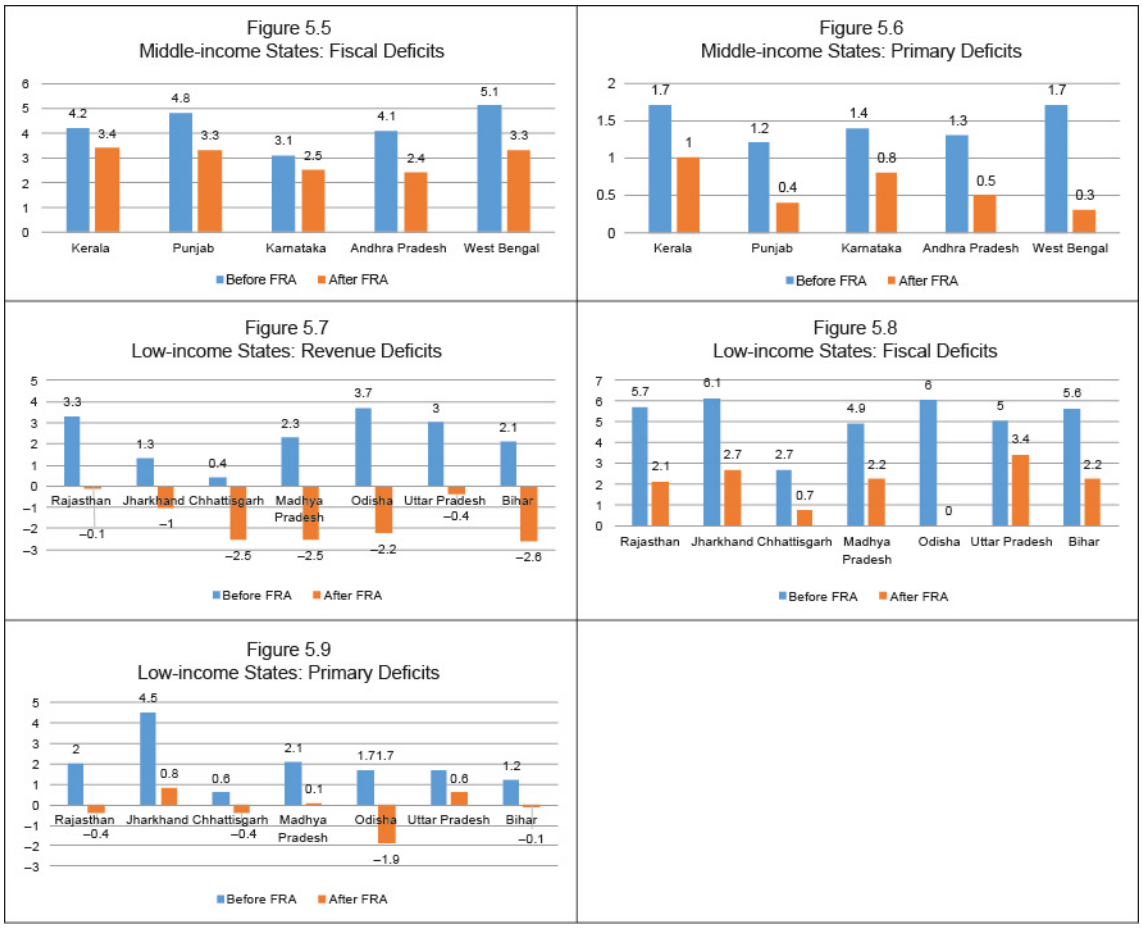
Figure 5 *continued*



Source: Compiled by the author.

This descriptive analysis does not conclusively establish the exact impact of fiscal rules on fiscal balances and the way state-level fiscal consolidation has been achieved and the nature of the relationship between different state-level macro and fiscal variables. There needs to be control for such factors to examine the impact of fiscal rules on fiscal balance and spending. The descriptive analysis also does not help in understanding the process of fiscal adjustment in a rules-based fiscal control regime across states. Due to multiple factors a panel data analysis—which suits the studies that deal with dynamic changes—is used to address these issues. The analysis used a dataset of 14 major non-special category states[10] spread over 15 years—from 2000–2001 to 2014–2015—to examine fiscal rules and public investment spending at the state level. This study used the Arellano Bond Panel estimation.[11]

[10] These states are Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal. This study ignores the small and/or special category as they are over-reliant on central government assistance. Overdependence on central government transfers severely constrains the fiscal autonomy of such states, and hence, affects their public finance management ability.

[11] Arellano and Bond (1991) suggested that if one is considering the orthogonality condition that exists between lagged values of dependent variable and the disturbance variable, then the additional instrument can be obtained in the dynamic panel data model.

7. THE ECONOMETRIC ESTIMATION

The final model has been defined to include two different determinants (per capita gross state domestic product and per capita central transfer) and two different dummies (VAT and FRA), with the FRA dummy being the most important variable of interest.

Econometrically, the model can be specified as follows:

$$K_{i,t} = \delta K_{i,t-1} + \beta_1 gpc_{i.t} + \beta_2 igft_{i,t} + \beta_3 D_1.vat + \beta_4 D_2.\ fra + u_{i,t}$$

$$u_{i,t} \sim IID(0, \sigma_u^2)$$

Where K = per capita capital outlay

gpc = gross state domestic product in per capita (in nominal terms)

igft = per capita intergovernmental fiscal transfers

D_1.vat = 0; before VAT

= 1; after VAT

D_2.fra = 0; before FRA

= 1 after FRA

Table 2: Fiscal Impact on Capital Outlay

Variable	Per Capita Capital Outlay
L.K	0.526***
	(5.35)
Igft	0.167***
	(6.58)
Gpc	0.00413**
	(2.52)
D_1_VAT	164.0***
	(2.64)
D_2_FRA	–135.6*
	(–1.91)
Const.	–34.6
	(–0.88)
No. of observations = 190	
Wald chi2(5) = 1,522.11	
Prob > chi2 = 0.000	

Notes: t-statistics in parentheses.

*p < 0.1, **p<0.05 and ***p< 0.01.

Source: Author's computations based on Reserve Bank of India Study on State Finances (various issues).

My analysis shows that the lag of per capita capital outlay, per capita transfer (igft), and per capita gross state domestic product (gpc) have a positive and significant impact on increase in per capita capital outlay. The VAT dummy also has a positive and significant effect on per capita capital outlay. However, this study observed a negative relationship between the FRA dummy and capital outlay at the state level.

8. SPENDING INERTIA

This result is not surprising. It should be emphasized that states in the post-FRBMA period are extremely cautious in spending and in general there is a spending inertia among the states reflected in an overcorrection of deficits. This has in turn depressed capital spending in states. This spending inertia has also contributed to the large accumulation of cash surplus holdings by the states. The Reserve Bank of India Study on State Finances 2011–12 observed that "The surplus cash balances of the States stood at Rs.852 billion as at March 11, 2012. These cash balances get automatically invested in the Central government's 14-day intermediate treasury bills as well as in auction treasury bills (ATBs) where States are non-competitive bidders, without any ceilings/limits. Consequently, there is a spillover of the surplus position of the States to the liquidity position of the Centre. The build-up (and volatility) of the Central government's cash surplus, in turn, reflects the unintended absorption of liquidity from the banking system which poses a challenge to the Reserve Bank's monetary management." (Reserve Bank of India 2012, pp. 70–71) The same study also pointed out that the Thirteenth Finance Commission in its report submitted in the FY 2009–2010, "therefore, advised the State governments to first utilize their cash balances before taking recourse to fresh borrowings, to finance their deficits so as to reduce the interest burden." This in practice however did not happen.

9. CONCLUSIONS

Although during the post-FRA period there was a reduction in the states' fiscal and revenue deficits, the econometric estimates in this study show that public investment spending was negatively related with the FRA dummy. It needs to be highlighted that the "one size fits all" uniform rule across states came under criticism. Since different states operated at different levels of sustainable deficits, imposing a uniform rule implied constraining capital spending unless large revenue surpluses are generated. My expenditure model shows that the states have contained their public investment spending to comply with the fiscal rules when controlled for the growth of intergovernmental transfers and other state-specific factors. However, most states have over adjusted their fiscal deficits resulting in an accumulation of cash surpluses. The impact of the decline in investment spending on growth is an area of further research.

To conclude, the Fourteenth Finance Commission addressed this phenomenon of spending inertia during the rules-based fiscal regime at the subnational level by changing the design of the fiscal rules. The Fourteenth Finance Commission has proposed that for the central government, the fiscal deficit ceiling will be 3% of GDP from 2016–2017 onward. However for the states, flexibilities of 0.25% over and above 3% of GSDP for a given year is allowed if the debt to GSDP ratio is below 25%. Also, if the states limit their interest outgoings as a percentage of revenue receipts below 10%, an additional 0.25% of GSDP is allowed as an extra fiscal space for capital spending. It needs to be seen how far the Fourteenth Finance Commission's award is going to change state-level fiscal behavior and the utilization of borrowed resources for capital spending within the existing federal fiscal framework of transfers.

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APPENDIX

Table A.1: Instruments and Nature of Fiscal Rules: A Cross-country Comparison

Country	Year	Name and Nature of Act	Numerical Targets	Description
United States	1986	Gramm–Rudman–Hollings Act (GRH)	Yes	Specified a series of annual deficit targets with a balanced budget to be achieved in 1991 and subsequently moved to 1993.
	1990	Budget Enforcement Act – Expenditure Rule	Yes	Annual appropriations limit adopted for discretionary spending.
	2010	Pay-As-You-Go (PAYGO Act)	No	Deficit-raising policies must be financed by other measures over a specified time period. Exempt programs included legislation with an "emergency" designation, social security, and the Bush tax cuts for the middle class.
	2011	Balanced Budget Rule – Expenditure Based	No	Discretionary spending caps were introduced. Additional spending cuts came into effect in March 2013. These additional cuts are expected to reduce $1.2 trillion over a decade with one half coming from defense spending and the other half from domestic programs, excluding social security, Medicaid, parts of Medicare, and certain other entitlement programs.
Japan	1947	Balanced Budget Rule	No	Current expenditure should not exceed domestic revenues.
	1997	Fiscal Structure Reform Act	Yes	Revised balance budget rule: Reduce overall government deficit to 3% of GDP.
	2006	Expenditure Rule	Yes	Numerical targets by spending category (public investment, social security).
	2010	Fiscal Management Strategy	No	Any major increases in expenditure or decreases in revenue need to be accompanied by permanent expenditure reductions/revenue-raising measures.
Canada	1991	Federal Spending Control Act	Yes	C$3 billion debt reduction and limitation in program spending except self-financing programs.
	1998	Debt Repayment Plan	No	
	2006	Target-based Plans	No	Eliminating net general government debt by 2021 and federal debt by 2013–2014.
European Union	1992	Maastricht Treaty	Yes	Debt and deficit ceiling: 60% and 3% of GDP, respectively.
	2005	Stability and Growth Pact	No	Country specific medium-term objectives are set for structural budget balance.
	2012	Golden Rule	Yes	Numerical Targets Annual pace of debt reduction (no less than 1/20th of the distance between the actual debt ratio and the 60% threshold) starting 3 years after a country has left the current excessive debt procedure (EDP).
Argentina	2000	Fiscal Responsibility Law (FRL)	Yes	Balanced Budget Rule: balance revenue and expenditure excluding social and infrastructure expenditure. Additionally, for provinces debt-servicing costs cannot exceed 15% of current revenues after transfers' deduction.
	2004	Implementation of Revised FRL law	No	Expenditure Rule: Primary expenditure cannot grow more than nominal GDP. Federal Fiscal Responsibility Council was created in 2000. However, its activities were suspended in 2009.

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Table A.1 *continued*

Country	Year	Name and Nature of Act	Numerical Targets	Description
Peru	2000	Balanced Budget Rule	Yes	Deficit ceiling for the non-financial public sector. The ceiling was set at 2.0% of GDP for 2000 and 2003, 1.5% of GDP for 2001, 2002, and from 2004–2008. Real growth current expenditure ceiling of 2% for 2000–2002 and 3% for 2003–2008.
	2009	Balanced Budget Rule	Yes	New limit of 2% for balanced budget was set. Real growth of current expenditure limit was at 4%, structural deficit limit at 1% of GDP.
	2013	Law 30099	No	Expenditure on maintenance of infrastructure, goods and services of social programs covered by the performance-based budgeting scheme and equipment intended for public order and security were excluded from current expenditure and were out of the ambit of the stipulated limits.
Mexico	2006	Balanced Budget Rule – Cash Basis	No	Rule applies to the federal public sector, which includes the central government, social security, and key public enterprises.
	2009	Balanced Budget Rule	Yes	Status quo with exclusion of investment outlays of the state-owned oil company Pemex from the balanced-budget rule. Although sanctions were also thought of, escape clauses also existed.
	2013	Expenditure Rule	Yes	Cap on structural current spending (SCS) defined as current primary expenditure including transfers to state and local governments for capital but excluding those outlays governed by automatic rules (pensions, subsidies for electricity, and tax devolution). SCS cannot grow faster than 2% in real terms through 2017.
Australia	1985	Expenditure Rule	Yes	Expenditure Rule, Balanced Budget Rule, Revenue Rule
	1998	Charter of Budget Honesty Act	Yes	Achieve budget surpluses over the medium term. Keep taxation as a share of GDP below the level of 2007–2008. Improve the government's net financial worth over the medium term. Commitment to restrain real growth in spending to 2% per year since 2009.
Brazil	2000	Fiscal Responsibility Law	Yes	Expenditure Rule: Personnel expenditure is limited to 50% of net current revenue for the federal government, and 60% for states and municipalities. Debt Rule: New borrowing must be at most equal to public investment.
Cameroon	2002	Balanced Budget Rule	No	The Central African Economic and Monetary Community (CEMAC) sets the fiscal rules.
	2008	Revised Balanced Budget Rule	No	Structural fiscal balance and non-oil basic fiscal balance respectively as a percentage of nominal GDP should be in balance/surplus.
Indonesia	1967	Balance Budget Rule		The consolidated national and local government budget deficit is limited to 3% of GDP in any given year as per State Finance Law and Government Regulation 23/2003.
	2004	Debt Rule	Yes	Central and local government debt should not exceed 60% of GDP.

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Table A.1 *continued*

Country	Year	Name and Nature of Act	Numerical Targets	Description
India	2004	Budget Balance Rule	Yes	Fiscal Responsibility and Budget Management Act. Reduce the fiscal deficit to 3% of GDP by 2008.
	2009	Revised Budget Balance Rule	No	FRBMA was suspended in 2009. All states barring three had met the targets. However, the Central Government had not achieved the stipulated targets.
Kenya	1997	Debt Based Rule	Yes	The debt-to-GDP ratio in net present value terms should be below 40% and/or total nominal debt to be below 45% of GDP (a goal of their medium term debt-management strategy).
				Government overdraft at the central bank is limited to 5% of previous year revenue.
				Revenue should be 21%–22% of GDP.
New Zealand	1994	Fiscal Responsibility Act		The government needs to run operating surpluses annually until "prudent" debt levels are achieved.
				Once these are achieved on average total operating balances should not exceed total operating revenues. In case of deviations from the principles, the government needs to specify the reasons.
				Specific fiscal targets should be set by the government for 3-year and 10-year objectives, typically in percent of GDP.
Russian Federation	2007	Balanced Budget Rule		Russia's legal fiscal framework relied on the non-oil balance as a key fiscal indicator. The budget included a long-term non-oil deficit target of 4.7% of GDP. This was suspended in April 2009 as a result of the global financial crisis, and formally abolished in 2012.
	2009	Oil Price Based Fiscal Rulesrule		The rule sets a ceiling on expenditures (oil revenue at the “base” oil price, plus all nonoil revenues, plus a net borrowing limit of 1% of GDP).
	2012			Once the Reserve Fund reaches this threshold, at least half of excess oil revenues should go to the National Wealth Fund, while the remaining resources would be channeled to the budget to finance infrastructure and other priority projects.
Singapore	1991	Debt Rule		Spending to not exceed 50% of net investment returns on reserves held by the Monetary Authority of Singapore and the Government of Singapore Investment Corporation.
	1995	Balanced Budget Rule (BBR)		Budget to be balanced across government term of office (usually 5 years).
	2008	Amendment to BBR		The rule was amended in 2008 to change the benchmark to “expected long-term net real investment returns”.

Source: Compiled by author from various sources.

Table A.2: Date of FRBMA and Period for Calculating Average

State	Month of FRBMA	Period Before FRBMA	Period After FRBMA
Karnataka	Sep 2002	1992–1993 to 2001–2002	2003–2004 to 2012–2013
Tamil Nadu	May 2003	1994–1995 to 2002–2003	2004–2005 to 2012–2013
Kerala	Aug 2003	1994–1995 to 2002–2003	2004–2005 to 2012–2013
Punjab	Oct 2003	1994–1995 to 2002–2003	2004–2005 to 2012–2013
Uttar Pradesh	Feb 2004	1994–1995 to 2002–2003	2004–2005 to 2012–2013
Gujarat	Mar 2005	1998–1999 to 2004–2005	2006–2007 to 2012–2013
Mahrashtra	Apr 2005	1998–1999 to 2004–2005	2006–2007 to 2012–2013
Himachal Pradesh	Apr 2005	1998–1999 to 2004–2005	2006–2007 to 2012–2013
Rajasthan	May2005	1998–1999 to 2004–2005	2006–2007 to 2012–2013
Madhya Pradesh	May 2005	1998–1999 to 2004–2005	2006–2007 to 2012–2013
Andhra Pradesh	Jun 2005	1998–1999 to 2004–2005	2006–2007 to 2012–2013
Odisha	Jun 2005	1998–1999 to 2004–2005	2006–2007 to 2012–2013
Tripura	Jun 2005	1998–1999 to 2004–2005	2006–2007 to 2012–2013
Haryana	Jul 2005	1998–1999 to 2004–2005	2006–2007 to 2012–2013
Manipur	Aug 2005	1998–1999 to 2004–2005	2006–2007 to 2012–2013
Chhattishgarh	Sep 2005	2000–2001 to 2004–2005	2006–2007 to 2012–2013
Assam	Sep 2005	1998–1999 to 2004–2005	2006–2007 to 2012–2013
Uttarakhand	Oct 2005	1998–1999 to 2004–2005	2006–2007 to 2012–2013
Meghalaya	Mar 2006	1998–1999 to 2004–2005	2006–2007 to 2012–2013
Bihar	Apr 2006	2001–2002 to 2005–2006	2007–2008 to 2012–2013
Goa	May 2006	2001–2002 to 2005–2006	2007–2008 to 2012–2013
Mizoram	Oct 2006	2001–2002 to 2005–2006	2007–2008 to 2012–2013
Jharkhand	May 2007	2002–2003 to 2006–2007	2008–2009 to 2012–2013
Nagaland	Jan 2010	2006–2007 to 2008–2009	2010–2011 to 2012–2013
West Bengal	Jul 2010	2008–2009 to 2009–2010	2011–2012 to 2012–2013
Sikkim	Sep 2010	2008–2009 to 2009–2010	2011–2012 to 2012–2013

FRBMA = Fiscal Responsibility and Budget Management Act.

Source: Reserve Bank of India. (2015). Study on State Finances 2014–15. New Delhi: Reserve Bank of India.