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Fiscal Dependency of States in India

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Darshini J S* and K Gayithri**

Abstract

Fiscal management and fiscal dependency are closely interlinked in any federal system. On account of improper fiscal management and enhanced development expenditure responsibilities, sub-national governments by and large end up with a huge resource gap, which necessitates fiscal and policy interventions by the higher level of government as part of bridging the resource gap. The first part of the current analysis explains the role of various sources of revenue in financing the basic resource gaps of the states and the second part decomposes the level and pattern of fiscal dependency on the different components of total transfers with respect to 14 major Indian states for the period 1981-82 to 2014-15. A phase-wise analysis of the states' dependency and its varying nature provides a meaningful insight into the relative role of the different sources of revenue in financing the total expenditure. The fiscal adjustment measures undertaken over time point to the poor fiscal health of the Indian states. The study finds that despite a fair improvement in revenue generation on the part of states, the basic resource gap continues to persist, with a steady rise in the total expenditure with an enhanced capital spending and a decline in the non-debt capital receipts and also that a shift in the pattern of financing the total expenditure from non-obligatory sources of revenue to obligatory sources of revenue has further enhanced heterogeneity across states in terms of fiscal management.

Keywords: *basic resource gap, fiscal dependency, borrowings, reform measures.*

Introduction

In any fiscal system, the fiscal management at the sub-national level remains closely linked to the fiscal dependency on the higher level of government. A proper fiscal management involves both revenue and expenditureadjustment. Actual revenue or resource gap has been defined as the gap between the sub-national expenditures and revenue from own sources. The existing resource gap reflects the volume of expenditure that needs to be financed from alternative sources of revenue. This gives an insight into the extent of dependency of states on other sources of revenue such as borrowings (administered by the centre- Rodden, 2002; Kishore and Prasad, 2007; Purfield, 2004) and transfers from the higher level of government.In bridging the existing resource gap, Finance Commissions determine a significant part of formula-based devolution. Besides the finance commissions, two other channels - Planning Commission and central ministries - provide planpurpose and specificpurpose transfers.Specific purpose grants such as centrally sponsored programmes and additional central assistance for state plan schemes play an important role in influencing the level and quality of public service delivery.

In addition to these transfers, states also get financial assistance for development projects in the form of central loans subject to their being repaid[1]. Apart from fiscal intervention through these transfers, in recent decades, the central government has undertaken several policy initiatives by way of intervention, concerning the economic activities of respective states. Further,based on the second generation fiscal federalism theories and with the Eleventh Finance Commission being constituted, an

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emphasis came to be placed on incentivising states towards undertaking some fiscal and institutional reforms at the sub-national level[2]. Accordingly, states have undertaken several fiscal adjustments cum reform measures as part of improving their fiscal position during the last two decades. Given these fiscal correction measures undertaken at the state level and the changing pattern of funds sharing from the central pool between the union and states,the present paper makes an attempt to examine the pattern of financing states' expenditures and the extent of their fiscal dependency,as also the changes that have taken place against the backdrop of policy measures undertaken both at the central andstate levels.

The structure of the paper consists of two parts. The first part discusses the different forms of Fiscal Dependency (FD1, FD2 & FD3) which clearly point to the crucial role played by various sources of revenue in financing the resource gaps of the states concerned. This part, following the methodology developed by Bajaj and Joshi (2000), computes the basic resource gap and the extent of fiscal dependency, which in turn help identify the relative role played by different sources of revenue in financing the total expenditures of the states. The second part of the paper assesses the pattern of dependency of states on the different components of the total central transfers, as also the extent of dependency (following the methodology developed by Srivastava and Rao, 2014) on the different types of central transfers besides presenting a summary of the findings.

Measuring Resource Gap and Fiscal Dependency

In order to understand the changing fiscal position and the pattern and extent of dependency on the central government funds, it is necessary to examine how the states' reliance on different sources of revenue has changed over time. An attempt was made by Bajaj and Joshi in this direction in 2000 while examining the financing pattern of all the Indian states together over the period from 1980-81 to 1996-97 using the resource gap (RG) as a measure ofestimating the dependency on central transfers. They found that more than 50 per cent of the expenditure of the states was met out of other sources of revenue rather than their own sources of revenue.

It is important to note that, as the resource gap increases, the states' tendency to depend on the alternative sources of revenue also increases correspondingly. The major outcomes of the analysis clearly indicate that improved tax efforts on the part of states contributed positively to a reduction in the resource gap as a result of which the dependency on central transfers decreased in the 1990s as compared to the 1980s. Following on this, the present analysis tries to examine the changing structure of the resource gap over the last four decades at the sub-national level. At the sub-national level, the total revenue sources, which are used to finance their expenditure, can be classified into independent (Own Source Revenue-OSR) and dependent revenue sources. Under Indian fiscal federalism,the major sources of financing, excluding OSR, available to the states include:

1. **Federal transfers such as Shared Taxes and Grants** (statutory transfers).
2. **Public Account Borrowings (PAB).These PAB liabilities** include: provident funds, small savings (major part since 1999), reserve funds and other public **deposits and advances with the government**,

3. **High-cost central loans from the central government and from banks and financial institutions** and
4. **Market borrowings and ways and means advances from RBI** (additional cash facility to fill thetemporary mismatch in receipts and expenditures of the state governments (Gopinath, 2009)**.**

States alsoget **external assistance** which is schematic in nature routed through the central government as part of plan assistance which is another major source of funding for the development activities of states. The **Non-Statutory Grants (NSG),** which are subject to the central government discretion also generate liabilities for states beyond the plan period and are even costlier from an economic as well as political point of view. What is important to note is that while statutory transfers do not reduce the fiscal autonomy of states,non-statutory transfers reduce the states' fiscal autonomyin addition to being costlier from an economic as well as political point of view.

For a meaningful analysis of how the dependency of states on different sources of revenue such as own source revenue, borrowings and transfers varies and how the relative share of transfers bringing about changes in the financing of state expenditure, it is important to measure the extent of reliance on the different components of revenue, given the changing nature of Basic Resource Gap. To explore this, the present study makes use of the Basic Resource Gap (BRG1), which is measured as the total expenditure minus own source revenue, as the first step. The next phase Basic Resource Gap (BRG2) comprises, apart from its own source revenue, part of capital receipts on which states have more control, such as internal debt net of market loans, ways and means advances (WMA) from RBI and high-cost central loans (BRG2- total expenditure minus own source revenue and part of capital receipts). In the final measure of BRG3, Shared Taxes and statutory Grants (with states having a fixed claim on central taxes) are also included in the revenue part along with own source revenue and part of capital receipts (BRG3 - total expenditure minus own source revenue and part of capital receipts and shared taxes & NSG).

The difference between **BRG1** and **BRG2** depicts the extent of expenditure financed using **part of capital receipts,** whereas, the difference between **BRG2** and **BRG3** shows the extent of expenditure financed through statutory transfers. The Resource Gap- **BRG3,** which exists even after financing through alternative sources of revenue, needs to be financed through sources on which states have a lesser control and is done at the discretion of the centre. This process may further widen the existing resource gap and create a dependence syndrome on the higher level of government.Following Patnaik *et al* (1994), Fiscal Dependency Ratio (FDR) is measured as the ratio of Basic Resource Gap to the total expenditure. Fiscal Dependency Ratio shows the level of dependency on revenue sources such as market loans, non- statutory transfers, high-cost central loans, ways and means advances(WMA) from RBI which are costlier, prefixed limit with short-term repayment and need forcentral government consent and discretion**.**

(FDR1) = BRG1/ Total Expenditure (excluding all sources of capital receipts)

(FDR2) = BRG2/ Total Expenditure (excluding market loans, central loans &WMA from RBI)

(FDR3) =BRG3/ Total Expenditure (excluding market loans, central loans, WMA from RBI& non- statutory transfers)

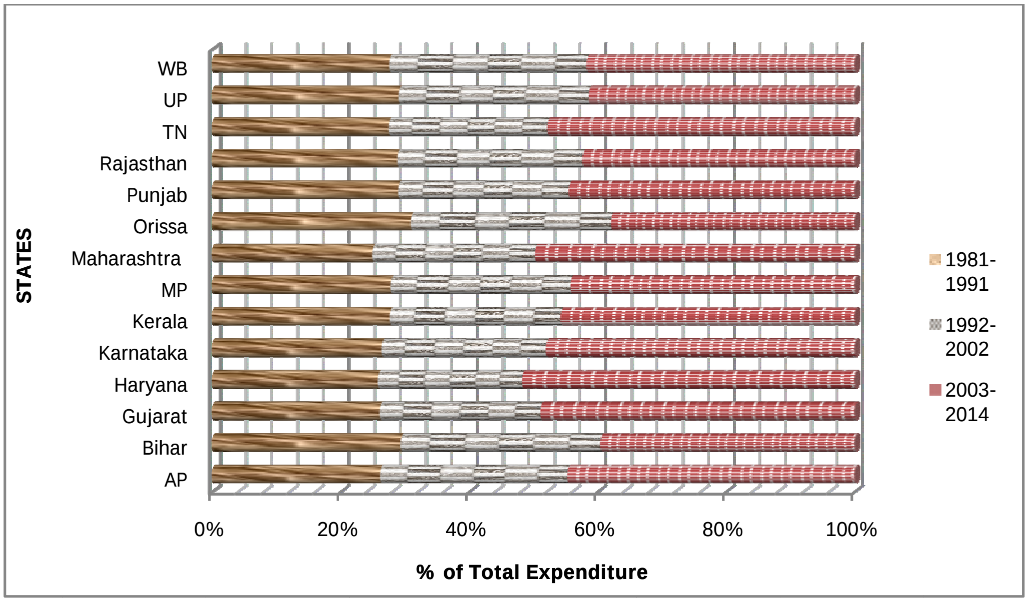
A larger difference between the values of the three types of Basic Resource Gap, after including the different sources of revenue in different stages, denotes a lesser role of Non-Statutory Transfers and Borrowing such as market loans, central loans & WMA from RBI in bridging the resource gap. In other words, larger values of Fiscal Dependency Ratio (FDR) (basic resource gaps as a ratio of the total expenditures) reflect a lower level of dependence of the sub-national governments on external sources of revenue to finance their expenditure.The larger the difference between the values of FD1 and FD2 and also between FD2 and FD3, greater the role played by certain forms of capital receipts as well as statutory transfers in reducing the extent of dependency of states on sources which are costlier besides being subject to the discretion of the central government. Values of FD2 are lower than the values of FD1 for all the states because part of capital receipts is taken into account and those of FD2 are higher as compared to the values of FD3 in view of the further inclusion of federal transfers in the revenue account.

The entire period of the study has beenanalysed taking into account the institutional and policy changes initiated over the years. The period between the eighth to tenth finance commissions was called as a "period of partial convergence" (Rangarajan and Srivastava, 2011), as the unified formula has been used in the distribution of income tax and union excise duties. From the Tenth Finance Commission,a modest allocation on the basis of population, the predominance of equity and consideration of cost disability factor (Area, Index of Infrastructure) along with tax efforts gained more prominence in the devolution formula. Even under the Eleventh Finance Commission, equity and cost disability were the prime factors in the devolution formula. With the Eightieth amendment to the Constitution (in 2000), the pattern of tax devolution also significantly changed in terms of making all the central taxes (excepting a few) sharable between the centre and states (FC reports). Starting from the Eleventh Finance Commission, an emphasis was placed on fiscal reforms at the sub-national level. Based on the Twelfth Finance Commission recommendations, fiscal rules were operationalised at the sub-national level from 2005-06. However, prior to the implementation of the Twelfth Finance Commission recommendations, fiscal rules had been introduced in some states (Multilateral Structural Adjustment Lending Facility-2001-02 provided by the ADB and World Bank-Govinda Rao & Pinaki Chakraborty, 2006). Since the last decade, states have undertaken several expenditure and revenue-led fiscal adjustment measures. Based on an inter-temporal analysis of devolution of transfers, implementation of new economic policies and fiscal adjustment measures, the period of the study from 1981-82 to 2014–2015 has been sub-divided into three phases- 1981-82 to 1991-92 (Period I); 1992-93 to 2002-03(Period II); and 2003-04 to 2014-15(Period III). These three sub-periods coincide with the award period of the Seventh to Thirteenth Finance Commissions and also a combination of the different phases of fiscal adjustment in the state economies. The latter phase coincides with the fiscal adjustment and improved own tax revenue mobilisation, larger devolution of transfers from the Twelfth Finance Commission,along witha fall in the committed expenditure and improved capital expenditure. This bifurcation helps track the impact of policy measures on macroeconomic variables across different time periods. Fourteen major states have beenconsidered for the analysis. They include: Andhra Pradesh (AP); Bihar (BHI); Gujarat (GUJ); Haryana (HAR); Kerala (KER); Karnataka (KAR); Madhya Pradesh (MDP); Maharashtra (MHR); Odisha (ODS); Punjab (PUJ); Rajasthan (RAJ); Tamil Nadu (TN); Uttar Pradesh (UP); and West Bengal (WB). The data required for the study were compiled from the Reserve Bank of India Bulletin (various issues).

Considering that there are three major sources of revenue - own source revenue, capital receipts and federal transfers that contribute to the total expenditure - it is essential to examine the changes in the pattern of financing the total expenditure. In a decomposition analysis, this study examines the nature of fiscal dependency in three parts-FD1, FD2 and FD3. FD1,while looking into the existing basic gap, indicates the decreased share of own source revenue across the three phases. In FD2, part of capital receipts (internal sources of borrowing) along with own source revenue are included for examining to what extent these two sources of revenue finance the total expenditure. Finally in FD3, part of federal transfers are also included to assess the role of all the three revenue sources in bridging the resource gap with respect to the fourteen major states. The bifurcation of FD into FD2 and FD3 helps reveal the relative role of capital receipts and federal transfers, in bridging the resource gap, which have become the major sources of revenue in recent years, as the former is obligatory and the latter non-obligatory in nature. This bifurcation helps examine how the state of dependency between obligatory and non-obligatory sources of revenue has changed over time in the context of institutional and policy measures undertaken at both the central and state levels. It also gives a clear indication of the fiscal health of the fourteen major states.

BRGs explain the varying extent of dependency of states ondifferent sources of revenue. The decomposition of changes in theresource gap clearly points out that the basic resource gap has increased in respect of almost all the states and that it is even less than 50 per cent of their expenditure financed out of their own source revenue. This implies that more than 50 per cent of the states' expenditure is met out of resources which they do not generate. However, the changing pattern of the resource gap is not uniform across the states. Even with an increase in the expenditure, states' efforts towards revenue generation are not satisfactory despite the introduction of several tax reforms during the post-FRBM period. The ratio of Fiscal Dependency (FD1-defined as the total expenditure minus own tax and non-tax revenue as a proportion of the total expenditure) has increased in respect of all the fourteen states despite a marginal improvement in the own tax revenue and an increased share in the central transfers. However, it is interesting to note a sharper increase in the capital expenditure. On the revenue expenditure side administrative services, pension burden has remained high, while theshare of interest payment has declined. Although the interest payment on central loans has registered a drastic fall from 2002-03, the mounting repayment of interest on internal debt in the third sub-period has led to an increase in the revenue expenditure. Since the repayment of interest rate on market borrowings has also started rising in the same period, it has caused a rise in the revenue expenditure.

Chart 1: State-Wise Fiscal Dependency Ratios (FDR1)



Source: Compiled from RBI state finances

On the other hand, capital expenditure also shows a steady rise since 2003-04. In this process, it is important to note a positive trend in the capital outlay in post-FRBM years (State finances, various issues). It is evident from chart: 1 that the increase in the dependency ratio is relatively high during the third sub-period (2003-2014) with respect to Haryana, Gujarat, Tamil Nadu, Karnataka, and Maharashtraas compared to Bihar, Odisha, Uttar Pradesh and West Bengal, in terms of a phase-wise analysis (within a state comparison). The increase in the dependency ratio with regard to **Tamil Nadu, Karnataka, Gujarat, MP**, and **AP** could be attributed mainly to a larger capital spending on the part of states along with a fall in the revenue expenditure (nearly a 10% fall). On the other hand, in respect of Odisha and Bihar, the extent of relative dependency has increased at a lower pace.

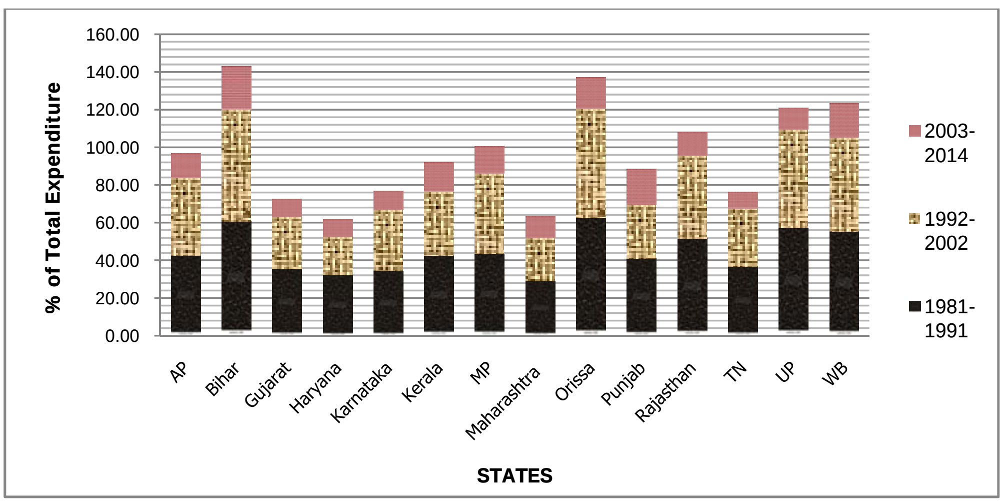
Although the performance of Odisha appears good in terms of reducing its revenue expenditure (by 17% in the last phase) mainly due to the expenditure cut back measures, (staff rationalisation measures) it has failed to raise its share in the capital spending. While **Rajasthan** followsOdisha in terms of spending, whereas in respect to **Bihar,** revenue expenditure has remained stagnant witha comparatively lower rise in the capital spending. **Punjab, Kerala** and **West Bengal** also follow Bihar in terms of spending. Based on a comparison across the states, it is evident that the increase in the ratio of fiscal dependency is comparatively high with regard to Maharashtra and Haryana, due to increase in the total expenditure (both revenue and capital expenditures). UP also follows these states in terms of spending. The changing pattern of spending in the post-FRBM years, impact of economic recession, poor tax efforts and decline in the contribution of non-tax revenue sources in the recent decades across several states have contributed towards an increased resource gap,renderingthe states in the processmore dependent on the obligatory sources of revenue.

FD1 clearly shows that more than 50 per cent of their expenditure is invariably financed from other revenue sources, which are obligatory in nature and hence, it is essential to further examine how the states' dependency on other sources of revenue varies with an increased resource gap. Since states tend to depend more on internal as well as external borrowings and central transfers (which together account for more than the states' own source revenue) and as their nature varies within the sources themselves, as also over time with various policy measures, it is essential to examine another measure of fiscal dependency which includes the remaining part of the revenue such as capital revenue and central transfers separately.

Fiscal Dependency (FDR2)

FD2 reveals the crucial role played by capital receipts with a major contribution frompublic account borrowings (PAB- a larger share of **deposits and advances with the government)** and NSSF loans and some other miscellaneous to the total. Compared to the last two sub-periods, in the third sub-period, the states' dependency on the remaining sources of revenue shows a reduction to a largeextent (chart 2). It is evident from chart 3 that, based on a phase-wise analysis, during the third sub-period, dependency on high-cost PABs, FIs loans, and some other miscellaneous capital receipts is higher with an increased capital spending among all the states, though it is not uniform across the states. And it is relatively higher inrespect of Uttar Pradesh, Gujarat, Karnataka, Tamil Nadu, Rajasthan and lowerinrespect of Punjab and Maharashtra.

Chart 2: State-Wise Fiscal Dependency Ratios (FDR2)

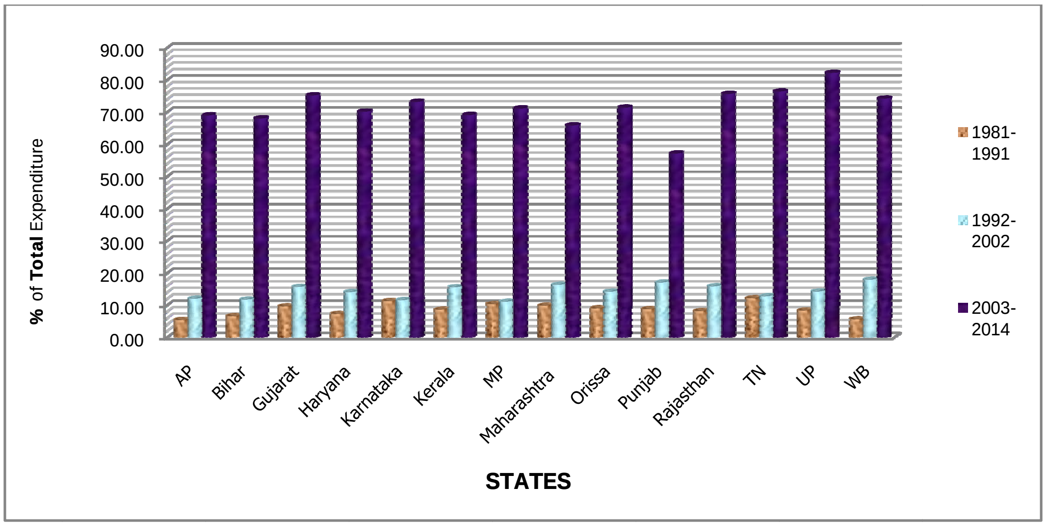


Source: Compiled from RBI state finances

Among the fourteen states, Punjab and Maharashtra are less dependent on capital receipts (CR), while Punjab (13% of CR), Haryana (12% of CR), Kerala, Maharashtra and West Bengal are more dependent on external sources of revenue (market borrowing) to finance their spending. On the other hand, Rajasthan (more than 50% of CR), followed by Kerala, Karnataka, AP and Haryana continue to be more dependent on PABs. Surprisingly, there is a drastic fall observed inrespect of states such as UP, MP, Odisha and Maharashtra with their reliance on both market borrowing and PAB since the last decade (tables 4, 5, 6).

It shows that although the states' dependency varies on the sub-parts of capital revenue, by and large, their dependency on capital revenue has increased to a large extent in the third phase under various debt reform measures (eg. Debt Swap Scheme 2002-2005) as part of the process of fiscal correction and focus on development capital spending (various issues of state finances; Rao & Shah, 2009).

Chart 3: State-Wise FD on Borrowings under PAB, FIs, NSSFs &Others (FD1-FD2)



Source: Compiled from RBI state finances

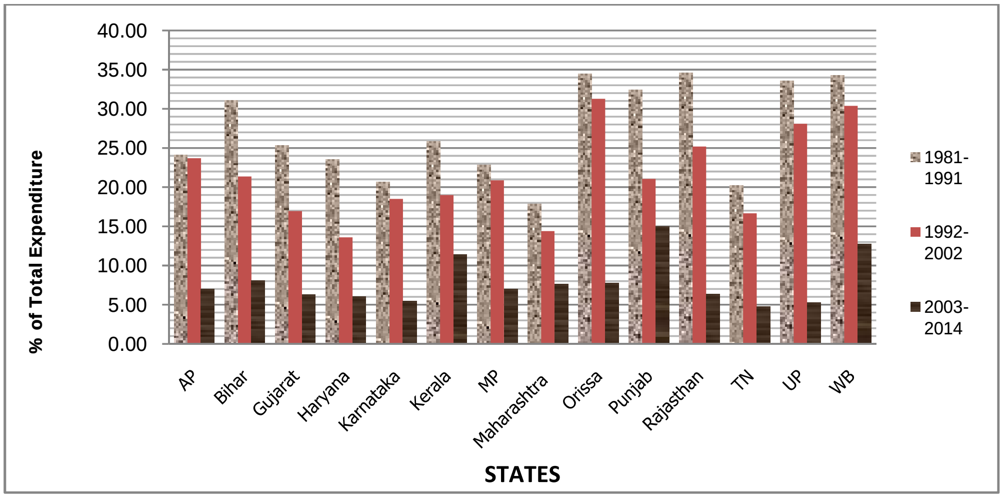
A comparison of FD1 and FD2 gives a clear picture of the changes in the pattern of resource gap and borrowing from different sources in financing states' spending over time. Further, the extension of FD also helps understand the position of the states' spending which is dependent on the central government. This includes both statutory transfers and funds which come under the central government discretion. So, in order to get a clear picture of to what extent states' dependency on funds is left to the central government discretion in addition to the share of statutory transfers being considered,another measure of fiscal dependency, i.e, FD3, is used in the present analysis.

Fiscal Dependency (FD3)

Fiscal Dependency (FD3) also reveals that the ratio of expenditure financed out of the funds coming under the central government discretion has decreased to a large extent in the third sub-period, as against the first two sub-periods. The extent of dependency on costlier and central government discretion dependent sources has come down in respect of almost all the states, but varies across the states. For instance, inrespect of Bihar, Uttar Pradesh, Odisha and Madhya Pradesh, the decline in the shared taxes is found to be relatively substantial despite their being major dependents on transfers. On the other side, dependency on external sources of revenue is found relatively high for **Punjab, West Bengal, Kerala**, **Andhra Pradesh**, Bihar, Maharashtra and Odisha with a larger share of expenditure. Among the above mentioned states, **inrespect of Punjab, West Bengal, Kerala** and **Andhra**

Pradesh, market borrowing predominates the statutory transfers. Punjab happens to be the least benefited state in terms of the statutory transfers.

Chart 4: State-Wise Fiscal Dependency Ratios (FDR3)



Source: Compiled from RBI state finances

Transfers played a very important role in lowering the dependency level of Bihar, UP and Odisha. Among the remaining states, transfers have helped, to some extent,in reducing the resource gap of Rajasthan and Madhya Pradesh, whereas their role is more or less stagnant when it comes to Karnataka and Tamil Nadu. The dependency of Gujarat, Haryana and Maharashtra on sources coming under central government discretion is higher as compared to the statutory transfers (chart 4).

The lesser the difference between FD2 and FD3, the smaller is the role played by the statutory transfers in reducing the dependency of states on sources which are volatile, costlier and which come under the discretion of the central government. The ratio of expenditure financed through Public Account Borrowings (PAB) and NSSF loans with a higher rate of interest is even larger than the statutory transfers in the last sub-period, which shows a reverse tendencywhen compared to the previous two sub-periods. It is evident from chart 4 that, even after the inclusion of the three different sources of revenue, which are both non-obligatory (own source revenue-BRG1) andobligatory (part of capital revenue and statutory transfers-BRG2 & BRG3) in nature. The fiscal gap still persists at different levels across the states which needs to be financed through non-statutory transfers and borrowing under market loans, central loans &WMA from RBI over which states haverelatively less control.

On the whole, the pattern of financing states' expenditure has undergone significant changes since the 1990s. A comparison across three different sub-periods shows the fiscal stress still persistingacross the states due to the lower contribution of the statutory transfers with a larger gap in FD1. There is a continued predominance of PAB and dependency on the external sources comprisingmarket borrowings with repayment obligations on which states havelesser control besides coming under the discretion of the central government (since being indebted to the centre) and RBI. But from the point of view of fiscal health, after the implementation of several debt-relief schemes, a drastic fall in the dependency on high-cost loans along with a lower volume of borrowing from NSSF is noticeable. But the dependency on public accounts still persists with a growing reliance on market borrowings. There is no uniformity observed with respect to the states when it comes to choosing between market borrowings and small savings (seetables 4, 5, and 6). The total transfers have increased as a ratio to the revenue expenditure besids contributing more towards a reduction in the current account deficits. It is evident from the comparative analysis of FD1 and FD3 that post fiscal adjustment measures (during the third phase), a larger gap still persists with the progressive nature of capital and revenue expenditures through the debt repayment mechanism, even with an apparent improvement in the revenue generation. The basic resource gap (FD1) has continued to persist in view of a steady rise in the total expenditure led by capital spending and a decline in the non-debt capital receipts. Transfer dependency, combined with the existing nature of deficit financing, has further increased the fiscal burden on the states.

It is evident from the decomposition of changes in the resource gap that with a larger and increasing gap between the total expenditure and own source revenue, states' reliance on sources of revenue other than their own has increased overtime. An examination of the phase-wise analysis shows that the share of states' own revenue was nearly 50 per cent up to the 1990s. But thereafter, with a rise in the revenue expenditure, states' dependency on both transfers and capital receipts has further increased. With the enforcement of reform measures, followed by the 12^{th} FC recommendations, capital expenditure also shows an increase along with revenue expenditure. From 2003-04, capital receipts have become relatively larger than federal transfers, while further shrinking the share of own source revenue in the gap filling process.

Since the above analysis has mainly taken into consideration only part of transfers (statutory transfers), it is necessary to assess the pattern of dependency of states on the different components of total transfers. To understand states' increased dependency on federal transfers, a detailed disaggregated analysis has been carried out.

Pattern and Decomposition of Fiscal Dependence on Federal Transfers

In the previous literature, some studies have examined the extent of fiscal dependency of the states on federal transfers. Regarding the level of fiscal dependency, **Srivastava and Rao (2014),** have analysed the pattern of dependence of different categories of states by using an index of the dependence of states on the different compoments of central government transfers. The study reveals, based on a state-wise decomposition, that the reliance of high-income states on transfers was between 6-18 percent, middle-income states between 15-23 percent, low-income states between 21-58 per cent and also of special category group 1 states between 6-33 per cent and group of 2 states between 8-37 percent. Following this, the present study tries to decompose the pattern of dependency on the different components of transfers.

In order to measure the degree of fiscal dependence on the central government, several methods have been suggested in the previous literature. Transfers as a share of sub-national revenue (Rodden, 2002; Serhan Cevik, 2016); Transfers as a share of sub-national expenditure (Serhan Cevik, 2016; Hunter, 1977); and even transfers as a share of central government revenue (Bhal & Wallace, 2007) as a measure of the level of dependency on central transfers. Transfers as a share of **sub-national revenue expenditure** have been employed in the present study to find out the relative role of different sources of revenue in bridging such fiscal gap. The analysis covers the period from the Eighth Finance Commission to the Thirteenth Finance Commission (**table 1).** An analysis of the extent of fiscal dependency of the Indian states reveals that as compared to the period from the Eighth Finance Commission to the Twelfth Finance Commission, the ratio of transfers to revenue expenditure shows a decrease inrespect of all the states (in average terms), excepting BIMARU states. Among BIMARU states, a progressive growth can be noticed during the Eleventh Finance Commission period itself.

Table 1: Total Transfers from FC & PC as a Percentage of Revenue Expenditures

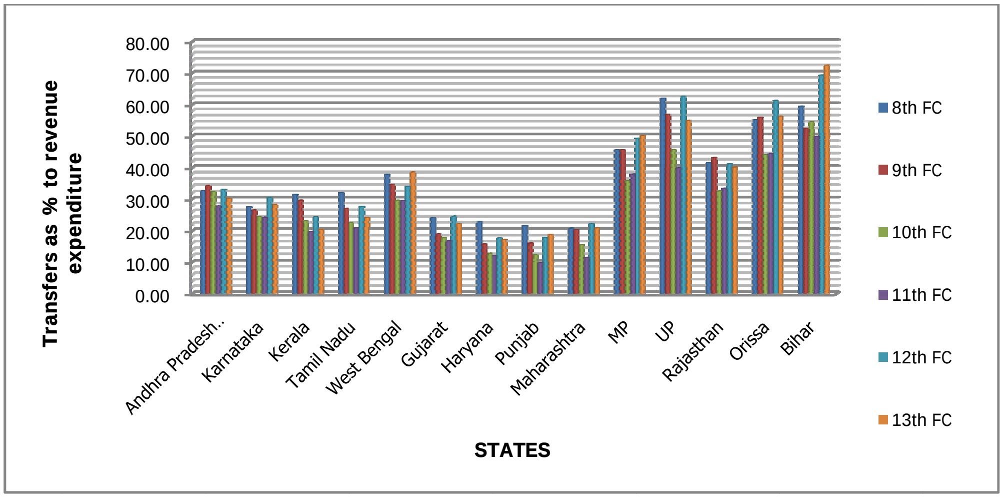
STATES	8th FC	9th FC	10th FC	11th FC	12th FC	13th FC
Haryana	22.81	15.61	12.70	11.85	17.55	17.06
Punjab	21.55	15.92	12.30	9.67	17.76	18.70
Maharashtra	20.70	20.18	15.38	11.42	22.08	20.74
Gujarat	23.97	18.84	17.71	16.66	24.47	22.04
Kerala	31.36	29.53	22.96	19.56	24.27	20.28
Tamil Nadu	31.92	26.96	22.38	20.74	27.54	24.02
Karnataka	27.43	26.42	24.31	24.12	30.42	28.12
AP(undivided)	32.53	34.20	32.31	27.69	32.97	30.14
West Bengal	37.69	34.55	29.51	29.49	33.87	38.50
Rajasthan	41.42	43.07	32.44	33.34	41.06	40.04
MP	45.53	45.56	35.74	37.80	49.24	49.99
Orissa	55.04	55.88	43.91	44.43	61.15	56.20
UP	61.87	56.76	45.59	39.77	62.51	54.79
Bihar	59.39	52.32	54.45	49.74	69.21	72.40

Source: Authors' compilation of the various documents of RBI state finances

An index of dependence (D) is defined as D=TR/RE where TR=Transfers Received by a state on Revenue Account (TR is a sum of SCTR+SPG+CT (CSS+CPG) +NPG) and RE=state's Total Revenue Expenditure.

Where, SCTR= Share in central taxes, TG=Total of plan and NON-Plan Grants, STG=State plan Grants, NPT =NON-Plan Grants and CT = conditional transfers. D is the sum of four components: D=D1+D2, Where D1=D*SCTR/TR; D2=D*TG/TR; D2.1=D2*SPG/TR and D2.2=D2*CT/TR D2.3=D2* NPG /TR.

Chart 5: Total Transfers as Percentage of Revenue Expenditures



Source: Authors' compilation from various documents of RBI state finances

During the Twelfth Finance Commission period, the share of transfers shows an increase inrespect of almost all the states, but it slightly decreased during the ThirteenthCommission period except in Bihar, Punjab and West Bengal. From an inter-state comparison, it is evident that the dependency ratio isthe least inrespect of Haryana and Punjab, followed by Maharashtra and Kerala. On the other hand, out of the fourteen major states, Bihar (above 70%) , Odisha, UP and MP happen to bethe major dependents on central transfers with the transfers playing an important role in bridging the resource gap with more than 50 per cent of their revenue expenditure being financed through transfers (**Table1 & Chart 5).** Further, for an in-depth analysis, the present study decomposes the total transfers into shared taxes, plan specific grants, conditional grants, and non-plan grants for examining the relative dependency across the states on the central government transfers. Based on the relative level of dependency, states are categorised into two parts - BIMARU and non-BIMARU.

Decomposition and Pattern of Dependence: Different Categories of States

In the decomposition process, the share of central taxes (D1) is treated as the first component and the total grants (D2) as the second component. The second component includes the state plan grants (D2.1), conditional grants (D2.2)and non-plan grants (D2.3) as sub-components.

Table 2: Decomposition of Dependence: States with a Relatively Larger Level of Dependence on Transfers

Period	States	Total Transfers	Share in Central Taxes	Total Grants	Total Grants			
					State Plan Grants	CSS	CPG	Non Plan Grants
1981-91	**Uttar Pradesh**	50.06	30.37	19.68	8.20	5.88	2.83	2.77
1992-02		41.55	28.13	13.42	7.98	3.31	0.56	1.57
2003-14		55.16	38.71	16.45	6.69	4.54	0.57	4.65
1981-91	**MP**	41.42	26.00	15.42	6.73	4.89	2.17	1.64
1992-02		37.42	24.41	13.01	4.69	5.31	1.34	1.67
2003-14		49.08	31.18	17.90	8.79	4.68	0.81	3.62
1981-91	**Bihar**	56.32	38.63	17.69	6.95	5.42	2.44	2.88
1992-02		54.67	40.63	14.04	4.79	5.10	0.43	3.71
2003-14		72.04	50.49	21.55	10.47	3.92	1.70	5.47
1981-91	**Odisha**	57.15	29.54	27.61	8.26	6.61	3.37	9.37
1992-02		46.72	28.08	18.64	7.72	4.71	1.13	5.08
2003-14		56.49	35.44	21.25	10.90	4.15	0.45	5.55
1981-91	**Rajasthan**	42.31	21.05	21.26	8.66	8.19	1.26	3.14
1992-02		35.03	18.84	16.19	4.85	5.52	1.13	4.68
2003-14		39.92	25.45	14.47	5.68	4.21	0.25	4.33

Source: Authors' compilation from various documents of RBI state finances

Conditional grant is a combination of central plan grants and centrally-sponsored schemes, which are plan-specific and conditional in nature. Each type of transfer is characterised by a specific objective. Conditional transfers need to achieve a minimum level of standard in providing public goods, whereas equalisation transfers deal with regional equity.

This research has found that, among the fourteen states, Punjab, Haryana, Maharashtra, and Gujarat were least dependent on transfers to finance their expenditure in the 1980s and the 1990s. Later on, in the last decade, Gujarat came to be replaced by Kerala. The existing gap in the devolution of shared taxes predominate as compared to the devolution of grants in the last two decades with regard to BIMARU states **(Table 2).** On the other hand, the existing gap in the devolution of grants can't be noticed in the devolution of shared taxes over the last two decades in respect ofnon-BIMARU states except in Kerala inrespect of which, both the shared taxes and grants show a decreasing trend over the last decade **(table 3).** In spite of this difference, the share of grantsshows a relatively progressive trend over the period involving the last two commissions withrespect to all the states.

As regards the non-BIMARU states, the share of state non-plan grants and plan grants are found relatively higher for the last decade with a fall in the conditional transfers, whereas in the BIMARU states, conditional transfers are relatively high compared to the non-plan grants (except Odisha). Bihar happens to be the major beneficiary as far as the allocation of total grants is concerned, which accounts for more than 20 percent, as against less than 10 per cent in respect of Punjab, Haryana, Maharashtra, Kerala and Gujarat over the entire period. Comparison across the states shows that conditional transfers are relatively high for Bihar, MP, UP, Odisha, and Rajasthan **(Tables 2 & 3).**

Table 3: Decomposition of Dependence: States with a Relatively Lower Level of Dependency on Transfers

Period	States	Total Transfers	Share in Central Taxes	Total Grants	Total Grants			
					State Plan Grants	CSS	CPG	Non-Plan Grants
1981-91	**Haryana**	20.95	10.65	10.30	3.62	4.18	0.98	1.52
1992-02		13.12	7.10	6.02	2.15	2.91	0.02	0.95
2003-14		16.32	7.77	8.55	3.19	2.15	0.17	3.04
1981-91	**Punjab**	19.91	11.25	8.67	3.10	2.30	1.18	2.08
1992-02		12.94	7.18	5.75	1.75	1.88	0.35	1.78
2003-14		16.63	8.43	8.20	2.66	1.60	0.09	3.85
1981-91	**Maharashtra**	21.07	12.93	8.14	2.43	3.10	1.26	1.35
1992-02		15.38	9.40	5.98	2.17	2.28	0.44	1.08
2003-14		19.98	9.87	10.10	4.15	2.49	0.32	3.14
1981-91	**Gujarat**	22.81	13.16	9.65	3.93	3.76	0.77	1.18
1992-02		18.48	10.70	7.78	2.77	2.27	0.26	2.48
2003-14		22.27	12.64	9.63	4.84	2.05	0.14	2.60
1981-91	**Kerala**	31.12	19.57	11.55	4.39	3.76	1.24	2.15
1992-02		23.81	15.59	8.22	3.23	3.06	0.47	1.47
2003-14		21.93	13.81	8.13	3.06	2.28	0.13	2.66
1981-91	**Tamil Nadu**	30.61	20.02	10.59	3.56	3.56	1.84	1.64
1992-02		22.92	15.29	7.63	3.20	2.78	0.44	1.20
2003-14		25.32	15.24	10.08	4.24	1.99	0.22	3.62
1981-91	**Karnataka**	27.53	17.82	9.72	2.94	4.11	1.90	0.77
1992-02		24.95	16.04	8.91	3.09	3.85	0.88	1.09
2003-14		28.45	16.12	12.33	4.88	3.15	0.18	4.12
1981-91	**Andhra Pradesh (undivided)**	33.53	20.69	12.84	3.89	4.35	2.36	2.24
1992-02		31.51	19.34	12.17	4.56	4.12	0.70	2.79
2003-14		31.26	19.13	12.13	5.80	2.83	0.23	3.27
1981-91	**West Bengal**	37.54	23.92	13.62	5.02	2.86	1.01	4.74
1992-02		33.48	21.65	11.83	5.99	2.36	0.38	3.10
2003-14		37.06	23.71	13.36	6.27	3.05	0.21	3.83

Source: Authors compilation from various documents of RBI state finances

As compared to the 1990s, in recent decades, the state plan grants show a more progressive trend, while conditional transfers show a relatively higher trend inrespect of several states. The state plan grants are found relatively higher in Odisha, Bihar, MP, UP and West Bengal. And non-plan grants are relatively higher inrespect of Odisha, Bihar, UP, Rajasthan, and Karnataka. However, the level of dependency on federal transfers differs significantly across BIMARU and non-BIMARU states (as per Finance Commission classification) rather than within BIMARU and non-BIMARU states. The steadily evolving structure of intergovernmental transfers reveals that the successive finance commissions have gradually enhanced the share of states in the centralised divisible pool over time. At the same time, the discontinuation of central plan loans linked to the plan grants has helped reduce the repayment obligation on the part of states besides facilitating them in terms of gettinga substantial proportion of earmarked grants. Following this, emphasis was given to several state-specific grants during the Thirteenth Finance Commission. But this trend has been reversed with a substantial rise in the share of central taxes during the period of the Fourteenth Finance Commission.

Conclusion

The main objective of the fiscal policies of the states is to attain economic growth. In that process, the relative shares of obligatory and non-obligatory sources of revenue influence the pattern of spending which further enhance states' capacity for further public capital investment which in turn impacts future economic growth. Larger the share of obligatory source of revenue and even those obligatory borrowings are allocated towards committed spending; it will further worsen the fiscal stress at the sub-national level. The extent of dependency on various revenue sources, the strategies that are adopted to mobilise more revenue, the extent of borrowing, share of federal transfers and pattern of spending are linked to economic growth. Considering the above factors, the present paper made an attempt to understand the relative share of different sources of revenue which explain the level of fiscal stress at the sub-national level. Since this is a preliminary analysis, the paper is descriptive in nature. But this paper will give more insightful information for ourother objectives which deal with both revenue and expenditure.

Since the 1990s, the structure of financing states' expenditure has undergone significant changes. On the one hand, the volume of total expenditure has continued to grow in view of an increase in the capital expenditure in the post-FRBM period. On the other, there has been a rise in the plan expenditure with CSSs (Sucharita, 2012) and plan outlays (Srivastava, 2003) at the sub-national level. Also, increased plan outlays have forced the states to go in for further borrowings, in the process causingincreased repayment liabilities besides forcing the states to claim more funds from Finance Commissions (Srivastava, 2003). In the process of financing the total expenditure, the dependency of the states on obligatory sources of revenue has further increased since the last decade. The share of own source revenue as well as transfers have decreased with the continued predominance of different sources of borrowing. A phase-wise analysis shows that a larger scale ofspending on the part of states caused the basic resource gap which has continued to persist despite a marginal improvement in the states' own sources of revenue. The changing pattern of financing the total expenditure has not only led to temporal variations,but also to heterogeneity across the states.

In this process of fiscal adjustment, central loans, which were the predominant obligatory source of revenue for states, came to be replaced by NSSF in the late 1990s, even as NSSF continued to remain as the predominant source of revenue over the period from 1999-2000 to 2004-05. Thereafter, its (NSSF) share shows a drastic declining trend since 2005-06. After the enforcement of several debt-relief schemes, a drastic fall in the dependency on high-cost loans with a lower volume of borrowing from NSSF is noticeable, though its proportion varies across the states (see tables 4, 5, 6). Some states such as Rajasthan, Andhra Pradesh, Kerala, Haryana and Karnataka continue to be more dependent on PABs. On the other hand, states such as Punjab, Gujarat, Haryana, West Bengal and Andhra Pradeshare more dependent on market borrowing,while Odisha, Uttar Pradesh and Madhya Pradesh coming under BIMARU category are relatively less dependent on internal as well as external borrowing, excepting

Rajasthan. Interestingly, BIMARU states are the major beneficiaries when it comes to the sharing of federal transfers while states such as Punjab, Haryana, Kerala and Gujarat, excepting Maharashtra, which are least dependent on federal transfers, account for a larger share in the internal or external borrowing. In the mean time, states with a good revenue collection such as Karnataka, Andhra Pradesh and Tamil Nadu are still more dependent on PAB. In the total borrowing, Public Account Borrowings (PAB) with a higher rate of interest predominate,despite the debt reform measures emphasising the role of market borrowings. It is evident from the above analysis that heterogeneity exists across the 14 major states. Overall, the expenditure-led fiscal decentralisation is visible in the Indian context. States need to raise an adequate level of revenue, so as to continue providing public services. States which are more dependent on obligatory sources of revenue with an expensive borrowing may have to face a higher level of fiscal deficit with a rising share of Debt/GSDP and IP/RR ratio. Such states may be forced to reduce the size of their capital expenditure under a fiscal consolidation framework, as it may have an adverse impact on their development activities, once the repayment of interest payment starts. The consequences may vary across states, depending on their extent of reliance on different sources of revenue and their way of spending on different components of expenditure with possible implications for their economic growth. Therefore, it is important for the states to stepup their own source of revenue efforts towards a more development-oriented spending. In the process of fiscal adjustment, an improvement in the quality of spending, proper debt management and diversification of own sources of revenue assume a greater significance.

Notes

[1] Central government loans to state development projects decreased substantially since 2005–06,whileup to 1999-2000 the same had occupied a predominant position.

[2] Debt Consolidation And Relief Facility (DCRF) by the FC-XII, Debt Swap Scheme (2002-03 to 2004-05), Tax reform measures (VAT)-2005, FRBM Act (2002-03), New Pension Scheme (NPC), Guarantee Redemption Fund, Consolidated Sinking Fund.

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Appendix

Table 4: States with fall in Both Market Loans and PAB (as % of Capital Receipts)

States	UP			MP			ORS			MAH		
Year	Market Loans	PAB	NSSF	Market Loans	PAB	NSSF	Market Loans	PAB	NSSF	Market Loans	PAB	NSSF
1981-84	13.32	21.61	0.00	5.77	27.58	0.00	16.27	20.27	0.00	3.76	27.40	0.00
1985-89	17.51	25.28	0.00	7.63	30.72	0.00	19.95	20.63	0.00	4.79	30.25	0.00
1990-94	10.42	27.54	0.00	14.01	33.44	0.00	21.49	28.59	0.00	6.82	39.28	0.00
1995-99	18.26	28.29	5.63	17.11	24.92	4.11	19.24	28.30	1.74	7.68	36.85	7.36
2000-04	13.01	20.52	19.88	13.19	14.53	16.86	15.06	24.47	9.79	8.13	23.51	31.66
2005-09	1.56	5.94	1.01	2.06	6.32	1.32	0.24	8.29	1.15	4.74	9.03	5.13
2010-14	1.66	4.39	0.72	1.84	4.98	0.50	0.54	7.59	0.56	4.50	8.34	0.52

Source: Authors' compilation from various documents of RBI state finances

Table 5: States with Larger Share in PAB (as % of Capital Receipts)

States	RAJ			AP			KER			KAR		
Year	Market Loans	PAB	NSSF	Market Loans	PAB	NSSF	Market Loans	PAB	NSSF	Market Loans	PAB	NSSF
1981-84	13.46	18.68	0.00	18.40	17.59	0.00	11.07	22.58	0.00	8.39	22.01	0.00
1985-89	13.34	18.83	0.00	20.66	21.26	0.00	17.69	23.09	0.00	11.96	20.47	0.00
1990-94	14.60	27.87	0.00	17.55	16.36	0.00	17.40	33.40	0.00	10.36	22.77	0.00
1995-99	15.60	26.89	4.93	18.12	15.01	3.67	18.59	45.50	2.31	14.45	26.18	3.84
2000-04	15.02	34.46	26.77	14.65	7.72	12.60	13.01	33.12	9.11	12.86	25.30	16.34
2005-09	2.67	53.18	1.19	4.79	21.91	1.70	4.93	19.22	1.83	1.72	16.12	1.27
2010-14	3.29	51.07	0.22	7.60	23.28	0.56	5.85	19.69	0.30	3.80	13.92	0.33

Source: Authors' compilation from various documents of RBI state finances

Table 6: States with Increasing Share inBoth Market Loans and PAB (as % of Capital Receipts)

States	PUJ			HAR			WB		
Year	Market Loans	PAB	NSSF	Market Loans	PAB	NSSF	Market Loans	PAB	NSSF
1981-84	2.05	14.34	0.00	10.22	14.51	0.00	5.44	4.28	0.00
1985-89	4.25	7.15	0.00	10.60	20.48	0.00	11.96	13.62	0.00
1990-94	3.69	11.23	0.00	11.87	26.65	0.00	15.48	18.98	0.00
1995-99	10.41	23.19	6.66	8.14	20.18	5.27	10.69	16.06	7.34
2000-04	8.45	10.20	25.78	11.73	19.90	26.48	8.37	9.16	31.81
2005-09	7.52	9.59	3.05	2.24	7.76	0.93	4.74	11.19	3.75
2010-14	12.60	12.14	1.47	11.74	21.41	1.00	5.94	12.96	1.93
States	**GUJ**			**TN**			**BHI**		
Year	**Market Loans**	**PAB**	**NSSF**	**Market Loans**	**PAB**	**NSSF**	**Market Loans**	**PAB**	**NSSF**
1981-84	6.91	19.80	0.00	7.31	15.62	0.00	6.77	18.20	0.00
1985-89	6.86	19.60	0.00	15.21	18.19	0.00	17.84	22.55	0.00
1990-94	6.96	20.01	0.00	11.89	19.83	0.00	22.27	18.37	0.00
1995-99	9.29	28.00	6.24	13.72	24.64	3.41	18.81	12.45	5.67
2000-04	11.73	9.14	30.47	14.37	10.99	16.82	14.73	15.79	26.33
2005-09	2.74	11.13	2.97	2.54	10.66	1.45	2.01	5.59	1.59
2010-14	5.18	12.17	0.78	4.33	10.36	0.23	3.94	11.76	0.95

Source: Authors' compilation from various documents of RBI state finances

Table 7: Bifurcation of States Based on Variation or Change in the Level of Fiscal Dependency1(FD1)in Different Sub-periods

Sub-Period	Fiscal Dependency 1	Fiscal Dependency 1	Fiscal Dependency 1
FD1	states with FD1 Above 75 per cent	states with FD1 In between 50-75 per cent	states with FD1 below 50 per cent
1981-1991 (average)	Nil	BHI,KER,MP,RAJ,UP,WB,ORS	AP,GUJ,HAR,KAR,MAH,PUJ,TN
1992-2002 (average)	Nil	AP,BHI,MP,ORS,RAJ,UP,WB	GUJ,HAR,KAR,KER,MAH,PUJ,TN
2003-2014 (average)	ALL the states	Nil	Nil
comparing across the sub-periods	states with increased gap in FD1	states with reduced gap in FD1	states with no change in FD1gap
B\W 1981 to 1991	AP,BHI,MAH,UP,WB	GUJ,HAR,KAR,KER,PUJ,TN	ORS,MP,RAJ
B\W 1992 to 2014	ALL the states	Nil	Nil
B\W 1992 to 2014	states with above 30 per cent hike	states with in between 20-30 per cent hike	states with below 20 per cent hike
	GUJ,HAR,TN,KER,KAR,MP, MAH,PUJ	AP,RAJ,UP,WB	BHI,ORS

Table 8: Bifurcation of States based on Variation or Change in the Level of Dependency on Statutory Transfers/ Total Expenditurein Different Sub-periods

Sub- Period	Statutory Transfers/Total Expenditure	Statutory Transfers/ Total Expenditure	Statutory Transfers/ Total Expenditure
FD1	states with IGT Above 20 per cent	states with IGT In between 10-20 per cent	states with IGT below 10 per cent
1981-1991 (average)	BHI,ORS,MP,UP,WB	AP,KAR,KER,MAH,RAJ,TN	GUJ,HAR,PUJ
1992-2002 (average)	BHI,ORS,MP,UP	AP,GUJ,KAR,KER,RAJ,TN,WB	MAH,PUJ
2003-2014 (average)	Nil	BHI	ALL the states except BHI
comparing across the sub-periods	states with increased dependency on IGT/TE	states with reduced dependency on IGT/TE	states with no change in dependency on IGT/TE
B\W 1981 to 1991	BHI	AP,WB,GUJ,HAR,KAR,KER,TN, MAH,PUJ,ORS,RAJ,MP	Nil
B\W 1992 to 2014	BHI,WB,GUJ,HAR,KAR,TN, MAH,PUJ,ORS,RAJ,UP,MP	AP,KER	Nil
B\W 1992 to 2014	states with above 20 per cent fall	states with in between 10-20 per cent fall	states with below 10 per cent fall
	BHI	AP,KER,KAR,MP,ORS,RAJ,TN, UP,WB	GUJ,HAR,PUJ,MAH

Table 9: Bifurcation of States Based onVariation or Change in the Level of Dependency on Total Transfers(IGT) / Revenue Expenditurein Different Sub-periods

Sub- Period	IGT/Revenue Expenditure	IGT/ Revenue ExpenditureV	IGT/ Revenue Expenditure
FD1	states with IGT Above 40 per cent	states with IGT In between 20-40 per cent	states with IGT below 20 per cent
1981-1991(average)	BHI,UP,ORS,MP,RAJ	AP,WB,GUJ,HAR,KAR,KER,TN, MAH	PUJ
1992-2002(average)	BHI,ORS,UP	AP,WB,KAR,KER,TN,MP,RAJ	MAH,PUJ,GUJ,HAR
2003-2014(average)	BHI,ORS,UP,MP	RAJ,MAH,AP,WB,GUJ,KAR,KE R,TN	PUJ,HAR
comparing across the sub-periods	states with increased dependency on IGT/RE	states with reduced dependency on IGT/RE	states with no change in dependency on IGT/RE
B\W 1981 to 1991	Nil	ALL the states	Nil
B\W 1992 to 2014	WB,GUJ,HAR,KAR,TN,MAH, PUJ,ORS,RAJ,UP,BHI,MP	KER	AP
B\W 1992 to 2014	states with above 10 per cent hike	states with in between 5-10 per cent hike	states with below 5 per cent hike
	BHI,UP,ORS,MP	RAJ,MAH	WB,GUJ,HAR,KAR,TN,PUJ

Table 10: Bifurcation of States Based onVariation or Change in the Level of Dependency on CapitalRevenue (Excluding Market Borrowing) /TEin Different Sub-periods

Sub- Period	Capital account/ Total Expenditure	Capital account/ Total Expenditure	Capital account/ Total Expenditure
Capital account/ Total Expenditure	states with CK Above 75 per cent	states with CK In between 20-75 per cent	states with CK below 20 per cent
1981-1991(average)	Nil	Nil	ALL the states
1992-2002(average)	Nil	Nil	ALL the states
2003-2014(average)	ALL the states	AP,BHI,HAR,KER,MP,MAH,OR S,PUJ,WB	Nil
comparing across the sub-periods	states with increased dependency on CR	states with reduced dependency on CR	states with no change in dependency on CR
B\W 1981 to 1991	ALL other states except KAR,MP,TN	Nil	KAR,MP,TN
B\W 1992 to 2014	ALL the states	Nil	Nil
B\W 1992 to 2014	states with above 60 per cent hike	states with in between 50-60 per cent hike	states with below 20 per cent hike
	KAR,TN	GUJ,AP,BHI,HAR,KER,MP,MA H,ORS,RAJ,WB	Nil

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