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BUDGETARY ADVOCACY AND PUBLIC FINANCE MANAGEMENT FOR NORTH-EASTERN REGION IN INDIA

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Abstract

Democracy across the world has witnessed the evolution of the electoral This paper analyses the budgetary effectiveness of the northeast states in India by exploring the causality between realised gap in budget estimates with states' degree of self-reliance, socio-economic and political constancy for a decade period, 2006-07 to 2015-16. There has been a trend in the gap between budgetary estimates. This paper constructs fractionalisation index, polarisation index, effective number of party index to judge the role of the central assistance in the standpoint of fiscal issues and governance accountability at the sub-national level. The panel ordered logistic model claims that the political concentration, ethnic diversity, state's own revenue capacity play an important role in determining the ineptitude of the states in fiscal management. The provision of states' expenditure tends to be inconclusive with high ethnic diversity or polarization for multiple decision making units which affects the growth pace of the state. The paper claims that the adverse impact is more vibrant in case of planned expenditure which is considered as key to long run development for the states.

Keywords: *Public Financial Management, Political Federalism, Fractionalization, Polarization, Ethnic Diversity*.
JEL Codes: *H61, P48, E60, H72*

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INTRODUCTION

In a democratic set up, the budget for any state is also perceived as an agreement as it allocates funds for activities and crates a bridge between politicians and task managers (Schick, 2011). However, in developing countries, budget credibility is still a matter of grave concern (Addison, 2013). Variances between budget estimates and the actual receipts (or expenditure) only reduces the ability of the government to execute the entitlements of the citizens in various forms- be it the rights or quality service delivery, finally making the budget less credible. In India, for example, in the North Eastern region (NER, henceforth) the translation of the budgetary allocations into the creation of public goods and infrastructure is doubtful and raises several questions about the utilization and allocation of the resources vis –a- vis the state of development in these States. Even in recent times they are perennially at the margin of India's overall development process (Nayak and Mishra, 2013; De et. al, 2019).

The NER is considered to be one of the most diverse regions in Asia in terms of its biodiversity, ethnicity, language and cultural variety (Government of India, 1956; Kumar B.B., 1996; Gopalakrishnan, 1991; Ganguly 2011; Dikshit and Dikshit, 2014; Bhattacharjee, 2018). The Ministry of Development of North-Eastern Region (MDoNER) was established in 2001 by Government of India to look after the development issues of North-East region. Successive Central governments tried to find solution to these challenges through a variety of means – transferring large resources being one of them. For example, GOI (2018) clearly states that in the preceding years the budgetary allocation to the MDoNER has increased significantly. Rather than taking advantage of the enhanced financial allocation along with the unique features and channelize them to the overall socio-economic development of this region, history suggests that the ethnic clashes and the separatists conflicts has led to high level of violence where the state machinery gets pulled into different direction and finally, all these taken together,

ultimately hindered the economic development (Roy Burman, 1989; Marchang, 2019).

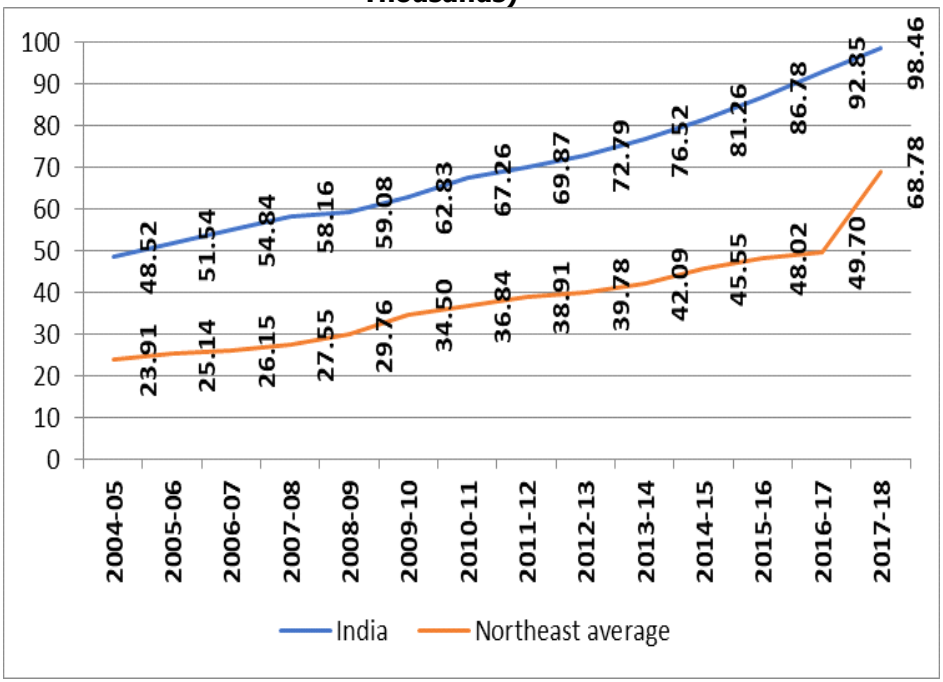
In this paper, based on panel data from 2006-07 to 2014-15 for all the NER states provided by the Reserve Bank of India (RBI) we try to scrutinize the trend of budgetary allocation in disaggregated form and attempt to explain the underlying reason behind such laggard performance of the NER region despite sustained efforts by the upper tier government. We also examine the mobility of these states over the said years in terms of efficient budgetary practices by constructing few indices taking into account the ethnic diversity, political federalism and alike factors which affect the fiscal governance.

THE FISCAL SCENARIO OF THE NER STATES

Primarily the weakness in forecasting revenue receipts has been seen as one of the major factors affecting budget credibility (Simson and Welham, 2014). For many years the states in the NER are struggling to raise their per capita Net State Domestic Product (NSDP). Figure 1 shows that the average per capita NSDP of the NER states has always been close or lower than half of the national average[1]. It is only during 2016-17 onwards that there is a rising trend in terms of the average per capita NSDP, the major contributor being Sikkim.

[1] The only exception is Sikkim, which has doubled its per capita income after 2008.

Figure 1: Average Per Capita NSDP of North-East Indian States (2003-04 Base Year for NSDP,) and the Average GDP (Rs. Thousands)



Source: Data for Per Capita Net State Domestic Product (Constant price at 2004-05 base year) is extracted from Reserve Bank of India, Handbook of Statistics on Indian States, Per capita GDP data (Constant Prices Rs.) is extracted from Ministry of Statistics and Programme Implementation, Government of India.

Reports submitted to the Fifteenth Finance Commission (GoI) suggest that as a percentage of GSDP, the average own tax revenue for North-East and hill states is 5.02 percent. To maintain the exchequer these states heavily depend on the transfers (which are mostly tied to specific expenditure priorities) from the upper tier[2], thus leaving less room for the states to the states to spend as per their local socio-

[2] Between 2011-2019, the average contribution of own revenue to the total revenue pool quite low. Assam: 33 percent, Mizoram: 9 percent, Nagaland: 9 percent, Tripura: 16 percent, Sikkim: 26 percent. The rest of the portion was financed through central transfers.

economic priorities. Thus, the NER states suffer from a twin blockade – low own revenue and tied central transfers.

Moreover, despite the debt targets for states recommended by the 13th and 14th Finance Commission, even in 2018-19, barring Assam, all other NER states are much above the 20 percent threshold (relaxed threshold prescribed by the FRBM Review Committee and in line with the revised FRBM implied debt target of 20 per cent) limit. In 2018-19, apart from Mizoram all other NER states are much above the 3 per cent of GFD-GSDP threshold. Such deficits are not a sudden phenomenon when we deal with sub-national finances. Therefore, for a better fiscal management, every state in India is entitled to a share of all Central taxes as per the union list (Article 275 of the Constitution). This taxes are pooled together to form the 'divisible pool of central taxes', and thereby creating a smooth process of devolution from the Centre to the States. These shares are recommended by the Central Finance Commission (set up as per provisions under Article 280 of the Constitution) formed every five years. The mandate of the Finance Commission also permits them to recommend the interstate share from this divisible pool. Primarily, the entire mechanism is to reduce the regional disparity by ensuring the flow of the needed resources to meet the expenditure needs. Following the mandate, the 14th Finance Commission (GoI) adopted a comprehensive approach to assess the expenditure needs by treating both the plan and the non-plan expenditures as a part of the revenue account[3]. Thus the grants were purposively designed to bridge the post devolution revenue deficit. Such post devolution revenue deficit only indicates the extent of a vertical imbalance. Needless to mention, that such vertical imbalances should be assessed and corrected for a better fiscal management. As a tool to mitigate such vertical imbalances the said Finance Commission provided 'Revenue Deficit Grant' (during 2015-16) to the states which had had the aforementioned needs to meet their expenditure requirements. Out of the eleven states for whom this revenue deficit grants were

[3] For details refer to the website of the Finance Commission of India: https://fincomindia.nic.in/

provided, six are from the NER (Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura). Question arises as what has been behind such poor performances of the NER states despite prolonged Central assistance. Why the states in the NER could not become self-sufficient, at least to a large extent, even after 60 years (roughly) of their formation. Is it the case that states which rely on unearned income have little incentive to increase tax (Moore, 2007). The entire budgetary exercise carried out in the NER states for several years may be questioned for such consistent poor performances. Lack of transparency, poor accountability and budget indiscipline are only examples of budgetary abuses. Over time, such social unrest and political polarization at the sub national level have led to the weakening of the revenue base of the NER states. In the Indian context, several studies have found that ethnic polarization due to caste affiliations as one of the main obstacles to hold politicians electorally accountable for poor performance (Banerji,1997; Banerji and Pande, 2007). Alesina, *et. al.* (1999), Bardhan and Mookherjee (2000) Afridi, Iversen and Sharan (2016), Bardhan and Mukherjee (2012) in pertinent context have shown that ethnic polarization can reduce investments in local public goods simply because of divergence of revealed preferences among the ethnic groups. Banerjee and Somanathan (2007) showed that higher degree of caste and religious based ethnic fragmentation in India has adversely affected the access to public goods. Therefore, as a timely exercise, this paper tries to identify the spending efficiency of the NER states of India by measuring the gap between budgetary allocation and actual spending and ranks the states over a decade period, 2006-07 to 2014-15. Further, it explores the parity between budgeted planned expenditure and developmental needs specified and also finds whether there exists any causality between realised gap in budgetary activity and socio-economic and political stability of these states. It also relates the role of the central assistance related to fiscal issues and governance accountability at the sub-national level.

METHODOLOGY

Following Montalvo,J.G., and Reynal-Querol, M. (2005) and Esteban, J.M., and Ray, D. (1994), fractionalization index[4] and polarization index have been used to measure social diversity and political polarization in the society respectively. The values for both the indices lie between 0 and 1. With more diversity in the society, the fractionalization index will be closer to 1. Further, polarization index captures the varied poles in terms of the political colours that exist in the said society, and with more polarization (less of coalition), the value of the said index will be close to 1.

$$Fractionalization\ Index = 1 - \sum_{i=1}^{n}(Share\ of\ i^{th} religion\ in\ total\ population)^2 \quad (1)$$

More the value of the fractionalization index more will be the diversity in the society.

Further, polarization index[5] has been defined as per the following equation 2.

$$Polarization\ Index\ = 1 - \sum_{i=1}^{n}\left(\left(\frac{0.5 - Share\ of\ i^{th} religion\ in\ total\ population}{0.5}\right)^2 * Share\ of\ i^{th} religion\ in\ total\ population\right) \quad (2)$$

Following Laakso and Taagepera (1979), the study also estimates political concentration using the 'Effective numbers of political parties'

[4] The fractionalization index measures the probability of two randomly chosen individual belonging to different groups. It does not include information on the extent of cultural or economic differences across groups. But it can be altered to incorporate information about group-based differences (Baldwin, K., and Huber, J. D. (2010)).

[5] An ethnic polarization index is a measure of the extent to which individuals in a population are distributed across different ethnic groups. The index was developed by Esteban, J.M., and Ray, D. (1994).

(ENP, henceforth) by constructing the Herfindahl-Hirschman Index (HHI)[6].

$HHI = \sum_{i=0}^{n} p(x_i)^2$ (3)

Where, x_i represents a party and p(x_i) is the proportion of seats or votes the party, i, receives.

We define, $ENP = \frac{1}{HHI}$ (4),

Where by dividing 1 by the HHI, the ENP measure is at its highest when the index is at 1/N and is at its lowest value, 1, when the index is also 1. High ENP reflects the higher number of political parties in the government which shows the high degree of coalition. The states are ranked on the basis of estimated values of these three indices, viz., ENP, fractionalization and polarization indices. The data related to the winning seats which required for ENP is taken from Election Commission of India. The religious population data required to calculate the polarization and fractionalization indices is taken from the Census, India. A Spearman's Rank-Order Correlation[7] method is used to identify the correlation and movement of rank of variables amongst ENP, per capita GSDP, revenue deficit, gap between actual spending and budget estimates and its square.

We have framed two different models for ordered logistic regression with panel data to obtain the likelihood of causality of budgetary inefficiency. Here we have measured budgetary efficiency by considering squared gap between actuals and budget estimates. A panel ordered logit model is performed to analyse the impact of this squared gap budgetary estimates.

Here, the dependent variable to be modelled (Y*) which takes on 8 different values according to their ranks, which are naturally

[6]HHI index is a commonly accepted measure of market concentration. It is calculated by squaring the market share of each firm competing in a market. Here it is used to measure the composition of the political party in power and whether it is a one-party government or a coalition.

[7]Spearman's rank correlation coefficient is known by the name of Charles Spearman.

ordered: Y^*_{it} = 1, 2,3 and 8 , t = 2007, 2008, .. 2015. Here, the observed Y is generated by a latent variable where the link between the latent and observed data is given as follows:

$$Y=1 \text{ if } a_1<Y^*<a_2$$
$$Y=2 \text{ if } a_2<Y^*<a_3$$
$$\ldots\ldots$$
$$Y=8 \text{ if } a_8<Y^*<a_9$$

Where, the range of the values is a_1 to a_5. Now the regression model takes a form as follows.

$$y_{it}^{*} = \alpha + \beta x_{it} + \varepsilon$$

Here x represents the matrix of independent variables, β is slope coefficients, and ε is a stochastic error term. The likelihood for the panel ordered logit is defined as the product of the probabilities associated with each discrete outcome.

$$L\ (\beta, \alpha) = \prod_{1}^{n} \Pr(Y_{it} = j/x_{it})$$

The α_j are called cut points or threshold parameters. The cut points are computed from the data and help to match the probabilities associated with each discrete outcome. From these, the category-specific marginal effects can be obtained. The analysis refers to a 'virtual' regression model, where conditional mean is a linear function of observed 'explanatory' variables. In order to get a simplified index within the range of 0 to 1, we have applied a distance formula on the financial inclusion index (composite index value) (Mukherjee and Sood, 2020).

Model 1: Planned Expenditure Framework

$$\text{Rank\_gap\_plan\_expenditure}_{it} =$$
$$\beta_0 + \beta_1 \text{per capita GSDP}_{it} + \beta_2 \text{polarisation index}_{it} + \beta_3 \text{ENP}_{it} +$$
$$\beta_4 \text{fractionalisation index}_{it} + \beta_5 \text{state own tax revenue}_{it} \ldots \quad (5)$$

Where i = 1,2,……,8 ; t=2006-07, 2007-08,…..2014-15

Model 2: Non-planned Expenditure Framework

$$\text{Rank\_gap\_nonplan\_expenditure}_{it} = \beta_0 + \beta_1 \text{per capita GSDP}_{it} + \beta_2 \text{polarisation index}_{it} + \beta_3 \text{ENP}_{it} + \beta_4 \text{fractionalisation index}_{it} + \beta_5 \text{state own tax revenue}_{it} \quad (6)$$

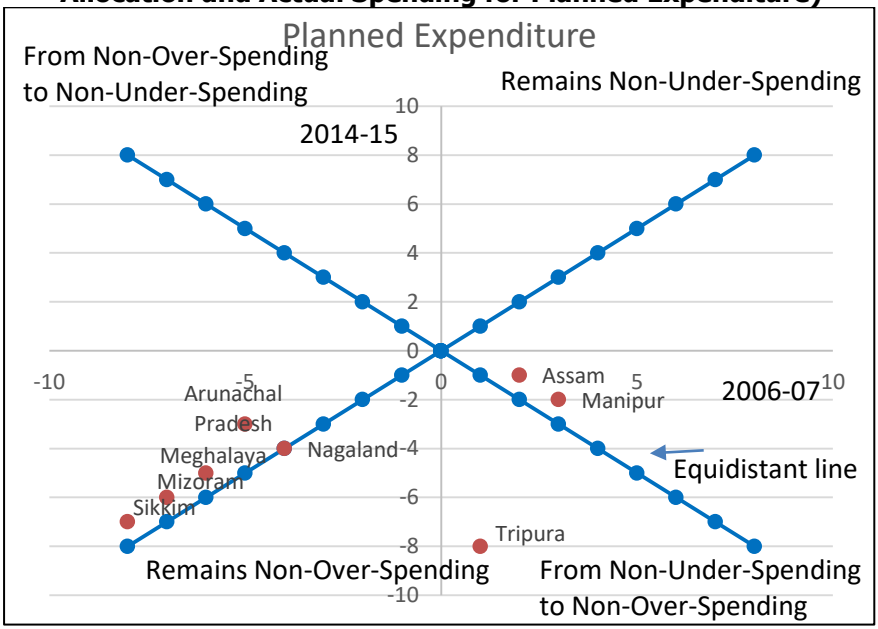
Where i = 1,2,……,8 ; t=2006-07, 2007-08,…..2014-15

EMPIRICAL ANALYSIS

In order to understand the budgetary efficiency, as a first step, the gap between the actual spending and budget estimate for plan and non-plan expenditure have been calculated separately. Based on the magnitude and the direction of the realised gap, the study states are ranked in ascending order. Positive gap suggests the over spending while negative gap shows an under spending. The rank is calculated across NER states and across time period and both the cases of positive gaps and negative gaps[8] are quite prominent as shown in four-Figure diagram (Figure 2).

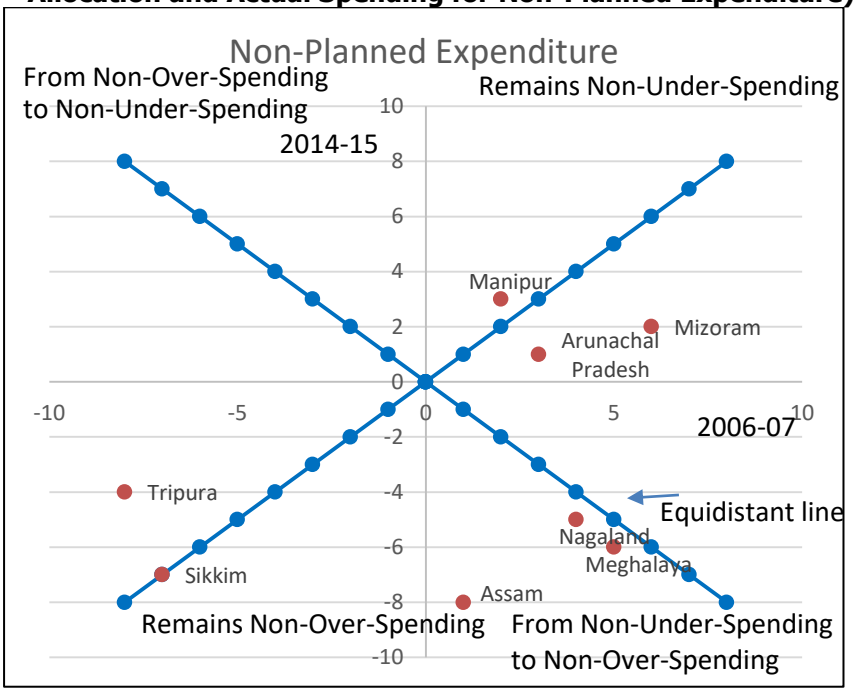
[8]Negative gap (Under spending): Budget estimate more than actuals; Positive gap (Over spending): Actuals more than Budget estimates.

Figure 2: Mobility of States Across Northeast States within Northeast States (According to the Gap Between Budget Allocation and Actual Spending for Planned Expenditure)



Data Source: Authors have calculated the rank on the basis of gap between budget estimates and actual spending from 2006-07 to 2014-15 by collecting the data from the Reserve Bank of India across northeast states.

Figure 3: Mobility of States across Northeast States within Northeast States (According To the Gap between Budget Allocation and Actual Spending for Non-Planned Expenditure)

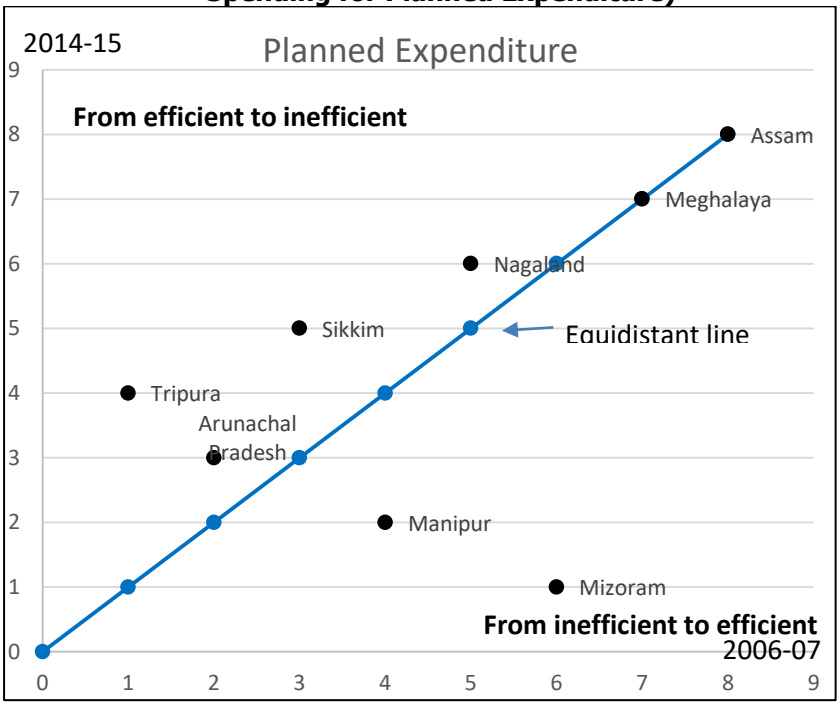


Data Source: Authors have calculated the rank on the basis of gap between budget estimates and actual spending from 2006-07 to 2014-15 by collecting the data from the Reserve Bank of India across northeast states.

In Figure 2 and 3, quadrant 1 implies positive gaps (over spending) for 2006-07 as well as 2014-15. Quadrant 2 implies positive gap (over spending) in 2014-15, but negative gap (under spending) in 2006-07. Quadrant 3 implies negative gap (under spending) for both 2006-07 and 2014-15. Quadrant 4 implies positive gap (over spending) for 2006-07 and negative gap (under spending) for 2014-15. Overspending, on one hand, denotes that the states are diverging the resources to given expenditure. Under spending, on the other, shows the inability of states to spend the funds. Given the above, for analytical

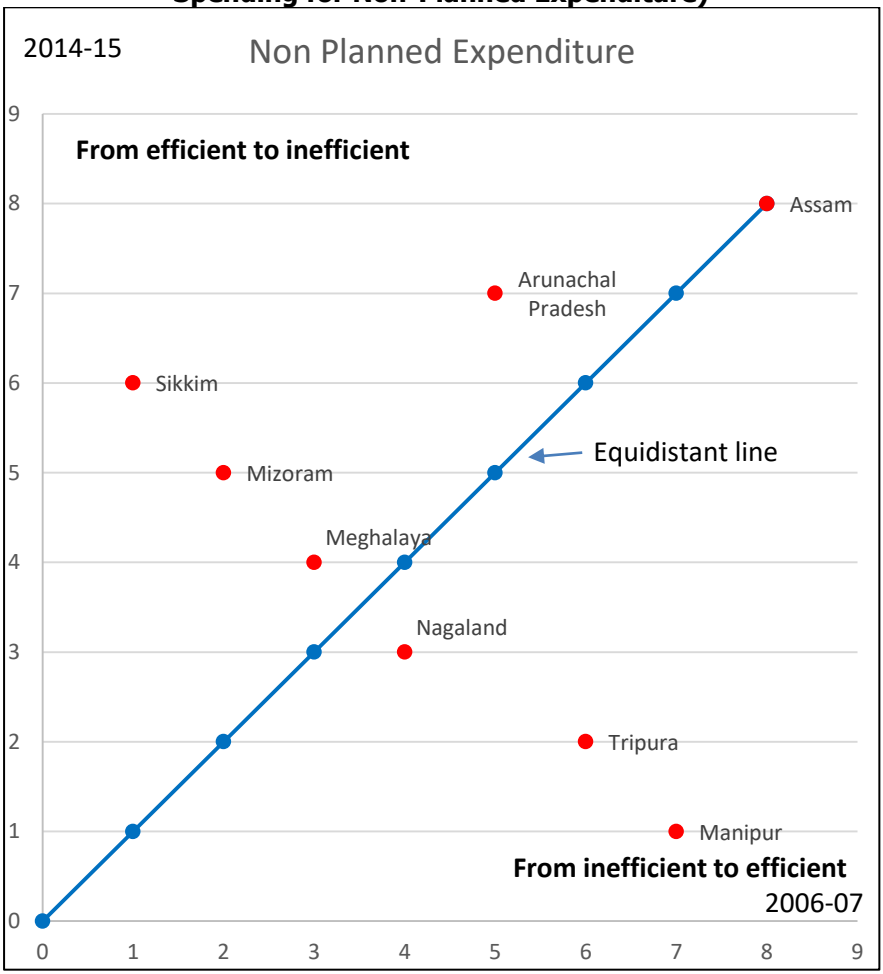
purpose to overcome the problem of bi directional gaps, the square of gap is calculated and the states are ranked again to see the mere existence of the gap and its magnitude. In this, for states with minimum volume of gaps, can be viewed as comparatively efficient simply because the absolute value of the gap between the estimate and actuals are low as shown in (Figure 3).

Figure 4: Mobility of States Across Northeast States (According To The Square of the Gap Between Budget Allocation and Actual Spending for Planned Expenditure)



Data Source: Authors have calculated the rank on the basis of gap between budget estimates and actual spending from 2006-07 to 2014-15 by collecting the data from the Reserve Bank of India. Rank is created on the basis of the value of the square of gap across states.

Figure 5: Mobility of States Across Northeast States (According to the Square of the Gap Between Budget Allocation and Actual Spending for Non-Planned Expenditure)



Source: Authors have calculated the rank on the basis of gap between budget estimates and actual spending from 2006-07 to 2014-15 by collecting the data from the Reserve Bank of India. Rank is created on the basis of the value of the square of gap across states.

Within NER states, Manipur and Mizoram are below of 45-degree line for plan expenditure which means that they became more efficient

state in 2014-15 compare to all other northeast states. Nagaland, Tripura and Manipur move from inefficient to efficient states in 2014-15 for non-plan expenditure. Compare to other northeast states Assam remains same for plan and non-plan expenditure in both time periods. For plan expenditure, Meghalaya remains at same position compare to other northeast states (Figure 3).

As seen that most of the states in the NER has moved from an efficient trajectory towards inefficiency over time, therefore, it is important at this point to examine the binding factors behind such performance. As evident from table 1, the ENP for all the NER states, barring Sikkim for few years, shows the existence of coalition. On an average, over the period in concern the lowest recorked ENP was for Sikkim (1.35) and the highest for Meghalaya (5.35). The ENP across states was as high as 4.61 during 2006, though it is showing a declining trend and is 2.41 during 2015, still the degree of collation is still quite high. With such an outcome, it is essential to check the polarisation index (table 2) as well as the fractionalization index (table 3).

Table 1: ENP for the NER States

States	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	***Average ENP***
Arunachal Pradesh	3.10	3.10	3.10	1.98	1.98	1.98	1.98	1.98	2.04	2.04	**2.33**
Assam	5.65	5.65	5.65	5.65	5.65	2.55	2.55	2.55	2.55	2.55	**4.10**
Manipur	7.45	3.93	3.93	3.93	3.93	3.93	2.01	2.01	2.01	2.01	**3.52**
Meghalaya	5.95	5.95	10.65	3.94	3.94	3.94	3.94	5.19	5.19	5.19	**5.39**
Mizoram	2.62	2.62	1.56	1.56	1.56	1.56	1.56	1.38	1.38	1.38	**1.72**
Nagaland	8.57	8.57	5.29	5.29	5.29	5.29	5.29	2.49	2.49	2.49	**5.11**
Sikkim	1.07	1.07	1.07	1.00	1.00	1.00	1.00	2.12	2.12	2.12	**1.35**
Tripura	2.49	2.49	1.70	1.70	1.70	1.70	1.70	1.50	1.50	1.50	**1.80**
Average ENP	**4.61**	**4.17**	**4.12**	**3.13**	**3.13**	**2.74**	**2.51**	**2.40**	**2.41**	**2.41**	-

Source: Authors' Calculation.

Table 2: Polarization Index for the NER States

States	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average Polarization
Arunachal Pradesh	0.7488	0.7486	0.7485	0.7483	0.7481	0.7480	0.7478	0.7477	0.7475	0.7474	**0.7481**
Assam	0.8783	0.8818	0.8854	0.8889	0.8924	0.8959	0.8994	0.9029	0.9064	0.9099	**0.8941**
Manipur	0.8428	0.8448	0.8467	0.8486	0.8505	0.8524	0.8543	0.8563	0.8582	0.8601	**0.8515**
Meghalaya	0.6751	0.6696	0.6641	0.6586	0.6532	0.6477	0.6422	0.6367	0.6312	0.6258	**0.6504**
Mizoram	0.4216	0.4213	0.4211	0.4208	0.4206	0.4203	0.4201	0.4199	0.4196	0.4194	**0.4205**
Nagaland	0.3759	0.3814	0.3870	0.3926	0.3982	0.4037	0.4093	0.4149	0.4204	0.4260	**0.4009**
Sikkim	0.8240	0.8233	0.8227	0.8221	0.8214	0.8208	0.8202	0.8195	0.8189	0.8183	**0.8211**
Tripura	0.4766	0.4815	0.4863	0.4911	0.4959	0.5007	0.5055	0.5104	0.5152	0.5200	**0.4983**
Average Polarization	**0.6554**	**0.6565**	**0.6577**	**0.6589**	**0.6600**	**0.6612**	**0.6624**	**0.6635**	**0.6647**	**0.6659**	

Source: Authors' Calculation

Table 3: Fractionalization Index for the NER States

States	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average Fractionalization
Arunachal Pradesh	0.7373	0.7381	0.7388	0.7396	0.7404	0.7412	0.7419	0.7427	0.7435	0.7443	0.7408
Assam	0.4928	0.495	0.4972	0.4993	0.5015	0.5037	0.5058	0.508	0.5102	0.5123	0.5026
Manipur	0.6487	0.6479	0.647	0.6462	0.6453	0.6445	0.6437	0.6428	0.642	0.6411	0.6449
Meghalaya	0.4473	0.442	0.4367	0.4314	0.4261	0.4208	0.4155	0.4102	0.4049	0.3996	0.4235
Mizoram	0.234	0.2336	0.2333	0.2329	0.2325	0.2321	0.2317	0.2314	0.231	0.2306	0.2323
Nagaland	0.2015	0.2049	0.2083	0.2117	0.2152	0.2186	0.222	0.2254	0.2289	0.2323	0.2169
Sikkim	0.5625	0.5661	0.5697	0.5734	0.577	0.5806	0.5842	0.5878	0.5914	0.595	0.5788
Tripura	0.2763	0.2798	0.2834	0.2869	0.2905	0.294	0.2976	0.3012	0.3047	0.3083	0.2923
Average Fractionalization	0.4501	0.4509	0.4518	0.4527	0.4536	0.4544	0.4553	0.4562	0.4571	0.4579	

Source: Authors' Calculation

Spearman's rank correlation coefficient measures the rank correlation and degree of statistical dependence of the variables' and also analyses the monotonic linkages.

Table 4: Spearman's Rank Correlation between Parameters Across the NER States

	Rank Gap in Plan Expenditure	Rank Gap in Plan Expenditure (sq)	Rank Gap in Non-Plan Expenditure	Rank Gap in Non-Plan Expenditure (sq)
Rank Revenue Deficit	0.0209 (0.8654)	-0.0536 (0.6642)	0.0422 (0.7328)	0.3115* (0.0097)
Rank Per capita GSDP	0.2720* (0.0249)	0.5041* (0)	0.0932 (0.4497)	0.2735* (0.024)
Rank Effective Numbers of Political Parties	-0.3609* (0.0025)	-0.3783* (0.0015)	-0.0601 (0.6265)	-0.4385* (0.0002)
Rank Fractionalization	-0.0941 (0.4454)	0.0231 (0.8519)	0.134 (0.2761)	-0.1308 (0.2879)
Rank Polarization	-0.3400* (0.0046)	-0.2943* (0.0149)	-0.2417* (0.0471)	-0.2457* (0.0434)

Spearman's rank correlation (with significance)

As evident from table 4, the correlation between rank of the states in terms of their revenue deficits and rank of the states in terms of their square gap in non-plan expenditure is significantly positive. Implying the fact, as revenue deficits has increased, the square gap in non-planned expenditure has also increased, and thus the state moved from non-underspending[9] to non-overspending[10]. Precisely, with increasing revenue deficits, the states gradually reduced their spending compared to the budget estimates. The rising revenue deficits ultimately compelled the states to spend much less compared to what they had estimated to spend. Further, the correlation between the per capita GSDP rank and the gap in plan expenditure rank and the rank of square gap in plan expenditure is significantly positive. This means that with rising per capita GSDP, the NER states state turns from non-overspending to non-underspending. Across northeast states, underspending is one of the main reason behind being inefficient. Therefore, with rise in per capita GSDP, the NER states can seek for more funds from the Central by virtue of the to the tax devaluation criteria. Using the fund so collected, they are now in a position to tackle the problem of underspending and thus gradually move towards efficiency. Same is applied for non-plan expenditure. Taken together, it can be said that with increased per capita GSDP, the states were able to move from a trajectory of inefficient spending towards a trajectory of efficient spending.

Rank of effective number of political parties has negative significant correlation with rank of gap of plan expenditure, rank of square of gap of plan expenditure and rank of square of non-plan expenditure. This implies that the NER states are inefficient because they comparably spend less that the budget estimates. High number of effective numbers of political parties suggest the political instability in

[9] Non under spending: The term is used to define states that have spent either equal to or more than the budget estimates.

[10] Non over spending: The term is used to define states that have spent either equal to or less than their budget estimates.

NER states. Each effective political party, no matter how effective they are in their own region, are small in number in terms of their presence in the state legislative assembly or in the parliament. Under such conditions, these states with such characteristics are left with no alternative other than to engage in a 'cooperative behaviour;' with the Centre. This leads to the more inflow of central funds into that particular state of the NER. Rank of polarization index has negative significant correlation with the rank of all four indicators. This means high polarization leads to overspending which leads to the efficiency across the NER states. This implies that higher polarization is helping the state to recognize the needs of the majority of people so that they can have the provision of the needed public good and can organize the fund efficiently.

Table 5: Ordered Logit Model (Rank of States According to Squared Gap for Planned Expenditure)

Rank of States in terms of Plan Expenditures (Poor=1; Best=8)	Coefficient (Std. Err)	Marginal Effects **Pr(rank_plan=1) (predict) =0.064**	Coefficient (Std. Err)	Marginal effects **Pr(rankplan=1) (predict)= 0.0746**	Coefficient (Std. Err)	Marginal effects
Fractionalization Index	-4.213 (2.992)	0.252 (0.195)	- 8.1004*** (2.755)	0.559*** (0.2381)	-10.445*** (2.579)	**0.787***** **(0.2802)**
Polarization Index	4.460 3.181	-0.267 (0.207)	7.962*** (2.903)	-0.550*** (0.246)	12.094*** (2.579)	**-.9113***** **(0.303)**
Per capita GSDP	0.000 (0.00)	0.000 (0.000)	-0.000034** (0.000013)	0.0000* (0.000)		
Effective Number of Political Parties	0.300** (0.113)	-0.018** (0.008)			0.298*** (0.1053)	**-0.0224**** **(0.0097)**
States own Tax Revenue	0.000** (0.00)	0.000** (0.00)				
Share in Central Taxes			0.000003** (0.000001)	-0.0000002** (0.000)		
/cut1	-0.547 (1.225)		-1.527 (1.087)		1.776 (0.899)	
/cut2	0.399 (1.209)		-0.584 (1.060)		2.734 (0.888)	
/cut3	1.121 (1.210)		0.092 (1.048)		3.441 (0.904)	
/cut4	1.792 (1.220)		0.698 (1.043)		4.095 (0.926)	
/cut5	2.504 (1.236)		1.361 (1.048)		4.763 (0.956)	
/cut6	3.485 (1.278)		2.248 (1.077)		5.582 (1.018)	
/cut7	5.381 (1.449)		3.886 (1.225)		6.813 (1.141)	

Source: Authors' Calculation

Note: *** refers to 1 percent level of significance, **refers 5 percent level of significance, *refers 10 percent level of significance

The ordered logit model considering the rank of the states (where the highest ranked state, that is state with less squared gap, signifies very efficient and conversely) using the squared gaps of planned expenditure as dependent variable has been used to get the likelihood function of the relative performance of the states (table 5). To get the determinants of an ordered category variable in terms of the relative ranking of the states on efficiency level of managing the budget for planned expenditure. Here the study has considered three different specifications with the set of parameters, viz., fractionalization index, polarization index, per capita GSDP, effective number of political parties, states own tax revenue and share in central taxes. The results of the panel logistic model for the said three specifications along with the corresponding marginal effects with respect to lowest rank have been presented in table 5. Here, in specification 1, the effective number of political parties (that is, inverse of concentration index) has shown positively significant relation in the logistic framework and negatively significant relation with relative marginal effects. Here for further analysis, we have considered the marginal effects as it shows slope of the probability function (or simply the odd ratio). The observed negative significant relation with the marginal effect signifies that more the value of the effective number of political parties, less would be the efficiency in terms of budget management for the said state. Further, in this specification, states own tax revenue showed positive significance. However, the values of the coefficient and marginal effects for this case may be ignored.

Moving to specification 2, here., fractionalization index, polarization index, per capita GSDP and share in central taxes- all showed a significant relation with the rank of the states. In this, fractionalization index and per capita GSDP recorded positive value for the marginal effects. The value of the coefficient for polarization index and fractionalization index are quite high compared to the same for per capita GSDP and share in central taxes.

The third specification, it can be seen that polarization index, fractionalization index and effective number of political parties- all showing significant contribution in determining the relative ranking of the states. The coefficient values are also very high. The marginal effects have negative significant for polarization index and effective number of political parties and positive significant relation with fractionalization index. Further, there are seven cut points where no two values are equal. Therefore, we need not test the equality of cut points for eliminating the importance of middle categories. The threshold parameters are significantly different, so not a single category can be merged with each other. These cut points behave like an intercept term or scale factors for the analysis.

The results portray, both polarization and fractionalization have significant contribution in determining the comparative efficiency of budget management. Therefore, political concentration and ethnic diversity in the society work in opposite direction determining the success of managing the budget efficiently. It depends on the net effective force, for the budget to be managed efficiently. By virtue of its nature, the ethnic diversity (therefore fractionalization index) do not change in the short run, however, political affiliation (thus the Polarization index) may be volatile. Therefore, logically it can be deducted that it is the polarization index that ultimately determine the net outcome for the planned expenditure meant for log run developmental expenditures.

Table 6 focusses on the ordered logit model using the squared gaps of non-planned expenditure as dependent variable has been used to get the likelihood function of the relative performance of the states. In specification 1, the independent variables are fractionalization index, polarization index, per capita GSDP, effective number of political parties and states own tax revenue. It is evident from the results that polarization index and states own tax revenue has showed a negative and significant relation, whereas their marginal effects have showed positively significant relation with the dependent variable. Considering

the marginal effects for further analysis we see that the fractionalization index and the effective number of political parties showed a negative significant relation with the non-plan expenditure. For specification 2 and 3 ,we see that the marginal effects for fractionalization index showed a negative significant relation with non –plan expenditure and polarization index showed positive significant correlation with non-plan expenditure. Here too, there are seven cut points where no two values are equal. Therefore, we need not test the equality of cut points for eliminating the importance of middle categories.

The result implies that more is the ethnic diversity (higher the fractionalization index) more inefficient will be the managing of the non-plan expenditure. Whereas, less the coalition (more the polarization index) more the efficient management of the non-plan expenditure. It may be deducted that with more ethnic diversity and less of coalition, the more dominant ethnic groups ultimately form the government and therefore, the expenditure pattern becomes skewed in favour of those dominant groups rather than spreading across groups and localities. This also, perhaps, answers the question to a large extent as to why small groups prefer to align with the group in power despite opinion differences otherwise.

Table 6: Ordered Logit Model (Rank of States According to Squared Gap for Non-Planned Expenditure)

Rank of States in terms of Non-Plan Expenditures (Poor=1; Best=8)	Coefficient (Std. Err)	Marginal Effects **Pr(rank_ non-plan=1) (predict) =.0773**	Coefficient (Std. Err)	Marginal effects **Pr(rank_ non-plan =1) (predict)= .076494**	Coefficient (Std. Err)	Marginal effects **Pr(rank_non-plan=1) (predict)= 0.8103**
Fractionalisation Index	9.588*** (2.953)	-0.684** (0.271)	13.165*** (3.492)	-0.930*** (0.345)	8.888*** (2.913)	**-0.662** (0.269)**
Polarisation Index	-9.290*** (3.288)	0.662** (0.287)	-12.322*** (3.913)	0.870*** (0.359)	-9.067*** (3.250)	**0.675** (0.292)**
Per capita GSDP	0.0000019*** (0.0000006)	0.000* (0.0000)	0.000002*** (0.000000)	0.000** (0.000)	0.000*** (0.000)	**0.000** (0.000)**
Effective Number of Political Parties	0.051 (0.114)	-0.004 (0.008)			0.126 (0.108)	**-0.009 (0.008)**
States own Tax Revenue	-0.000011** (0.000006)	0.000** (0.0000)				
Share in Central Taxes			-0.000005** (0.000002)	0.000** (0.000)		
States own Non Tax Revenue			-0.000010 (0.000008)	0.000 (0.000)		
Grants From Centre			-0.000003 (0.000002)	0.000 (0.000)		

Rank of States in terms of Non-Plan Expenditures (Poor=1; Best=8)	Coefficient (Std. Err)	Marginal Effects **Pr(rank_ non-plan=1) (predict) =.0773**	Coefficient (Std. Err)	Marginal effects **Pr(rank_ non-plan =1) (predict)= .076494**	Coefficien t (Std. Err)	Marginal effects **Pr(rank_non-plan=1) (predict)= 0.8103**
/cut1	-2.255 (1.061)		-4.040 (1.303)		-2.594 (1.022)	
/cut2	-1.280 (1.014)		-3.018 (1.248)		-1.632 (0.973)	
/cut3	-0.597 (1.002)		-2.320 (1.230)		-0.958 (0.961)	
/cut4	0.017 (0.993)		-1.682 (1.217)		-0.353 (0.953)	
/cut5	0.673 (0.991)		-0.993 (1.207)		0.291 (0.952)	
/cut6	1.512 (1.011)		-0.143 (1.212)		1.111 (0.973)	
/cut7	2.900 (1.117)		1.239 (1.280)		2.427 (1.070)	

Source: Authors' Calculation

Note: *** refers to 1 percent level of significance, **refers 5 percent level of significance, *refers 10 percent level of significance

CONCLUSION

As noted in our empirical analysis, in summary, it can be said that fractionalization and polarization have significant impact on the public sector expenditure. The volatility in spending pattern weakens the budgetary efficiency of the states. As amongst NER states, inequality in polarisation and fractionalisation is also high, the effects have different consequences. The gap between budgetary estimates and actuals for both, planned and non-planned expenditures remain a major problem in this region. Therefore, dependence on central share is the regular phenomenon for maintaining the budgetary balance. It has been seen that there is trend in the type of occurrence of gaps for the states. Some states like Assam, Meghalaya, Manipur, Tripura experience mostly overestimation in budget whereas, few other states, like Arunachal Pradesh, Mizoram have been experiencing mostly underestimation in budgeted expenditure. The value of the gap is generally more in case of planned expenditure. Some states like Tripura, Meghalaya and Nagaland, experience more than 100 per cent over and underestimation of actual expenditure. It is true that these gaps occur due to irregular pattern of revenue receipts, inefficiency in designing of fund requirement and improper utilisation of earlier sanctioned fund. On top of that the spending of the provision of public goods tends to be inconclusive with high ethnic diversity or polarization as in such cases it becomes difficult for the stakeholders to agree on the provision of public goods that may not benefit everyone. The impact is even more vibrant in case of planned expenditure which is considered as long run developmental investment for the states. In the case of the NER states, this feature, not only create huge constraints in the way of becoming self-reliant public sector but also lowers the pace of the overall growth and development of the entire region. Therefore, the basic objective behind creating a special thrust for 'Seven Sisters' fails. Further, political instability, cultural conflicts along with locational disadvantages prevent different sub-groups in the region from collectively demanding and realising state services that could have catered to all rather than to special interests. Therefore, despite all

efforts by the successive governments at the Centre, the typical composition of the heterogeneous society with wider economic inequality have only seen better provision of a public good, perhaps only for the dominant groups or precisely for the groups in power at different point of time – no matter whoever it was at different time points. For the NER region, the distinguishing marks of ethnicity was mostly absent, and thus it resulted in coalitions that are porous and naturally was subject to infiltration. Therefore, despite more funds –both by the Centre and the state- the budget management in terms of efficiently spending the allocated funds hardly happened. In this context for the NER states, it is quite evident that the allocation of funds to different sectors by the state, though important, is secondary in this context, the primary concern remains the fact if at all they are able to spend efficiently what they had allocated. Majority of the NER states, with low own revenue, still continue to be heavily dependent on upper tier for all fiscal issues. Not more funds, rather a strong political willingness is needed to make them self - sustaining.

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