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FRBM Act and Fiscal Performance of the Special Category States of India: A Trend Analysis

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Abstract

The Indian states namely Arunachal Pradesh, Assam, Himachal Pradesh, Jammu & Kashmir, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, and Uttarakhand were given special category status considering their severe developmental constraints and long-term economic backwardness. Microeconomic efficiency and macroeconomic stability remain to be a persistent challenge for these special category states in terms of their revenue augmentation, deficit reduction, and fiscal sustainability. The Fiscal Responsibility and Budget Management (FRBM) Act, 2003 has been a revolutionary step towards raising the fiscal efficacy of the Centre and the States in India, particularly management of their finances. Keeping these in consideration, the present study attempts to examine the impact of fiscal reforms i.e., the FRBM Act on the state finances in India, specifically on the special category states which need additional fiscal attentions. For the purpose, the trend analysis as well as searching of the structural break through Chow test have been conducted for the period from 1990-91 to 2019-20 with respect to various fiscal indicators. It is observed that most of the states from both the special and Non-Special categories are performing well in revenue receipts and deficit management after the implementation of FRBM Act, implying a significant impact of FRBM Act on their fiscal performance. However, the result of the Chow test shows less impact of the FRBM Act on the special category states.

I. Introduction

Binding fiscal policy rules are likely to influence the level and composition of government expenditure and revenue collection as well as induce transparency in the country's budget. India, being a federal structure, the fiscal performance at the sub-national level plays a significant role to maintain the fiscal efficiency in the centre. However, there has been deteriorating fiscal performance at both the Centre and

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State levels in India during the period from 1980-81 to 1999-2000 (Rao, 2000). At the earlier, the Eleventh and Twelfth Finance Commissions recommend fiscal reform incentive schemes intending to maintain fiscal discipline at the state level. Apart from this, Fiscal Responsibility Legislations (FRLs) and various institutional reforms were undertaken at the centre as well as state-level including the rule-based fiscal framework known as Fiscal Responsibility and Budget Management Act (FRBMA, 2003). All these initiatives and regulations are towards the objectives of revenue augmentation, deficit reduction, and fiscal sustainability to have microeconomic efficiency as well as macroeconomic stability at the Centre and State levels (Saikia et al. 2021; Mohanty and Mishra, 2016). Eleven states namely Arunachal Pradesh, Assam, Himachal Pradesh, Jammu & Kashmir (which was having its statehood till 31st October 2019), Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, and Uttarakhand were known as the Special Category States. Having various disadvantages, these states were highly dependent on central grants. Thus, there is no hard budget for these states. Special category states are considered to be handicapped without the central grants. After Economic Reforms, inter-state disparities in terms of GSDP have increased across the states of India (Ahluwalia, 2000). Whenever the disparity level increases among states, the special category states can be expected to be the worst sufferers. Implementation of target-based fiscal rules is effective in reducing fiscal imbalances at the sub-national level which is a major consequence for the economic growth of the country. All the special category states havestarted implementing FRBM Act between the year 2005 and 2010 to maintain their fiscal stability. So, this is felt necessary to check whether these states are performing well or not after the implementation of the FRBM Act.

The study has been divided into six sub-sections including the present one i.e., introduction. The literature survey has been reported in the second section, where the third section covers the research objectives. The fourth section focuses on data sources and methodological issues, whereas the fifth section analyzes the results and major findings. The last section consists the conclusion part.

II. Review of Literature

Several studies have examined the role of the FRBM Act on fiscal performance of both central and state governments' finances (Sucharita et al., 2011; Badaik, 2017; Rao and Sen, 2010; Sen and Dash, 2013). Majority of the studies are mainly theoretically oriented focusing on the gross picture of all the states or of the major states. For example, Singh et al. (2017) have observed that the Fiscal Responsibility and Budget Management Act (FRBMA), 2003 sets fiscal rules to foster fiscal discipline on the Central Government and achieve a balanced budget with effective revenue management. Sucharita et al. (2011) has analyzed the role of the FRBM Act in restoring fiscal balance in India and also explained the major factors behind the rising fiscal imbalance by using the OLS method over the period from 1980-81 to 2008-09. They find no such significant effect of the FRBM Act on the gross fiscal deficit to GDP ratio. However, the GDP growth rate has exemplified a significant negative effect on the gross fiscal

deficit to GDP ratio. Badaik (2017) has explored the impact of Fiscal Responsibility Legislations (FRLs) on the performance of state finances in India by considering the panel data for 28 states from 2000-01 to 2009-10. Fixed effect and Random effect models are used to get the regression coefficients. The result shows that FRLs have a positive impact on the performance of the states. Singh (2015) has discussed the allocation of funds to the special category states from Central Government through both Finance Commissions and Planning Commission. Dash (2011) tries to evaluate the fiscal performance of Tripura (as a special category state) after implementing the FRBM Act, over the period from 1990-91 to 2009-10. The study finds that the overall fiscal performance of the state is improving after the FRBM Act. Singh & Srinivasan (2006), have been examined the impacts of the intergovernmental transfer system and tax assignment tocentre on the quality of governance and government expenditure, the efficiency of the tax system, the fiscal health of different tiers of govt., economic growth and on regional inequality. Jacob & Chakraborty (2020) tries to analyze the Karnataka state performance in terms of fiscal prudence for the period from 2011-12 to 2017-18. By using CSO, CAG reports, and NIPFP databases the study shows the trends of different fiscal indicators including expenditure, revenue receipts, debt management, etc. By examining the expenditure side, the author found the states have curtailed their capital expenditure and decreased their spending on education, social welfare and nutrition which leads to badly affects the human development outcome. Chakraborty & Dash (2017) try to examine the impacts of the fiscal rule on fiscal balance across the 14 major states of India by covering a dataset from 2000-01 to 2013-14. The findings of the paper show that after the implementation of the fiscal rule, the states were able to reduce the fiscal imbalances. Moreover, they have found that the deficit target set by the fiscal rule, the states have resorted to cuts the development expenditures. Mukherjee (2019) tries to assess the impact of fiscal rules in Indian public finances during 2001-16. Various trends of fiscal indicators such as revenue, expenditure and debt, etc. show that all the states are able to reduce their revenue as well as fiscal deficits in the post FRBM period. Dholakia & Karan (2005) try to estimate debt and fiscal deficit by deriving a theoretically consistent and appropriate definition for the 18 non-special category states and 10 special category states. The study covered a period of 1989-90 to 2003-04. They observed that non-special category states have a significantly greater probability of fiscal sustainability than the special category states. However, rigorous studies on the theoretical issues and practical policy perspectives of the FRBM Act on fiscal indicators are the need of the hour in terms of fiscal performance of the Special Category States (of which majority are North-eastern States of India). The present study is an attempt towards that direction.

III. Objectives of the Study

The main objective of the study is to examine the long termimpact of the FRBM Act on the major fiscal indicators of the special category states in comparison to the general category states of India. Also, tries to analyze the structural break of the series in respect of fiscal indicator i.e. gross fiscal deficit for the special category states of India over time.

IV. Data Sources and Methodology

The present study is based on secondary data collected from the Handbook of Statistics on State Government Finances published by RBI, and Economic and Political Weekly Research Foundation (EPWRF). The study attempts to cover a period of 30 years (1990-91 to 2019-20) subject to data availability and to incorporate all the Special Category States including Jammu & Kashmir. Moreover, the study period is subdivided into two parts i.e., Pre-FRBM (1990-91 to 2002-03) and Post-FRBM (2003-04 to 2019-20).

The effectiveness and suitability of the recent FRBM Act has been found by analyzing provision and rules undertaken by FRBM Act. To study the impact of the FRBM Act on fiscal indicators, the trends of the performance of major fiscal indicators such as Gross Fiscal Deficit (GFD), Revenue Deficit (RD), Primary Deficit (PD), Total Expenditure (TE), Revenue expenditure (RE), capital expenditure (CE), Total Tax Revenue (TTR), State Own Tax Revenue (SOTR), State Own Non-Tax Revenue (SONTR), Internal debt (ID), Interest Payments (IP) and Total Outstanding Liabilities (TOL)have been analyzed before and after the FRBM Act, at the state level. All the mentioned indicators are taken as a ratio of the repectiveGross State Domestic Product (GSDP).

Table 1: Month & Year of Implementation of the FRBM Act at Sub-national Level, Special Category

States	Month & Year of Enactment	Financial Year of Enactment
Arunachal Pradesh	March, 2006	2005-06
Assam	September, 2005	2005-06
Himachal Pradesh	April, 2005	2005-06
Jammu &Kashmir	August, 2006	2006-07
Manipur	August, 2005	2005-06
Meghalaya	March, 2006	2005-06
Mizoram	October, 2006	2006-07
Nagaland	January, 2010	2009-10
Sikkim	September, 2010	2010-11
Tripura	June, 2005	2005-06
Uttarakhand	October, 2005	2005-06

Source: State Finances- A Study of Budgets of 2013-14, RBI

Furthur to check the structural breaks in the series in respect of fiscal performance, Chow test has been used. As in the case of Chow test, the break points have to be decided in a priori to test the impact of certain policies or incidents (here, the respective years of implementing the FRBM Act by the various Special category States during 2005-06 to 2010-11; Table1). CUSUM of squares tests is applied to check the structuralbreak in mean and volatility of growth rates respectively with an unknown

breakpoint for the gross fiscal deficit to GSDP ratio over time. It is a possibleway to treat the breakpoint as unknown and carry out the Chow test for all the possibleyears.

Moreover, in order to examine the effectiveness of the FRBM Act on the fiscal indicators through a quantitative analysis Gross Fiscal Deficit to GSDP ratio has been regressed against the growth rate of GSDP, development revenue expenditure to revenue receipt ratio and FRBM (where dummy is taken as '1' for year in which it was implemented and '0' otherwise).

V. Results and Discussion

Performance of Special Category States

The economic reform process has not ensured equity for regional development in India (Ahluwalia, 2002). There was huge inter-state variation in the performance level among the Indian states during both the pre-reform as well as post-reform periods (Sachs et al., 2002). The reforms process is mostly in the favour of already well-governed states. The backward states have always failed to utilize the opportunity of reforms because of various hindrances they have faced like less attractive social, economic, and political conditions. Especially, in the case of Special Category States, they were handicapped in various ways because of their low resource base, lack of infrastructure, their geographical location with international boundaries. So, they have less capacity for revenue generation, expenditure quality management and debt sustainability.

Trends in State Government Major Deficit Indicators

The trend of major deficit indicators for the special and general category states are evaluated through their state of fiscal deficit, revenue deficit, and primary deficit as a percentage of GSDP before and after the implementation of the Fiscal Responsibility and Budget Management (FRBM) Act. There are three major deficit indicators such as fiscal deficit, revenue deficit and primary deficit. Revenue deficit indicates the extent to which current receipts are not able to cover revenue expenditure in terms of borrowing to finance. Basically, government consumption expenditure requires to be financed through capital receipts. These capital receipts, excluding non-debt capital receipt, consist of net borrowing, which is called fiscal deficit. The primary deficit is equal to fiscal deficit (a net inflow of borrowed funds) minus interest payments, which represent outflow of borrowed funds in the form of transfer payments. From the Table2 it is observed that there has been a positive impact of FRBM inmost of the Special Category States compared to the Non-Special Category States.

Table 2: Trends in State Govt. Major Deficit Indicators as Percentage of GSDP

States	Fiscal Deficit (FD)		Revenue Deficit (RD)		Primary Deficit (PD)	
	PRE-FRBM	POST-FRBM	PRE-FRBM	POST-FRBM	PRE-FRBM	POST-FRBM
Non-Special Category States						
AP	2.27	4.31	0.88	0.81	0.85	1.73
BH	2.47	3.06	1.34	-2.30	0.64	1.18
GA	1.46	2.97	0.37	-0.26	0.49	0.69
GT	1.72	2.23	0.90	-0.01	0.74	0.43
HR	1.20	2.87	0.53	1.10	0.37	1.24
KR	0.99	2.10	0.34	-0.35	0.43	0.95
KL	1.50	3.25	0.97	2.05	0.61	1.29
MP	1.54	3.15	0.72	-1.18	0.52	1.18
MH	1.25	1.78	0.58	0.27	0.60	0.27
OD	2.09	1.42	1.16	-1.71	0.73	-0.21
PN	1.99	3.87	1.29	2.16	0.64	1.06
RJ	1.74	3.40	0.80	0.99	0.65	1.19
TN	1.08	2.37	0.73	0.42	0.43	0.91
UP	1.92	3.29	1.07	-0.83	0.68	0.97
WB	2.19	3.74	1.50	2.42	1.01	0.51
Special Category States						
AR	1.82	2.58	-3.56	-10.99	0.50	0.41
AS	0.82	1.43	0.19	-0.87	0.02	-0.13
HP	3.02	3.86	1.50	0.73	1.46	0.49
JK	1.72	4.76	-0.79	-3.33	-0.01	1.26
MN	2.51	3.84	-0.47	-6.29	1.04	0.37
ML	1.53	2.63	-0.64	-1.70	0.67	1.15
MZ	9.73	5.43	3.66	-3.68	6.12	1.37
NG	5.62	3.27	0.73	-4.97	2.86	-0.20
SK	2.65	2.52	-2.23	-4.90	0.50	0.43
TR	2.87	2.18	-0.54	-5.28	0.98	-0.15
UT	1.31	2.86	0.48	0.18	0.26	1.36

Note: Andhra Pradesh (AP); Bihar (BH); Goa (GA); Gujarat (GT); Haryana (HR); Karnataka (KR); Kerala (KL); Madhya Pradesh (MP); Maharashtra (MH); Odisha (OD); Punjab (PN); Rajasthan (RJ); Tamil Nadu (TN); Uttar Pradesh (UP); West Bengal (WB); Arunachal Pradesh (AR); Assam (AS); Himachal Pradesh (HP); Jammu & Kashmir (JK); Manipur (MN), Meghalaya (ML); Mizoram (MZ); Nagaland (NG); Sikkim (SK); Tripura (TR); Uttarakhand (UT)

Source: Calculated based on Handbook of Statistics on State Government Finances, RBI& EPWRF

While in the case of Non-Special Category States, the impact of the FRBM Act is not marked as only the state of Odisha has shown a decreasing rate of fiscal deficit. However, improvements have been noticed for almost all the special category states during the post-FRBM period in revenue and primary deficits and 4 out of 11 in fiscal deficit. The states, Mizoram, Nagaland, Sikkim and Tripura were able to reduce fiscal deficit after the implementation of the FRBM. After the FRBM Act, most of the Special and Non-Special Category States were able to reduce revenue deficit. The states of Arunachal Pradesh, Jammu & Kashmir, Manipur, Meghalaya, Sikkim and Tripura had Revenue Surplus before implementation of the FRBM Act. There has been an increase in revenue surplus for all the special category states except Himachal Pradesh and UttarakhandAfter the FRBM. The states of Assam, Mizoram, and Nagaland have a shift from revenue deficit to revenue surplus state after the FRBM. Himachal Pradesh and Uttarakhand have witnessed a reduction in revenue deficit from pre to post FRBM period. In case of primary deficit, the states of Gujarat, Maharashtra, Odisha and West Bengal from the Non-Special Category States have been able to reduce primary deficit in the post-FRBM period. Assam, Nagaland and Tripura have shifted from a primary deficit state to a primary surplus state. There has been a reduction in primary deficit for other special category states except for Jammu & Kashmir, Meghalaya and Uttarakhand over pre to post FRBM period. The reductions are substantial for the states of Mizoram and Nagaland. Thus, most of the Special Category States have a favorable impact of the implementation of FRBM Act.

Trends in State Government Major Expenditure

The trend of the major expenditure indicators for the Special and Non-Special Category States are evaluated through their state of total expenditure, revenue expenditure, and capital expenditure as a percentage of GSDP before and after the implementation of the Fiscal Responsibility and Budget Management (FRBM) Act. Table3 demonstrates that except for Sikkim all the Special and Non-Special Category States were shown an increasing trend in terms of total expenditure, revenue expenditure. Whereas including Sikkim, all the states have shown an increasing trend in case of capital expenditure in the post-FRBM period and the Special Category States deserve special mentioning in this regard. Therefore, it is clear that all the states in general and the Special Category States in particular are utilizing their revenue towards individual developmental needs. The variation in terms of capital expenditure for the Special Category States is huge after the FRBM Act implying larger extent of capital formation for them. So, the central government should appreciate them for their expenditure management with a deficit target.

Table 3: Trends in State Govt. Major Expenditure Indicators as Percentage of GSDP

States	Total Expenditure (TE)		Revenue Expenditure (RE)		Capital Expenditure (CE)	
	PRE-FRBM	POST-FRBM	PRE-FRBM	POST-FRBM	PRE-FRBM	POST-FRBM
Non-Special Category States						
AP	11.29	25.77	8.98	20.10	2.31	61.50
BH	11.47	27.97	9.77	21.45	1.70	78.55
GA	8.95	18.52	7.51	14.62	1.44	40.23
GT	7.36	12.47	5.97	9.29	1.38	37.07
HR	6.73	13.92	5.66	11.15	1.07	29.73
KR	5.19	13.82	4.27	10.72	0.91	44.86
KL	6.00	14.78	5.18	12.73	0.82	37.41
MP	8.83	23.45	7.47	17.54	1.36	77.29
MH	5.66	11.61	4.72	9.39	0.95	25.54
OD	7.65	19.42	6.08	15.14	1.57	60.01
PN	7.35	16.83	6.04	13.53	1.30	31.81
RJ	7.00	18.76	5.54	14.67	1.46	48.09
TN	6.03	14.53	5.27	11.51	0.76	44.45
UP	7.33	23.08	5.57	17.60	1.37	99.31
WB	6.44	17.76	5.38	14.54	1.06	61.11
Special category States						
AR	19.57	58.57	13.78	41.68	5.79	253.42
AS	6.55	20.17	5.31	17.02	1.25	93.99
HP	11.93	25.46	9.24	19.82	2.69	44.61
JK	13.84	36.21	10.62	27.65	3.22	38.08
MN	17.44	46.26	12.11	34.24	5.33	118.98
ML	12.14	31.31	9.37	25.76	2.76	98.88
MZ	39.01	56.19	31.35	44.72	7.65	140.43
NG	29.32	50.42	22.54	39.60	6.77	81.38
SK	51.38	42.24	45.59	33.59	5.79	62.61
TR	20.13	33.89	15.94	25.71	4.19	119.83
UT	8.43	15.96	6.78	12.34	1.65	49.04

Note: Andhra Pradesh (AP); Bihar (BH); Goa (GA); Gujarat (GT); Haryana (HR); Karnataka (KR); Kerala (KL); Madhya Pradesh (MP); Maharashtra (MH); Odisha (OD); Punjab (PN); Rajasthan (RJ); Tamil Nadu (TN); Uttar Pradesh (UP); West Bengal (WB); Arunachal Pradesh (AR); Assam (AS); Himachal Pradesh (HP); Jammu & Kashmir (JK); Manipur (MN), Meghalaya (ML); Mizoram (MZ); Nagaland (NG); Sikkim (SK); Tripura (TR); Uttarakhand (UT)

Source: Calculated based on Handbook of Statistics on State Government Finances, RBI& EPWRF

Trends in State Government Tax Revenue

Table 4: Trends in State Govt. Tax Revenue as Percentage of GSDP

States	Total Tax Revenue (TTR)		State Own Tax Revenue (SOTR)		State Own Non-Tax Revenue (SONTR)	
	PRE-FRBM	POST-FRBM	PRE-FRBM	POST-FRBM	PRE-FRBM	POST-FRBM
Non-Special Category States						
AP	11.29	25.90	4.15	10.25	1.19	2.14
BH	11.20	27.74	2.25	5.53	0.87	0.61
GA	8.85	18.57	2.47	7.02	3.42	4.90
GT	7.40	12.59	3.00	5.99	1.04	1.06
HR	6.98	13.98	2.64	6.62	1.77	1.56
KR	5.21	13.93	2.41	7.02	0.46	0.72
KL	5.98	14.82	2.67	6.66	0.32	1.06
MP	8.86	23.58	2.78	7.59	1.19	1.87
MH	5.68	11.80	2.72	6.35	0.72	0.82
OD	7.62	19.95	1.51	5.58	0.59	2.19
PN	7.53	16.73	2.50	6.63	1.50	1.91
RJ	6.98	18.84	1.96	6.06	0.83	1.85
TN	6.01	14.68	2.96	7.25	0.40	0.84
UP	7.33	23.24	1.97	7.04	0.48	1.70
WB	6.45	17.87	1.92	5.25	0.21	0.43
Special Category States						
AR	19.18	61.11	0.34	3.05	1.53	3.96
AS	6.65	20.54	1.18	4.66	0.53	1.93
HP	11.69	25.27	1.66	5.09	0.76	2.17
JK	13.36	36.24	1.23	5.66	0.61	2.46
MN	17.24	46.28	0.49	2.60	0.61	1.43
ML	12.21	31.30	1.08	4.15	0.70	1.80
MZ	38.56	57.14	0.51	2.32	1.28	2.38
NG	28.45	50.29	0.76	2.39	0.94	1.61
SK	51.88	43.63	1.55	3.76	30.45	12.77
TR	20.07	29.04	1.11	4.02	0.72	0.97
UT	9.94	16.21	2.03	4.79	0.54	1.00

Note: Andhra Pradesh (AP); Bihar (BH); Goa (GA); Gujarat (GT); Haryana (HR); Karnataka (KR); Kerala (KL); Madhya Pradesh (MP); Maharashtra (MH); Odisha (OD); Punjab (PN); Rajasthan (RJ); Tamil Nadu (TN); Uttar Pradesh (UP); West Bengal (WB); Arunachal Pradesh (AR); Assam (AS); Himachal Pradesh (HP); Jammu & Kashmir (JK); Manipur (MN), Meghalaya (ML); Mizoram (MZ); Nagaland (NG); Sikkim (SK); Tripura (TR); Uttarakhand (UT)

Source: Calculated based on Handbook of Statistics on State Government Finances, RBI & EPWRF

The tax revenue is a major component of the taxable capacity of a state. It can be measured in terms of GSDP (as it is considered as a proxy for the tax base of a country). Thus, to analyze the revenue capacity of a particular state, both own tax revenue and own non-tax revenue to GSDP ratio can be considered as the major indicators. From Table 4, it is clear that in case of total tax revenue and state own tax revenue all the Special and Non-Special Category States were shown increasing tax capacity except Sikkim. Moreover, in case of the state's non-tax revenue indicator, the state Sikkim shows a huge reduction in revenue generation. Bihar and Haryana from the general category states also show a decreasing trend in terms of state own non-tax revenue. Thus, there has been huge inter-state variation in terms of various revenue-generating indicators.

Trends in State Government Debt indicators

The trend of major debt indicators for the Special and Non-Special Category States are evaluated through their state of internal debt, outstanding liabilities and interest payments as a percentage of GSDP before and after the implementation of the Fiscal Responsibility and Budget Management (FRBM) Act (*Table5)*. In case of debt indicators, internal debt and outstanding liabilities have shown a high transition from pre-FRBM to post-FRBM period across the states. In terms of interest payments, most of the states from both the Special and Non-Special Categories have shown a declining trend in the post-FRBM period. However, the FRBMA has less impact on the debt indicators across the states.

Table 5: Trends in State Govt. Debt indicators as Percentage of GSDP

States	Internal Debt (ID)		Outstanding Liabilities (OLs)		Interest Payments (IP)	
	PRE-FRBM	POST-FRBM	PRE-FRBM	POST-FRBM	PRE-FRBM	POST-FRBM
Non-Special Category States						
AP	4.86	25.6	15.62	37.65	16.33	14.63
BH	5.31	21.17	22.62	35.4	21.43	11.54
GA	2.57	17.24	14.21	29.14	13.68	14.11
GT	2.12	15.5	11.36	24	18.31	19.59
HR	1.56	9.9	8.59	22.29	15.92	16.38
KR	2.79	16.67	6.26	17.9	13.76	10.62
KL	2.6	17.09	10.36	28.29	20.09	19.53
MP	1.46	13.26	12.09	28.14	14.72	11.4
MH	4.5	9.6	8.24	19.61	15.02	15.71
OD	3.46	25.99	15.37	23.88	25.92	11.81
PN	3.53	19.03	15.27	36	26.97	24.3
RJ	2.11	14.39	12.02	30.8	21.71	17.92

TN	3.51	21.87	7.54	20.39	13.49	13.75
UP	3.76	32.3	15.06	37.02	24.21	14.68
WB	2.07	17.58	12.7	41.92	28.32	31.31
Special Category States						
AR	2.58	12.59	11.29	38.32	7.17	5.62
AS	5.26	26.43	9.12	19.9	15.03	8.81
HP	4.69	26.8	17.37	40.74	19.2	18.8
JK	5.3	23.18	16.98	46.9	16.21	11.01
MN	3	16.86	16.08	46.62	10.82	7.97
ML	15.64	25.37	9.78	30.34	8.25	7.46
MZ	10.89	36.25	46.4	65.31	8.36	7.56
NG	7	19.01	24.26	51.14	12.07	8.5
SK	6.02	19.56	19.8	30.99	5.86	5.89
TR	1.48	17.1	20.48	37.74	11.31	9.38
UT	4.86	25.6	14.29	23.18	15.4	14.32

Note: Andhra Pradesh (AP); Bihar (BH); Goa (GA); Gujarat (GT); Haryana (HR); Karnataka (KR); Kerala (KL); Madhya Pradesh (MP); Maharashtra (MH); Odisha (OD); Punjab (PN); Rajasthan (RJ); Tamil Nadu (TN); Uttar Pradesh (UP); West Bengal (WB); Arunachal Pradesh (AR); Assam (AS); Himachal Pradesh (HP); Jammu & Kashmir (JK); Manipur (MN), Meghalaya (ML); Mizoram (MZ); Nagaland (NG); Sikkim (SK); Tripura (TR); Uttarakhand (UT)

Source: Calculated based on Handbook of Statistics on State Government Finances, RBI & EPWRF

Structural Breaks

Table 6: Structural Breaks in fiscal deficit to GSDP Ratio: Special Category States

States	Year of Break	F- Statistic	P- value	Remarks
Arunachal Pradesh	2006	72.0087	0.0000	Significant
Assam	2006	65.2712	0.0000	Significant
Himachal Pradesh	2006	80.7822	0.0000	Significant
Jammu & Kashmir	2007	18.2349	0.0001	Significant
Manipur	2006	49.6918	0.0000	Significant
Meghalaya	2006	41.5883	0.0000	Significant
Mizoram	2007	12.4150	0.0005	Significant
Nagaland	2010	33.4611	0.0000	Significant
Sikkim	2011	27.9877	0.0000	Significant
Tripura	2006	74.6025	0.0000	Significant
Uttarakhand	2006	12.3004	0.0000	Significant

Source: Calculated based on Handbook of Statistics on State Government Finances, RBI & EPWRF

A break in fiscal performance is suggested by the evidence of deficit reduction in terms of gross fiscal deficit at the special category states of India (Table 6). In case of all the Special Category States,significant break point has been observed after the implementation of the FRBM Act.

Panel Unit Root Test

Prior to opting for the panel regression approach, we investigated the time-series properties of all the variables, such as Fiscal deficit to GSDP ratio, growth rate of GSDP, Development Revenue Expenditure to the ratio of revenue receipts.Different methods of panel unit root tests viz. ***Levin, Lin, Chu (2002),Im, Pesaran, Shin (2003)*** were applied in our investigation for both Special as well the Non-Special Category States separately (Table 7).Where the earlier one assumes a common unit root across cross-sections, while the latter one assumes individual unit root processes.Here, the null hypothesis signifies the presence of a unit root at level, while the alternative hypothesis ascertains stationarityin the data series.The results of both the tests collectively suggest that all the variables are stationary at 1 percent level of significance and development revenue expenditure to revenue receipts is stationary in the first difference.

Table7: Results of Panel Unit Root Tests: Levin, Lin, Chu (2002),Im, Pesaran, Shin (2003)

Variables	Non-Special Category States		Special Category States	
	Levin, Lin, Chu t-statistics	Im, Pesaran, Shin W-statistics	Levin, Lin, Chu t-statistics	Im, Pesaran, Shin W-statistics
FD/GSDP	-2.161 (0.015*)	-0.696 (0.243***)	-5.845 (0.00*)	-5.313 (0.00*)
GSDPgr	-16.845 (0.000*)	-16.551 (0.000*)	-11.928 (0.00*)	-12.554 (0.00*)
DRE/RR	-1.328 (0.092**)	-0.148 (0.440***)	-1.267 (0.102***)	-0.857 (0.195***)
DRE/RR: I(1)	-15.064 (0.000*)	-15.666 (0.000*)	-11.386 (0.000*)	-14.217 (0.000*)

*Note: I(1) is the 1st difference of the unit root; automatic selection of lags through Schwarz Information Criteria (SIC). All panel unit root tests are defined by Bartlett kernel and Newly West bandwidth. *-**-*** shows 1, 5 &10 per cent level of significance.*

Source: Authors' Calculation

Panel Cointegration Test

Since all the variables were found to be I (0) in case of both Levin, Lin, Chu and Im, Pesaran, Shin except DRE/RR is I(1) in Im, Pesaran, Shin. In the next step, an attempt has been made to test, whether there exists a long-run equilibrium between the variables through the panel cointegration tests.The study has been used the methodology proposed by Pedroni (1999) to test whether a cointegrating relationship exists between the variables in case of Special as well Non-Special Category States.The null hypothesis shows there is no cointegration while the alternative hypothesis shows there is cointegration.This method employs seven statics, four panel statistics and three group panel statistics.In the case of panel statistics, the first-order autoregressive term

AR(1) is assumed to be the same across all the cross sections while in case of group panel statistics, the parameter is allowed to vary over the cross sections (Kaur, 2018). The results of the test for both the panel and group statistics reveal evidence of panel cointegration (Table8).The estimated 'rho' statistics, variance ratio 'V' statistics, fails to reject the null hypothesis which means there is no cointegration among the variables in case of Non-Special Category States. But AugmentedDickey Fuller (ADF) statistics and the Phillips and Perron (PP) statistics reject the null hypothesis of no cointegration at 1% significance level for all the three models.This implies

Table-8: Panel Cointegration Tests: Pedroni Residual Cointegration

Test Statistics	Non-Special Category States		Special Category States	
	Panel Statistics	Group Statistics	Panel Statistics	Group Statistics
Model with no deterministic intercept or trend				
V Statistics	-0.990 (0.839***)		-0.948 (0.828***)	
Rho Statistics	-0.810 (0.208***)	1.405 (0.920***)	-2.474 (0.006*)	-1.463 (0.071**)
PP Statistics	-1.962 (0.024**)	-0.131 (0.447***)	-4.586 (0.000*)	-4.666 (0.000*)
ADF Statistics	-1.988 (0.023**)	-0.069 (0.472***)	-4.623 (0.000*)	-4.732 (0.000*)
Model with individual intercept and no deterministic trend				
V Statistics	-0.946 (0.828***)		-1.290 (0.901***)	
Rho Statistics	-0.630 (0.264***)	2.298 (0.989***)	-2.101 (0.017*)	-0.997 (0.159***)
PP Statistics	-2.390 (0.008*)	1.077 (0.859***)	-5.600 (0.000*)	-5.716 (0.00*)
ADF Statistics	-1.515 (0.04*)	1.775 (0.962***)	-5.806 (0.000*)	-5.605 (0.00*)
Model with individual intercept and trend				
V Statistics	-1.271 (0.898***)		-2.847 (0.997***)	
Rho Statistics	0.902 (0.816***)	2.148 (0.984***)	-0.604 (0.272***)	0.476 (0.683***)
PP Statistics	-6.501 (0.000*)	-5.919 (0.000*)	-9.043 (0.000*)	-15.322 (0.000*)
ADF Statistics	-7.018 (0.000*)	-5.107 (0.000*)	-7.096 (0.000*)	-7.807 (0.000*)

*Note: All reported values are asymptotically distributed as standard normal. Figures in the parentheses indicate the respective p values. Automatic selection of lags through Schwarz Information Criteria (SIC). Newly West bandwidth selection using a Bartlett kernel. *-**-*** shows 1, 5 &10 per cent level of significance.*

Source: Authors' Calculation

that the cointegration results are not affected by differentmodeling assumptions. Moreover, in case of the Special Category states the results are same as the Non-Special Category States but here except 'rho statistics and V statistics, all the panel and group statistics reveal the evidence of panel cointegraton.

The Pedroni(1999) test results are also supported by Kao residual cointegration test, which rejects the null hypothesis and accept the alternative hypothesis of cointegration at 1% level of significance (Table 9). Also, in case of Non-Special Category States the test shows cointegration at 1% level of significance. Thus, the overall findings of the

panel cointegration tests reveal that the FD/GSDP, GSDPgr, DCE/RR and DFRBM are cointegrated, indicating a long-term co-movement between them. Thus, it is clear from the results that there is a long runimpact of the FRBM on the fiscal indicators of the Indian states.

Table-9: Results of Kao Residual Tests

Variable	Non-Special Category States		Special Category States	
	t-statistics	Prob.	t-statistics	Prob.
ADF	-2.074	0.019	-1.643	0.040
Residual variance	1.472		9.820	
HAC variance	0.449		1.487	

*Note: Newly West bandwidth selection using a Bartlett kernel. Automatic selection of lags through Schwarz Information Criteria. *-**-*** shows 1, 5 &10 per cent level of significance.*

Source: Source: Authors' Calculation

After ensuring the stationary properties of the data, the impact of FRBM Act has been examined by using the panel estimation methods. The following equation has been used for hepurpose:

$$F_{it} = \alpha_o + \beta_1 Gr_{(it-1)} + \alpha_1 RE_{it} + \alpha_2 D_{it} + \varepsilon_{it} \quad (1)$$

Here, F stands for fiscal deficit to GSDP ratio; Gr is the growth rate of GSDP; RE is the development revenue expenditure to revenue receipt ratio; D is the FRBM dummy with '0' (if not implemented) and '1' (if implemented) and ε is the error term of the model. For checking the fixed or random effect, Hausman specification test is applied which validates the fixed effect model for the Non-Special Category States and random effects model for the Spcial Category states. The result of Fixed effect model shows that the impact of FRBM Act on the fiscal deficit to GSDP ratio is significant at 1% level for the Non-Special Category States. Whereas, the Random effect model reveals that the implementation of the FRBM Act has significant impact on the fiscal deficit to GSDP ratio for the Special Category states at 5 percent level. So, implementation of FRBM appears to be significant for managing fiscal deficit.

Table10 clearly reveals that the implementation of FRBM has a clear and significant impact on fiscal deficit of the Non-Special Category States. The positive coefficient of the FRBM dummy reveals that the implementation of FRBM leads to an adverse impact on the States' fiscal deficit with an increasing amount of deficit as (α_o+α_2i.e. 16.14 + 6.40 = 22.54) on an average, keeping all other explanatory variables constant. Again for the Non-Special Category States, gross fiscal deficit reduces with increased in GSDP growth rate as well as development revenue expenditure as a proportion to revenue receipt. However, for the Special Category States, the implementation of FRBM Act does not have that much adverse impact on their fiscal deficit as compared to the Non-Special Category States, though there is no model fit for the regression of the Special Category States.

Table-10: Results of the Fixed and Random Effect Models

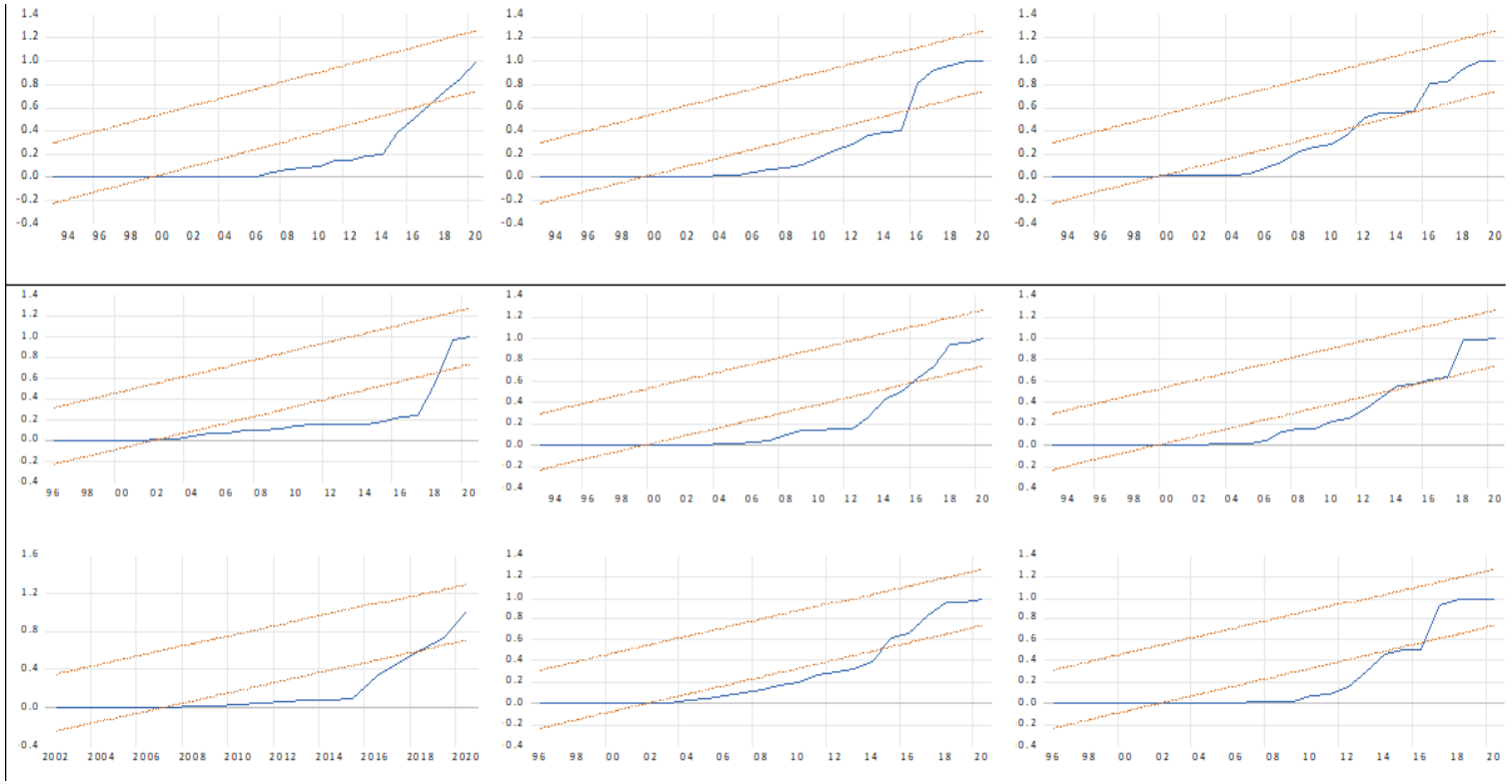
Regressors	Non-Special Category States (FE)	Special Category States (RE)
C	16.135 (0.000*)	7.521 (0.000*)
GSDPgr	-1.485 (0.138***)	0.854 (0.193***)
DRE/RR	-2.137 (0.033**)	-1.560 (0.119***)
FRBM_dummy	6.403 (0.000*)	1.841 (0.066**)
Cross-section FE (dummy variables)		
R-squared	0.273	0.015
Adjusted R-squared	0.244	0.005
F-statistic	9.244 (0.000)	1.526 (0.207)
Akaike info Criterion	3.536	
Durbin-Watson stat	0.848	1.390
Hausman (chi2)	0.000 (1.000)	10.561 (0.014)
No. of observation	435	292

*Note: 1. Figures in p-values; *-**-*** indicate significance levels at 1%, 5% and 10%, respectively.*

Source: Authors' Calculation

It can be observed from Figure 5, that the CUSUM of Square statistics is significant at 5 % level of significance. The figures indicate that the model is stable only for the state of Uttarakhand. Other states have shown instability over the time. Break point is observed for all the states after the implementation of the FRBM Act.

Figure 5: Special Category States: Fiscal Deficit



RBI & EPWRF; Note: fig: (i-xi) contain for the AR, AS, HP, JK, MN, ML, MZ, SK, TR, UT respectively; Source: Calculated based on Handbook of Statistics on State Government Finances

Conclusion

The present study clearly demonstrates that the fiscal performance of the special category states after the implementation of the FRBM Act appears to be better in comparison to the Non-Special Category States. These states have been reducing revenue deficit and also maintain revenue generation after the FRBM Act, but in the context of fiscal deficit and debt sustainability, the performance is not that much satisfactory. The causes may be that most of the special category states have utilized the central resources according to their capacity and performing well over time but some of them were failed to maintain fiscal sustainability and they are highly dependent on central grants. The result of the Chow test has shown structural break in case of all the special category states in the post-FRBM period. There is unexplained variation in fiscal performance across the states. Thus, it is expected to be better if there is a target-based and time-bound framework with proper accountability and monitoring facilities, for both the special and non-special category states. It may be motivated them to grow and become prosperous by reducing their dependency on the Centre.

Note:

Now, there is no such categorization of special and general category states after the recommendations of the Fourteenth Finance Commission and restructuring and reduction of the plan grants and CSS lead these states in a disadvantageous position. But still the eight northeastern states and the two (As Jammu & Kashmir become union territories: 31st October, 2019) Himalayan states were getting some benefits than other states considering their economic backwardness and higher dependency on the Centre.

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