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POLITICAL CONCENTRATION, RELIGIOUS DIVERSITY AND HUMAN DEVELOPMENT: EVIDENCE FROM INDIAN STATES

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Abstract

This paper provides a framework that extricates the relationship between fractionalization and HDI and elucidates the impact of political polarisation on the pace of growth for major Indian states in order to determine the existing inequality across Indian states. A number of different composite indices have been constructed to measure 'Fractionalization' and 'Polarization' 'Political Stability' consisting multi-dimensional inter-related indicators to determine the impact of such parameters on HDI using a dynamic panel-data estimation considering the period from 1991 to 2019. The political concentration influences adversely the economic outcomes through obstructing the determination of provision of public good or allocation of resources in the complex decentralised federal structure. This study confirms the strong causality of religious diversity, women participation in political power, state's share in total member pool of parliament with political stability which harms quality of governance.

Keywords: *Fractionalisation, Social Diversity, Political Concentration, Economic Development, Panel Data Analysis*
JEL Codes: *D72, O53, Z12, O15*

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INTRODUCTION

The quality of governance gets determined by the effectiveness of policy implementation of a state which realises the high pace of economic growth as an outcome. However, a few questions can be raised in regard to this hypothesis. What makes different states or different provinces of an economy, more or less efficacious economically? What makes the quality of governance diverse across the states under the same federal structure? The answer is still dubious and requires a detailed empirical investigation. Literature already established the association between quality of economic growth and religious diversity of an economy (Levinson (1998), La Porta R., et al (1999), Fearon (2003)). Further, Alesina., et al, (2003) provided the new measures of fractionalisation considering ethnic, linguistic and religious diversity in the model. Spolaore and Wacziarg (2009) and Reynal-Querol, (2002) advocated that the cultural heterogeneity effects various outcomes through hindering economic growth due to conflicts in decision making process which eventually generates disparity in redistribution and brings in inefficiency in effective implementation of provision of public goods. Few studies have also identified that how political competition influences economic performance of a state (Polo, 1998; Damania and Yalcin, 2008, Dash and Mukherjee, 2021), theoretically as well as empirically. The political competition affects the effectiveness of policy implementation and reduces the welfare generation as the growth-promoting policies have been given more priority than need based policies (Besley *et. al.*, 2010). A provision of public good gets scattered due to the skewed political concentration (Svensson, 2005). When the provision of public services occurs in a decentralised government, centralized provision dominates in decision making process and with the presence of externalities, democratic decentralization gets advantageous position if political parties are unified (Ponce-Rodríguez. et al, 2021).

In India, where the federal structure has been distributed across national, state and local governments and the autonomy has been

provided to the states for revenue generation and allocation of public goods and services following the fiscal decentralization since the implementation of the Constitution 73rd and 74th Amendment Acts . The Indian Constitution establishes a federal structure to the Indian government, declaring it to be a "Union of States" where part XI of the Indian constitution specifies the distribution of legislative, administrative and executive powers between the Central government and the States of India. The power and functions are allocated between states and the centre. Determination of provision of public good is multifaceted in nature, given the federal structure of the country. Few social parameters like ethnic diversity, polarisation has an important role in the provision of public goods (Jackson, 2010). Consequently, it becomes challenging to meet an efficient system for provision of public good, given the diverse structure of Indian social and political structure. On the other hand, the socio-economic inequality along with ethnic diversity across different regions brings in different ideologies which makes the country politically diverse in nature. Further, religious or caste based concentration risk the political competition in a democratic set up and disturbs a perfect electoral governance. Social breakups on the basis of religion acts as instrumental in choosing the political representatives and create disparity through reducing the democratic electoral process and reduces equitable social inclusion and disturbs the trajectory of economic development (Dash and Mukherjee, 2021). In India, state wise disparity in revenue generation capacity, government spending and variations in public services indicate violation of the principle of "horizontal equity" or "equal treatment of equals" in federal structure. The changes in federal structure after 1990s reform and growing diversity in political system and polarization in the social structure, attract the investigation of the impact of these factors in the development. However, question remains how does ethnolinguistic variation influence the political and economic outcomes under this complex federal structure. There is no second opinion that it might not be politically viable in India to bring in remedial adjustment in such a way that allows richest state to offset the fiscal incapability in order to decrease the increasing disparities (Rao, 2017). As

a result, central transfers and grants to the states based on the recommendations of the Finance Commissions became very crucial for the long run development of the states. The trend of disparity in central transfers leads to mounting variations in infrastructure levels and human development causing divergence of incomes across Indian states. Studies accept as true that political centralization should exist along with fiscal federalism in order to function it with better communication and cooperation where multi-structure government can either foster or reduce growth. The central government however is assumed to foster growth through proper central transfer and tax sharing schedule according to the demand which can come through political centralization (Blanchard and Shleifer, 2000). The divergence in the performance of the Indian states attracts more attention of the researchers. There is empirical evidence of connection between political competition with socioeconomic performance for Indian states (Besley and Burgess, 2002, Chhibber and Nooruddin, 2004, Keefer and Khemani, 2005, Ghosh, 2010). These studies indicated that a few Indian states like Kerala corroborated that a perfect political competition improves democratic accountability and the quality of governance for the states. Moreover, it has been empirically established that a productive political rivalry places more priority towards access to health and education for better socioeconomic output. There exists huge inter-state inequality in terms of Human Development Index (HDI) in India unlike the other developed federal structure such as Canada, USA, Australia and EU (Kelkar, 2019). An empirical analysis of Mukherjee and Chakraborty (2011) has shown that Indian states have been experiencing varied trajectories of economic performance estimated in terms of HDI score along with significant variation in the degree of political competition. In the federal system, political geography as well as the identity of political affiliation matter for public good provision. The politicians' group identity and the nature of the elected representation are very important as far as the public goods spillover effect is concerned (Besley, *et. al.*, 2004). It is an utmost need to discuss how does restructurings take place through a multifaceted institutional process in federal structure including the ethnic and religion

based diversity, given different political aims of national and subnational governments.

Further, effective number of political representatives refers the degree of electoral support or party fractionalisation. Dunleavy and Boucek (2003) constructed the composite index of effective number of political parties to assess the impact of the size of the largest party's electoral power given the numbers of political parties in competition. However, theoretically, for the goods which is not provided to one specific ethnic group, fractionalisation may affect the provision of that good creating uncertainty in the voluntary contributions by the ethnic groups which will lead to inefficiency in the decision making system and adversely affect the policy implementation (Jackson ,2010).

Apart from that, there is a role of share of political party representation from the states and coalition between centre and regional parties. It is proven that democracy achieved through systematic political competitiveness. The number of parties and structure vary extremely across continents. The size refers the number of parties that compete in elections.

However, this point needs enough evidence and thus still subject to a debate. However, most of the present literature focus on the effects of federalism on social policy based on case studies from developed countries. In case of emerging country like India, the inferences of economic outcomes based on political concentration, social diversity and federalism are not much studies. The synchronized consolidation of political structure, religious diversity in provision of public good, have not been empirically explored. The increasing attention to outcome based evaluation across various states within a country based on fiscal federalism with respect to political conflict brings in debates about regional disparity in provision of public goods and resource allocation, the impact of such politics and social configuration for such countries demands greater attention.

A detailed analysis of the determining factors for human development and the degree of association between political concentration and fiscal federalism for human development for an emerging economy should be the priority to understand the potential and net effective development of the economy. In this study, we try to track the influence of relationship among the fractionalization, political and religious polarization, effective number of political party representative, political stability, women participation in political decision making on states' development for the 15 major states in India and to have proper road map for an effective implementation of policy intervention by sub-national governments. We construct multiple indices based on theoretical definition and available data. We conduct a dynamic panel data analysis using the composite indices as parameters of indicators of economic, political and social indicators. In the next section, we discuss the model set up, parameter selection, data source for the empirical estimation.

DATA AND METHODOLOGY

On the basis of available secondary data, we first construct the composite indices in order to determine 'Effective number of political parties', 'Fractionalization' and 'Polarization' for the select states following the methodology of McDoom and Gisselquist (2016) in order to capture the socio-political outcomes in one parameter with number of interrelated variables. In order to measure political stability of the states, we consider variables like number of elections held, number of times regime changes[1] as well as the effective number of political parties[2] in the parliament.

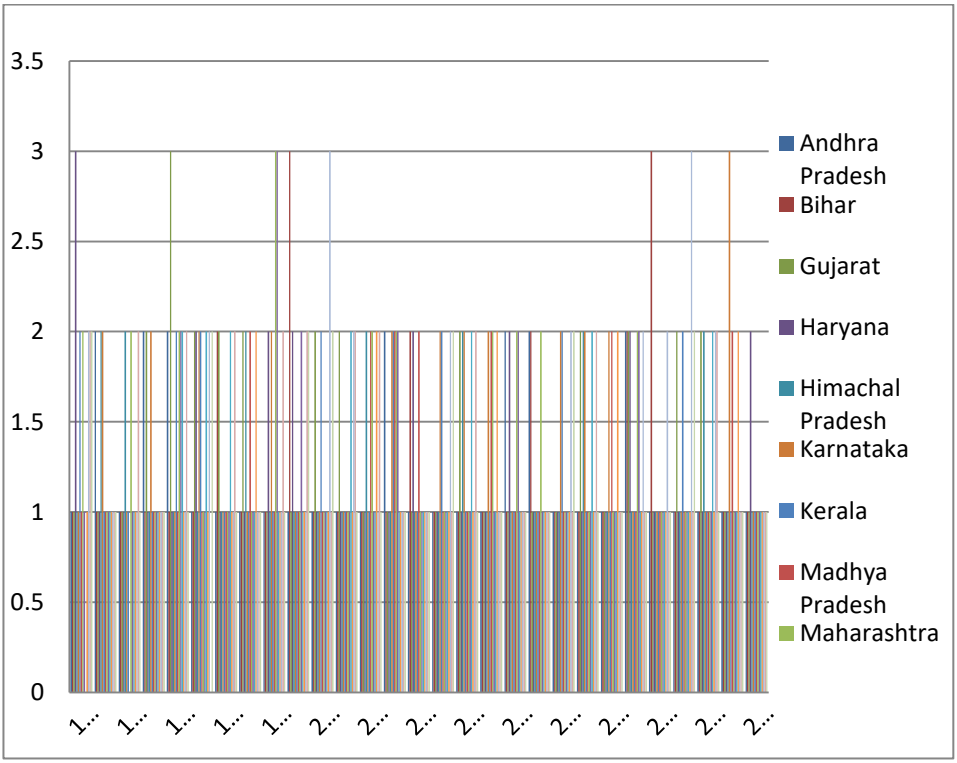
The number of times Chief Ministers (CM, hereafter) elected per year has been considered as tool to measure the regime change and thus considered as political instability considering '1' as perfect stability. We estimate the relative political stability of the select states on the basis of

[1]Jong-A-Pin (2009) uses these factors to measure the political instability.

[2]See Laakso and Taagepera (1979).

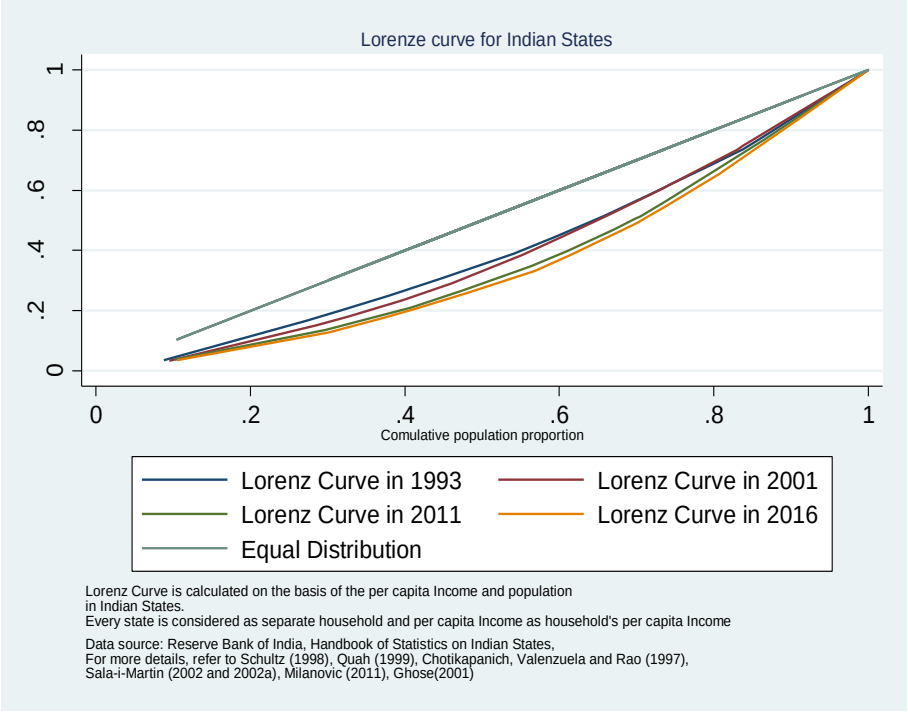
number of CM elected per year as shown in Fig 1. It has seen that only for few years more than one CMs have been elected. A very few states have witnessed more than two Chief Ministers which signifies that mostly states have been experiencing political stability in India.

Figure 1: Number of Chief Minister per year for Indian States



Data Source: Compiled from Reports from Chief Minister's Office (CMO), Indian states (from 1991 to 2019).

Figure 2: Generalized Lorenz Curve



Source: Per capita GSDP data have been compiled from RBI, Population data from Census, various years.

A Generalized Lorenz curve has been graphed to measure the inequality, considering each state as the individual and per capita GSDP as the income of that individual to measure the inequality of the wealth distribution across states and Gini coefficient has been estimated on the basis of the state's per capita GSDP and population share. The estimated Gini coefficient[3] refers the increasing inequality present across states.

[3]Corrado Gini develops the Gini Coefficient in 1912. See Gini (1912). It is a ratio of the area between the equitable line and Lorenz curve to the area below equitable line i.e. the ratio of 0.5 minus area below Lorenz curve to the 0.5.

Table 1: Gini Coefficient

Gini Coefficient	1991	2001	2011
With Population Weightage	0.22637	0.23123	0.24429

Data Source: Authors' calculation from RBI and Census India, 1991, 2001 and 2011.

The index referring to effective number of political parties is constructed on the basis of the seats won by the parties which form the government, where year wise data are collected and compiled from the election commission of India.

$$\mathrm{HHI} = \sum_{k=0}^{n} (S_k)^2 \quad (1)$$

$S_k = \text{Seat share of party k in power}$

$\mathrm{HHI} = \text{Herfindahl–Hirschman Index}$[4] as shown in equation (i) which refers to the political concentration in democratic process. Effective Number of Political Party Index has been constructed following the HHI values. It is the inverse value of the HHI index as defined in equation (ii).

$$\mathrm{ENP} = \frac{1}{\mathrm{HHI}} \quad (2)$$

The index ranges between 1 and infinity. The value 1 denotes that one political party won majority and it is in power. While, more than 1 refers to alliance of multiple political parties in government. The share of the Members of Parliaments from states in national government has been considered to measure degree of decision making power in the federal political structure. More share refers to larger decision making power of the state at lower house.

Further, female participation in political position is an important factor as studies validates that it brings in effective decision making

[4]It measures the market concentration to identify the market competitiveness, here to measure the political competitiveness (Hirschman, 1958))

process and relatively unbiased resource allocation and transparent system with efficient governance (Deininger, Nagarajan, Singh, 2020). Therefore, this indicator has to be included in order to track the effective democratic process in decision-making system as far as political structure is concerned. We consider the number of women representatives in the assembly to measure the gender based inclusion in a democratic set up.

For social institutions, the fractionalization index and polarization index[5] are constructed to measure the diversity and polarization in the society.

$$\text{Fractionalization Index} = 1 - \sum_{i=1}^{n}\left(\text{Share of } i^{th} \text{religion in total population}\right)^2 \quad (3)$$

$$\text{Polarization Index} = 1 - \sum_{i=1}^{n}\left(\left(\frac{0.5 - \text{Share of } i^{th} \text{religion in total population}}{0.5}\right)^2 * \text{Share of } i^{th} \text{religion in total population}\right) \quad (4)$$

The fractionalization index as defined in (3) and polarization index as shown in (4) take the values between 0 and 1. The zero value of fractionalization index means there is no diversity or there exists polarization. While, the value 1 denotes that the society is more diversified. It is similar for polarization index. Here the population share based on religion has been considered. The data have been extracted from the Census of India for various years. Here we consider the typical exponential growth rate for estimation of projected population. Further, the variables like net capital formation and numbers of factories produced are used to measure the infrastructure development of the states. These data have been compiled from RBI handbook for Indian states. Human development index has been constructed as composite

[5]Esteban and Ray (2008) gives the polarization and fractionalization indices.

index considering three major sectors, viz., education, income and health indicators[6]. Here, we consider literacy rate as measure of education, life expectancy rate as a measure of health status and per capita GSDP as income of the state.

$$\text{II (Income Indicator)} = \frac{(\text{Per capita GSDP})_i - (\text{Per capita GSDP})_{\text{minimum}}}{(\text{Per capita GSDP})_{\text{maximum}} - (\text{Per capita GSDP})_{\text{minimum}}}$$

$$\text{HI (Health Indicator)}^7 = \frac{(\text{Life Expectancy rate})_i - (\text{Life Expectancy rate})_{\text{minimum}}}{(\text{Life Expectancy rate})_{\text{maximum}} - (\text{Life Expectancy rate})_{\text{minimum}}}$$

$$\text{EI (Education Indicator)} = \frac{(\text{Literacy rate})_i - (\text{Literacy rate})_{\text{minimum}}}{(\text{Literacy rate})_{\text{maximum}} - (\text{Literacy rate})_{\text{minimum}}}$$

The indices are estimated on the basis of simple distance formula. Here, the lowest and highest values are taken from the given values of Indian states for every year in such a way that the estimated value of indicator is considered as '0' for the state with lowest value and '1' for the state with maximum value.

Finally, simple average of three based indicators is used to compute the HDI.

$$\text{Human Development Index (HDI)} = \frac{\text{II}+\text{HI}+\text{EI}}{3} \quad (5)$$

Data related to life expectancy rate for Indian states is taken from Sample Registration System which is available with RBI as well as

[6]See Human Development Report 2018
http://hdr.undp.org/sites/default/files/2018_human_development_statistical_update.pdf

[7]Same base year i.e. 2004-05 is taken. GSDP deflector is used convert the data into same base year for per capita GSDP.

NITI Ayog. Literacy rate and per capita GSDP for Indian states is extracted from RBI, handbook on Indian states.

In India, after liberalisation, the role of the state governments has been increased in policy making process for certain sectors like agriculture, priority sectors. Therefore, we need to consider post liberalisation period to analyze the impact of the political as well social structure on the Human Development for the states. We have excluded the union territories, northeast states and national capital for the empirical analysis. Few states like Chattisgarh, Uttarakhand, Telangana are dropped from the analysis due to unavailability of the data. The Northeastern states are also dropped as they are classified as special category states due to locational disadvantages. We have considered Robust Arellano–Bover/Blundell–Bond linear dynamic panel-data estimation is used (Arellano and Bond, 1991; Arellano and Bover 1995; Blundell and Bond, 1998) for the empirical analysis. Here, the number of years are more compare to the number of states. Therefore, dynamic panel data framework has been considered.

The data description and summary of the variables are mentioned in Table 1.

Table 1: Description and Summary of Variables

Variable	Observation	Mean	Std. Dev.	Min	Max
Year	435	2005	8.38	1991	2019
Effective Number of Parties	434	420.36	8670.07	1	180625
Political Polarisation	435	0.692	0.259	0.153	1
Fractionalisation	435	0.426	0.189	0.08	0.722
Number of CM in year	435	1.297	0.514	0	3
MP Share	435	0.471	0.333	0	1
Women Representation	434	0.07	0.034	0.011	0.144
HDI	390	0.701	0.124	0.33	0.952

Source: Authors' Compilation

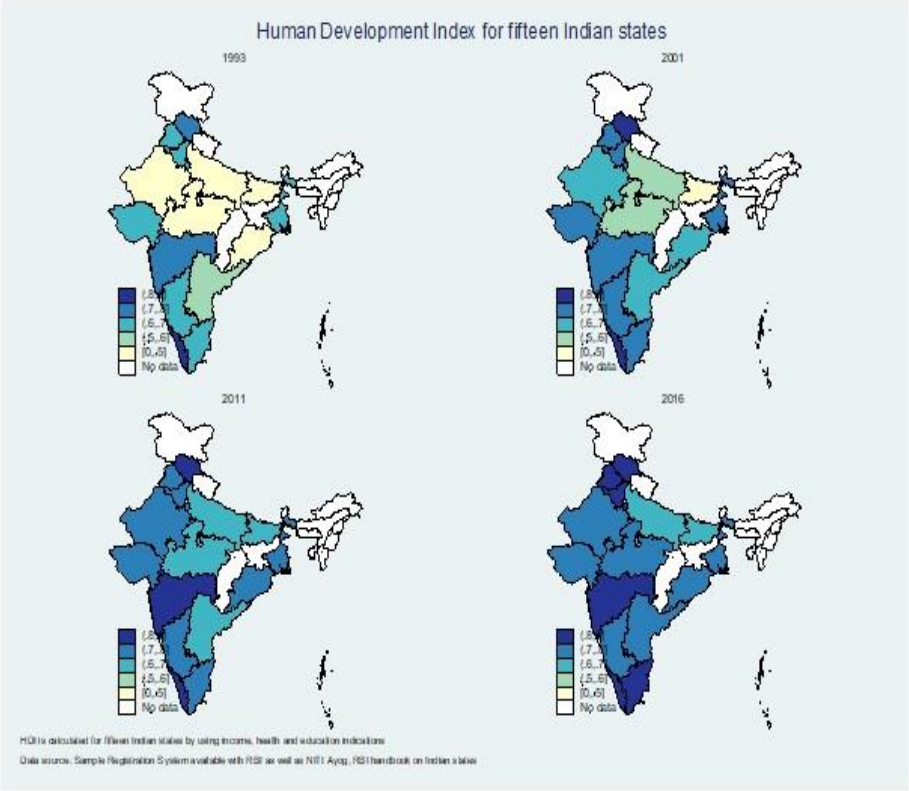
After plotting the estimated values of the composite indices, Human Development Index, Polarisation Index and Fractionalisation Index for the states on political map of India for four benchmark years- for the last four decades, we can visualise the transformation of the country in these perspectives.

Table 2: Correlation Coefficient Matrix of the Variables Considered

	Effective Number of Political Parties	Polarisation Index	Fractionalisation Index	Number of CM per year	Change in CM	MP from state share	Women representation	Same Party at Power
Effective Number of Political Parties	1							
Polarization Index	0.2855	1						
Fractionalization Index	0.1861	0.9758	1					
Number of CM per year	0.0037	0.1546	0.1661	1				
Change in CM (dummy)	-0.1236	0.0385	0.0389	0.8121	1			
MP Share from States	-0.1835	-0.1829	-0.2388	0.0942	0.0787	1		
Share of Women Representatives	-0.1704	0.6752	0.7371	0.1179	0.0327	0.2005	1	
Same Party on Power (dummy)	-0.5691	0.1383	0.163	0.0449	0.0898	0.2098	0.5061	1

Source: Authors' Calculation on the basis of compiled data.

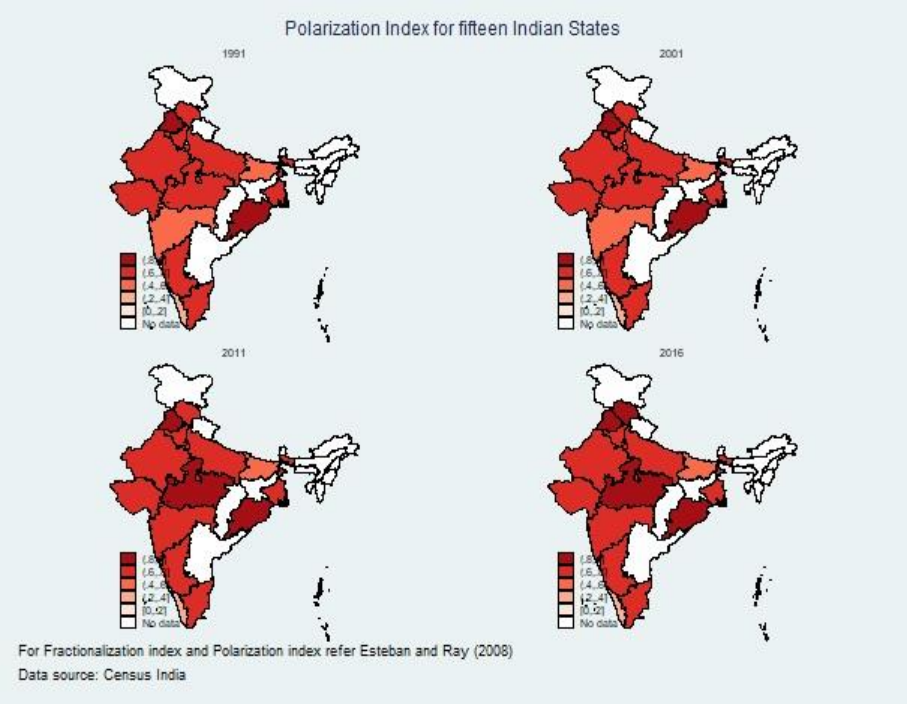
Figure 3: HDI Fractionalization Over the Period 1991-2016



Source: Based on Estimated Values

Northern states have been experiencing gradual improvement in HDI performance as shown in figure 3. It is basically because of effectiveness of the welfare schemes focusing on social sector which has contributed towards the HDI formation process. According to Mukherjee, Chakraborty and Sikdar (2014, 2016), the major states like Kerala Goa, Himachal Pradesh Karnataka, Gujarat have been utilizing the public sector funds in an efficient process and economic and political accountability reduced the leakage in welfare based funds in terms of reaching out to the target groups.

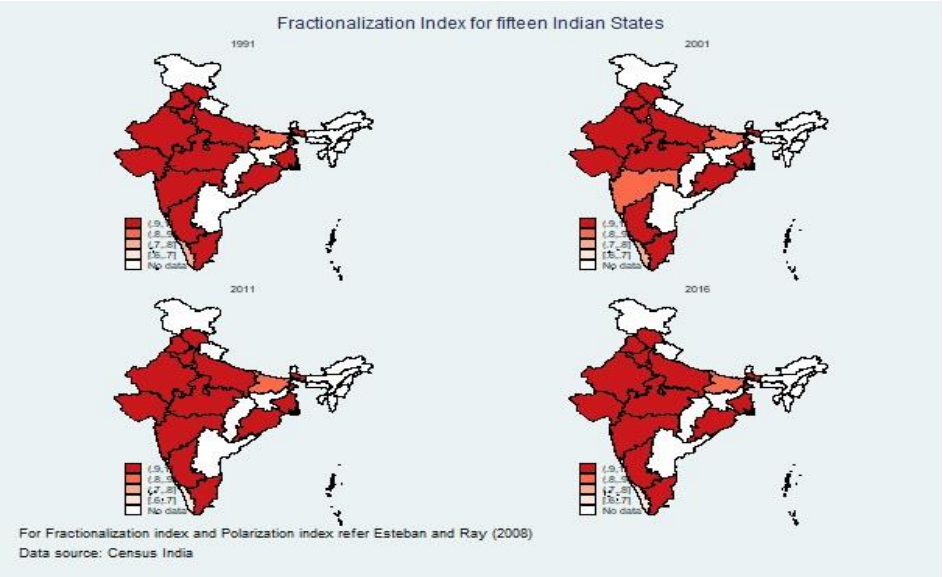
Figure 4: Polarization: Trends Over the Period 1991-2016



Source: Based on Estimated Values

As far as polarization indices are concerned, it has been increasing steadily since the 2001. There has been a sharp increase in polarization since the 2011. It has huge implication on decision making process in democracy. Polarization brings in biased allocation across states.

Figure 5: Change in Fractionalization Index Over the Period 1991-2016



Source: Based on Estimated Values

Fractionalization which is proxy for diversity is concentrated in northern India. Over the period of time, fractionalization is reducing in the southern India. Alesina el. al (2003) finds that there exists high correlation between polarization index and fractionalization index.

DYNAMIC PANEL DATA ANALYSIS

A dynamic panel data model has been used with three different specifications to capture the underlying effect of social diversity, political stability, political concentration, other parameters for political representation in democratic decision making process for the states, gender representation on the development for the major Indian States. This panel dataset includes a time series yearly data from 1991 to 2019. Therefore, it is imperative to take into account the possibility of time specific errors in framework. The dynamic panel data model captures

the individual effects which includes an AR(1) term and lagged dependent variable.

Model 1:

$$\begin{aligned}HDI_{it} = {} & \beta_0 + \beta_1 * (ENP)_{it} + \beta_2 * (POL)_{it} + \beta_3 * (FRAC)_{it} + \beta_4 \\ & * (\text{Number of CM per year})_{it} + \beta_5 * (MP_{share})_{it} + \beta_6 \\ & * (\text{Women Representatives Share})_{it} + \beta_7 * (ENP)_{i(t-1)} + \beta_8 \\ & * (POL)_{i(t-1)} + \beta_9 * (FRAC)_{i(t-1)} + \beta_{10} \\ & * (\text{Number of CM per year})_{i(t-1)} + \beta_{11} * (MP_{share})_{i(t-1)} \\ & + \beta_{12} * (\text{Women Representatives Share})_{i(t-1)} + \beta_{13} \\ & * HDI_{i(t-1)} + \beta_{13} * HDI_{i(t-1)} + \varepsilon_{it}\end{aligned}$$

Model 2:

$$\begin{aligned}HDI_{it} = {} & \beta_0 + \beta_1 * (ENP)_{it} + \beta_3 * (FRAC)_{it} + \beta_4 * (\text{Number of CM per year})_{it} \\ & + \beta_5 * (MP_{share})_{it} + \beta_6 * (\text{Women Representatives Share})_{it} \\ & + \beta_7 * (ENP)_{i(t-1)} + \beta_8 * (POL)_{i(t-1)} + \beta_9 * (FRAC)_{i(t-1)} \\ & + \beta_{10} * (\text{Number of CM per year})_{i(t-1)} + \beta_{11} \\ & * (MP_{share})_{i(t-1)} + \beta_{12} \\ & * (\text{Women Representatives Share})_{i(t-1)} + \beta_{13} * HDI_{i(t-1)} \\ & + \beta_{13} * HDI_{i(t-1)} + \varepsilon_{it}\end{aligned}$$

Model 3:

$$\begin{aligned}HDI_{it} = {} & \beta_0 + \beta_1 * (ENP)_{it} + \beta_2 * (POL)_{it} + \beta_4 * (\text{Number of CM per year})_{it} \\ & + \beta_5 * (MP_{share})_{it} + \beta_6 * (\text{Women Representatives Share})_{it} \\ & + \beta_7 * (ENP)_{i(t-1)} + \beta_8 * (POL)_{i(t-1)} + \beta_9 * (FRAC)_{i(t-1)} \\ & + \beta_{10} * (\text{Number of CM per year})_{i(t-1)} + \beta_{11} \\ & * (MP_{share})_{i(t-1)} + \beta_{12} \\ & * (\text{Women Representatives Share})_{i(t-1)} + \beta_{13} * HDI_{i(t-1)}\end{aligned}$$

We conduct dynamic panel data analysis with same three specifications without time specific errors. In a dynamic equation framework, few lagged endogenous variables appear together with auto correlated disturbances. Table 3 presents the results with time specific effects and table 5 shows without time specific effects. Further, Arellano

and Bond autocorrelation estimator has been used to test the presence of autocorrelation at first difference.

Table 2: Dynamic Panel Data Analysis with three Specifications with Time Specific Effects

Variables	**Model 1**	**Model 2**	**Model 3**
L.HDI	0.888*** (0.0784)	0.909*** (0.0785)	0.909*** (0.0777)
L2. HDI	0.0185 (0.0673)	0.000588 (0.0691)	0.00561 (0.0691)
Fractionalisation	0.175*** (0.0625)	0.0630 (0.0502)	
L. Fractionalisation	-0.135** (0.0630)	-0.0626 (0.0494)	
Polarisation	-0.0391** (0.0199)		-0.00473 (0.0231)
L. Polarisation	0.0211 (0.0203)		0.00374 (0.0215)
MP Share	-0.000762 (0.00194)	-0.000859 (0.00189)	-0.00114 (0.00200)
L. MP share	0.000737 (0.00146)	0.000940 (0.00150)	0.000862 (0.00147)
Effective Number of Parties	$7.96 * 10^{-8}$ *** $(3.11 * 10^{-8})$	$8.19 * 10^{-8}$ *** $(3.16 * 10^{-8})$	$8.22 * 10^{-8}$ *** $(3.19 * 10^{-8})$
L. effective number of parties	$1.49 * 10^{-7}$ *** $(3.59 * 10^{-8})$	$1.50 * 10^{-7}$ *** $(3.59 * 10^{-8})$	$1.50 * 10^{-7}$ *** $(3.61 * 10^{-8})$
Women Representation	0.0117 (0.0327)	0.0104 (0.0350)	0.00855 (0.0364)
L. women Representation	0.0103 (0.0230)	0.0160 (0.0242)	0.0209 (0.0245)
Constant	0.993** (0.480)	0.524 (0.479)	0.572 (0.460)
Wald chi2 (Prob > chi2)	$4.92 * 10^{10}$ (0.00)	$8.89 * 10^{10}$ (0.00)	$6.08 * 10^{10}$ (0.00)
Observations	345	345	345
Number of id	15	15	15
Control for Time Specific Effect	Yes	Yes	Yes

Note: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 3: Model 1- Arellano-Bond Test for Zero Autocorrelation in First-Differenced Errors

	Model 1		**Model 2**		**Model 3**	
Order	Z	Prob>z	z	Prob>z	Z	Prob>z
1	-2.9442	0.0032	-2.9147	0.0036	-2.9788	0.0029
2	1.5738	0.1155	1.6655	0.0958	1.6775	0.0934

Table 5: Dynamic Panel Data Analysis with three Specifications without Time Specific Effects

Variables	Model 4	Model 5	Model 6
L.HDI	0.771*** (0.0491)	0.763*** (0.0489)	0.786*** (0.0542)
L2. HDI	0.0611 (0.0378)	0.0646* (0.0372)	0.0611 (0.0392)
Fractionalisation	0.209*** (0.0277)	0.124*** (0.0235)	
L. Fractionalisation	-0.170*** (0.0245)	-0.0963*** (0.0213)	
Polarisation	-0.0687*** (0.0154)		0.0485*** (0.0182)
L. Polarisation	0.0588*** (0.0125)		-0.0330** (0.0161)
MP Share	-0.00129 (0.00159)	-0.00123 (0.00154)	-0.00122 (0.00173)
L. MP share	0.00136 (0.00177)	0.00167 (0.00177)	0.00227 (0.00178)
Effective Number of Parties	$6.38 * 10^{-8}$ $(4.40 * 10^{-8})$	$6.27 * 10^{-8}$ $(4.28 * 10^{-8})$	$9.02 * 10^{-8}$ *** $(3.34 * 10^{-8})$
L. effective number of parties	$1.18 * 10^{-7}$ *** $(3.87 * 10^{-8})$	$1.18 * 10^{-7}$ *** $(3.75 * 10^{-8})$	$1.41 * 10^{-7}$ *** $(2.79 * 10^{-8})$
Women Representation	0.00936 (0.0493)	0.00696 (0.0510)	0.00650 (0.0554)
L. women Representation	0.0173 (0.0389)	0.0112 (0.0408)	0.0180 (0.0455)
Constant	0.115*** (0.0154)	0.116*** (0.0157)	0.103*** (0.0163)
Wald chi2 (Prob > chi2)	146215.30 (0.00)	200412.37 (0.00)	36287.85 (0.00)
Observations	345	345	345
Number of id	15	15	15
Control for Time Specific Effect	No	No	No

Note: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 6: Arellano-Bond Test for Zero Autocorrelation in First-Differenced Errors

	Model 4		Model 5		Model 6	
Order	Z	Prob > z	z	Prob > z	Z	Prob > z
1	-2.7109	0.0067	-2.7066	0.0068	-2.8013	0.0051
2	0.67205	0.5016	0.57744	0.5636	0.78578	0.432

The test results satisfy the robustness of Arellano–Bover/Blundell–Bond linear dynamic panel-data estimation and also satisfies the specification bias. In model 1, lagged HDI, ENP, lagged ENP, Fractionalization index, lagged fractionalization index, polarization index, lagged polarization index, number of CM per year have statistically significant impact on HDI but when polarization index is dropped or fractionalization index is dropped, only lagged HDI, ENP, lagged ENP and number of CM per year shows the significant impact on the HDI. ENP sand ENP lagged have positive and significant impact on the HDI. ENP infers the degree of coalition in government. If it is high, then number of parties are forming the government is high. Therefore, government brings in democratic decision making process for policy implementation. When different parties with different ideologies and thus having diverse political agenda represents different states, government becomes more inclusive and effective. Therefore, more democratic government makes the unbiased policy implementation. The number of CM selected per year has negative and significant impact on the human development. It is obvious that the political stability of the state makes long run development of the state. Multiple change in highest power of the state signifies the instability in party formation and thus ineffective structure of the government. Therefore, political instability affects the development of the state in current period and consecutive periods as well. This instability affects the long run development of the state as the states fails to represent firmly in national government. In this analysis we get the positive significant impact on the dependent variable by lagged HDI which means that an interrelated causality in creating HDI for consecutive periods creates a resonance in the trend. If there is slow

pace of growth due to political instability for a certain period, it will create a falling trend in terms of realizing long run development of the states. Further, fractionalization index shows the religious diversity in the economy. Religious diversity acts as key to the socio-political conflicts in the economy. and thus brings in problem in provision of public good which can create the severe destruction to the economy. In case of India, minorities have fair political representation at national and subnational government. This political reservation protects their rights in access to the public goods. The results from the current study show that the diversity has significant positive impact on HDI. Although ethnic diversity benefits through democratic decision making process, religious diversity in terms of fractionalisation has been showing negative impact on the HDI. Political polarization is also having adverse impact on religious diversity. It affects the democratic rights of the minority. They can face the barriers while accessing the public goods in the highly polarized society.

CONCLUSION

Our empirical observation on the relationship between HDI and fractionalisation in one hand and polarization and fractionalization, on the other. The political decision making mechanism under federal structure has very important role in the process of the HD and reduction of state wise disparity. Specifically, this study has claimed that political polarisation has significantly adverse impact on human development of a state. Further, fractionalisation or regional diversity brings in constructive unbiased decision making system in provision of public good. This brings in economic growth of the state through efficient resource allocation. Further, number political party members in central political power makes more decisive power in fiscal federal structure to get more central share in public sector spending which supports the states in development. Delay in the political decision will always affect the development adversely. Therefore, the policies and efforts should be taken to stabilize the government and increase the inclusiveness of the politics. This

research shows that the political stability, social inclusiveness and economic decisions are important determinants which need to be categorically determined to capture allocative efficiency of public sector resources. We recommend that policy planner should place an evaluation matrix with state wise rank values of fractionalisation, polarisation indices along with other outcome based parameters like economic growth, social sector development and degree of self-reliance for all the state for last few years for dynamic comparative analysis and for better policy implementation. A welfare based schemes and provision of public goods should be determined taking into consideration of all concerned socio-economic and political parameters for a state.

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