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# OUTCOME OF FPTP IN DIVERSIFIED SOCIETY: EVIDENCE ON DISPROPORTIONALITY FROM LOKSABHA CONSTITUENCIES

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# Outcome of FPTP in Diversified Society: Evidence on Disproportionality from Loksabha Constituencies

**Vivek Jadhav**

## Abstract

*Democracy across the world has witnessed the evolution of the electoral system. First-Past-The-Post (FPTP) practiced in India does have certain disadvantages like disproportional representation. This paper analyses the election outcome in FPTP electoral system in a diverse society like India using constituency level information for the Loksabha election. This paper tries to understand how social, religious diversity, fractionalization affect the outcome in the FPTP system. The fractionalization index for religious diversity, polarization index religious polarization, Herfindahl–Hirschman Index for vote concentration are formed for Loksabha constituencies to understand the impact of religious diversity on vote concentration as well as vote share of winning candidates. Further regression analysis is done where state-specific and time-specific effects are controlled. It is found that fractionalization i.e. religious diversity affects the vote concentration negatively. It is also found that on average the vote concentration for SC/ST reserved constituencies is lower than general constituencies. This suggests that religious diversity reduces the vote concentration which further leads to disproportionality. It is important to think the ways to provide the space for the parties which are getting votes but not getting seats in Loksabha specifically for reserved constituencies.*

**Keywords:** *Religious Polarization, Electoral System, Religious, Fractionalization, Vote Concentration*.
**JEL Codes:** *D72, K16, H11, P48, Z12*

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**Vivek Jadhav**

# INTRODUCTION

The role of social, religious polarization on development is widely discussed. Banerjee (1997), Banerjee and Pande (2007) suggests that the ethnic polarization affect the efficiency through inefficient politicians winning election because of caste affiliations. On the other hand, Alesina, et.al. (1999), Bardhan and Mukherjee (2012), Afridi, Iversen and Sharan (2016) suggests that polarization affects the development through decline in investments in local public goods. Banerjee and Somanathan (2007) also argues that access to public goods is adversely affected by the religious fragmentation. The religious polarization and fragmentation also play important role in election outcome. Recent work by Hansen (2001), Shah (2007), Banerjee (2007) do take effort to understand the association between religious nationalism, caste and politics at local level. In this study, we have tried to work on Loksabha constituencies to understand the role of religious polarization and diversity in the determining the outcome of election.

Indian democracy does witness the vote-seat disproportionality. India follows the First Past The Post (FPTP) system. FPTP is viewed as the simplest form of the electoral system as each voter can give one vote and the candidate wins when he/she gets the highest number of votes but not necessarily the absolute majority in the constituency. But FPTP does have disadvantages. FPTP favors main parties and can exclude the small and regional parties which mean the FPTP system creates a single party which forms the government[1], on the other hand proportional representation (PR) leads to a multiparty system. FPTP also creates a discrepancy in the vote share obtained by the parties and seat share won by the parties. In terms of preferences, voter may not vote for optimal preference in FPTP system to avoid the wastage of the vote (Monroe,

[1]Refer to Reynolds, Reilly, and Ellis (2008). In FPTP, every voter can give one vote and the candidate who receives the highest votes wins the election. Therefore, votes received by minor parties or parties representing a smaller section of the population can be seen as wasted votes as these votes don't get any "voice" and "value" in parliament. Therefore, even those voters who prefer smaller parties can vote for other parties rather than "wasting their votes".

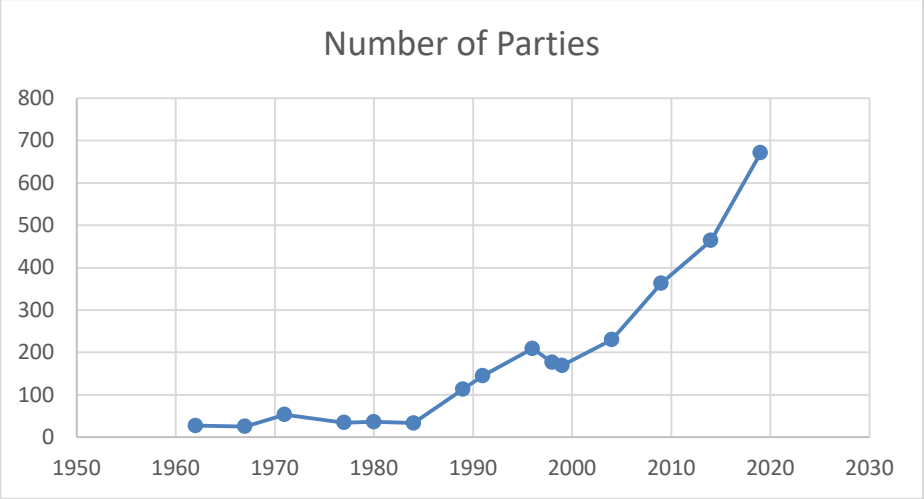
1995). This creates problem for small parties. As far as Indian democracy is concerned, even if FPTP system is implemented, small parties, regional parties are established, and survived. But Indian democracy does witness the discrepancy in vote share and seat share.

Duverger (1963) suggests that

(1) Proportional representation tends to lead to the formation of many independent parties,
(2) The two-ballot majority system tends to lead to the formation of many parties that are allied with each other,
(3) The plurality rule tends to produce a two-party system.

India on contrary has multiparty system with high level of disproportionality and dominant party after votes getting transferred into seats (Sartori (1986), Chhibber and Murali (2006)).

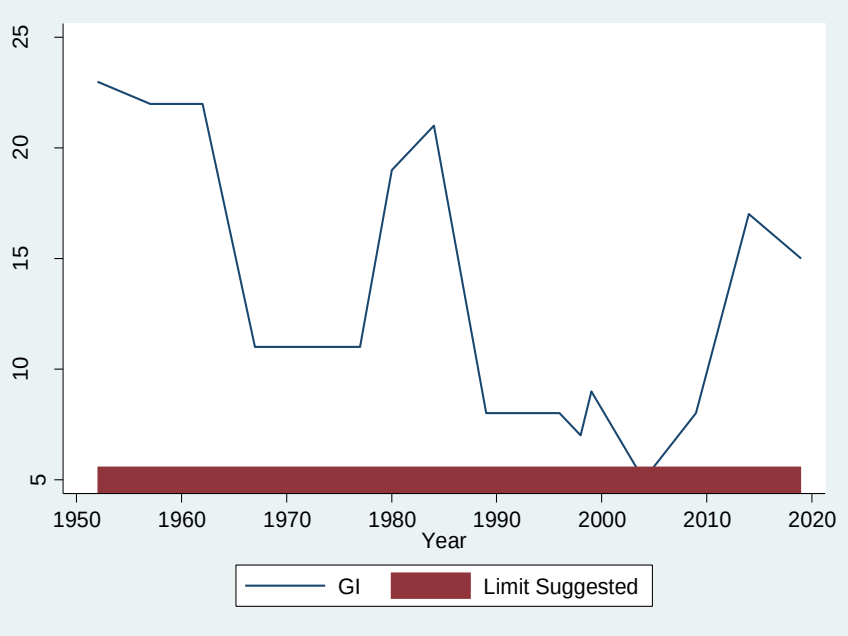
**Figure 1: Total Number of Political Parties (Including State National and Registered (Unorganized) Parties**




**Data Source:** Election Results, Full Statistical Reports, the Election Commission of India (https://eci.gov.in/statistical-report/statistical-reports/)

Figure No. 1 suggests that the number of political parties is increasing rapidly over a period of time. With coalition and alliances, the number of parties forming the government is also increasing. This trend is contrary to FPTP as the multiparty structure is developing. Chhibber and Murali (2006) finds that the law gets violated in states like Bihar, Uttar Pradesh (Hindi Belt) where in Southern states, situation is close to Duverger's law. Chandra (2007) suggests that the ethnic identity can be a reason for high number of parties in Uttar Pradesh which violates the Duverger's law. The geographically concentrated minority parties can also an important role.

**Figure 2: Disproportionality for Indian Loksabha Election**




**Data Source:** Author uses the data from Election Results, Full Statistical Reports, the Election Commission of India (https://eci.gov.in/statistical-report/statistical-reports/) to calculate the Gallagher Index to measure the disproportionality.

Figure No. 2 shows the trends for Gallagher Index[2]. The Special Committee on Electoral Reform (a Canadian Parliamentary Committee) suggests that for Canada, the Gallagher Index should be 5 or less than 5. For India it is higher that 5. Tillin (2015) also finds the disproportionality at the national election. Law Commission of India 2015 report on the electoral reforms does highlight the disproportionality and finds that even if the FPTP system supports the majoritarian government can't uphold majoritarianism in a multiparty system because a candidate which receives votes around 20-30% can manage to win[3]. The Report of the Committee on Electoral Reforms, 1990 does face disagreement among the member regarding the continuation of the FPTP system due to the issue of disproportionality[4]. Mishra (2018, April) suggests that elective representatives as they receive votes below 50% don't represent the majority of the population. The alternatives for the Indian electoral system should be investigated.

The disproportional representation generated from the fact that the winning candidate wins the election with small margin i.e. other candidates are also receiving the fair amount of votes. Since the candidate who receive highest vote (not necessarily more than 50%) wins the election, even if one receives 30-40% votes, he/she can manage to win the election. Therefore, to understand why disproportionality exists, the constituency level analysis is required. In this study, we have tried to understand how religious polarization and diversity are affecting the election outcome. This study will essentially benefit to understand why disproportionality exists at national level.

[2]Gallagher (1991) proposed the disproportionality index also known as the Gallagher index measure the disproportionality between the seats won by the party and votes received by the party. Gallagher Index $= \frac{1}{2} * \sum_{i=1}^{n} (v_i - s_i)^2$ where $v_i$ and $s_i$ are percentage of vote and seat obtained by the $i^{th}$ party.

[3]Refer to Law Commission of India, Report No. 255 Electoral Reforms March 2015 http://lawcommissionofindia.nic.in/reports/report255.pdf

[4]Refer to Report of the Committee on Electoral Reforms, May 1990, Government of India, Ministry of Law and Justice, Legislative Department, https://adrindia.org/sites/default/files/Dinesh%20Goswami%20Report%20on%20Electoral%20Reforms.pdf

## Data and methodology

Easterly and Levine (1997), Collier and Hoffler (2004), and Miguel, Satyanath and Sergenti (2004) use fractionalization index[5] to identify the social diversity. For polarization, Esteban and Ray (1994) and Wolfson (1994) propose the polarization index. The fractionalization index and polarization index have been used to measure social diversity and political polarization in the society respectively. In this work, the polarization index proposed by Montalvo and Reynal-Querol (2005) is used. Both indices lie between 0 to 1. More the fractionalization index, more the diversity in society where higher polarization index represents highly polarized society.

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

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

This polarization index is also known as Reynal-Querol index (Reynal-Querol, 2002).

There are two challenges encountered while calculating the fractionalization and polarization indices. First challenge is predicting the population for election years as census year (1991, 2001, 2011) and elections years (1991, 1996, 1998, 1999, 2004, 2009) are different. To predict the population for every religion at district level, exponential growth rate for every religion at district level is calculated based on census data. The exponential growth rate for every religion is calculated for 10 years based on census data for every districts. Then based on that exponential growth rate, the population is predicted for election year. Second challenge is matching the district information with Loksabha

[5]The fractionalization index identifies the chances of selecting two individuals randomly belonging to the different groups. This fractionalization index doesn't discuss the cultural and economic differences among groups (Baldwin and Huber, 2010)

constituencies. In many cases, the district itself is a Loksabha constituency. But in some cases, one district may have more than one Loksabha constituencies or one Loksabah constituency may be shared by more than one district. In first case where one district has more than one Loksabha constituencies, the district level population is divided into the constituencies proportional to the valid votes of the constituencies. In second case where one constituency has more than one district, the population of these districts are added to get the population at constituency level. After getting constituency level religion population, the polarization index and fractionalization index is calculated.

Further, to understand the election results, two key variables are used as dependent variables. First, the concentration of votes at constituencies and second, vote share of winning candidates. These variables represent whether there is concentration at constituency, whether wining candidate is getting majority of votes (i.e. more than 50%). The Herfindahl-Hirschman Index (HHI)[6] is calculated by adding the square of vote shares of all candidates contesting election in given constituencies. HHI shows the voting concentration. Higher HHI suggests that one candidate has managed to win high vote share. Lower HHI and lower vote share of winning candidate suggests that votes are getting divided into other candidates too. Voters are preferring other candidates too but since candidate with highest votes win the election in FPTP, the preference of voters who voted for other candidates. And that gets reflected into the disproportionality at national level.

$$\mathrm{HHI} = \sum_{i=0}^{n} x_i^2$$

Where $x_I$ is vote share of $i^{th}$candidate in given constituency.

Further it is also interesting to understand how vote concentration changes for SC/ST reserved constituencies compared to general constituencies. Therefore, dummy variable for reserved

[6]HHI index is commonly used index to measure the market concentration.

constituencies is used in the analysis. Further, since concentration and vote share of wining candidates can be affected by number of candidates contesting the elections in given constituency, incumbency, number of terms, party of candidates.

Since 2011 census is a last census available, extrapolation of population data after 2011 is avoided. The focus of study is on 1991, 1996, 1998, 1999, 2004, 2009 Loksabha elections as it is interesting to focus on the post-1991 where alliance politics becoming a routine. The state specific effect and time specific effect are also controlled.

Equation 1:

$$\boldsymbol{HHI_i} = \boldsymbol{\alpha + \beta_1 * Fractionalization\ Index_i + \beta_2 * Polarization\ Index_i + \beta_3 * Incumbent_i + \beta_4 * SC_i + \beta_5 * ST_i + \beta_6 * Same\ Party_i + \beta_7 * Number\ of\ Candidates + \beta_8 * Number\ of\ Terms_i + \sum_{i=2}^{n} D_i * State_i + \sum_{i=2}^{n} \theta_i * Year_i + \varepsilon_i}$$

Equation 2:

$$\boldsymbol{Vote\ Share\ of\ Winner_i = \alpha + \beta_1 * Fractionalization\ Index_i + \beta_2 * Polarization\ Index_i + \beta_3 * Incumbent_i + \beta_4 * SC_i + \beta_5 * ST_i + \beta_6 * Same\ Party_i + \beta_7 * Number\ of\ Candidates + \beta_8 * Number\ of\ Terms_i + \sum_{i=2}^{n} D_i * State_i + \sum_{i=2}^{n} \theta_i * Year_i + \varepsilon_i}$$

## RESULT

Table No. 1 shows the result for equation. In three model, the fractionalization index has statistically significant and negative impact on HHI. In all models, the coefficient of SC and ST dummies are statistically significant and negative. The number of candidates and number of terms have also statistically significant impact on HHI.

**Table 1: HHI**

| HHI (Concentration of Votes) | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---|---|---|---|---|---|---|
| Fractionalization Index | -0.141** (0.01) | -0.035** (0.03) | | -0.119** (0.02) | -0.031 (0.05) | -0.011 (0.17) |
| Polarization Index | 0.059** (0.03) | | -0.012 (0.15) | 0.049 (0.08) | | |
| Incumbent (1 if incumbent) | 0.003 (0.40) | 0.003 (0.43) | 0.003 (0.44) | -0.001 (0.87) | -0.001 (0.82) | -0.001 (0.82) |
| Reserved for SC (1 if constituency is reserved for SC) | -0.014*** (0.00) | -0.014** (0.01) | -0.014*** (0.00) | -0.013** (0.01) | -0.012** (0.010 | -0.012** (0.01) |
| Reserved for ST (1 if constituency is reserved for ST) | -0.028*** (0.00) | -0.029*** (0.00) | -0.030*** (0.00) | -0.025** (0.01) | -0.027*** (0.00) | -0.027*** (0.00) |
| Same Party (1 if candidate contesting the election with same party) | 0.000 (0.93) | 0.001 (0.88) | 0.001 (0.91) | 0.014** (0.03) | 0.014** (0.03) | 0.014** (0.03) |
| Number of Candidates Contesting the election | -0.001*** (0.00) | -0.001*** (0.00) | -0.001*** (0.00) | -0.001*** (0.00) | -0.001*** (0.00) | -0.001*** (0.00) |
| Number of terms for the candidates | 0.003** (0.03) | 0.003** (0.02) | 0.003** (0.02) | 0.004*** (0.00) | 0.004*** (0.00) | 0.004*** (0.00) |
| Constant | 0.432*** (0.00) | 0.440*** (0.00) | 0.439*** (0.00) | 0.352*** (0.00) | 0.361*** (0.00) | 0.360*** (0.00) |
| Controlling for Party of previous winner | No | No | No | Yes | Yes | Yes |
| Controlling the State Specific Effect | Yes | Yes | Yes | Yes | Yes | Yes |
| Controlling the Time Specific Effect | Yes | Yes | Yes | Yes | Yes | Yes |
| Number of observations | 1407.00 | 1407.00 | 1407.00 | 1407.00 | 1407.00 | 1407.00 |
| F<br>Prob > F | 27.01<br>(0.00) | 27.51<br>(0.00) | 27.38<br>(0.00) | 13.08<br>(0.00) | 13.15<br>(0.00) | 13.11<br>(0.00) |
| R-squared | 0.44 | 0.44 | 0.44 | 0.52 | 0.52 | 0.51 |
| Adjusted R-squared | 0.43 | 0.42 | 0.42 | 0.48 | 0.48 | 0.48 |
| Joint test for State Specific and Time Specific Effect:<br>F value (P value) | 24.61<br>(0.00) | 24.60<br>(0.00) | 24.31<br>(0.00) | 20.43<br>(0.00) | 20.37<br>(0.00) | 20.21<br>(0.00) |

The Table No. 2 shows the result for equation 2. The fractionalization index does have statistically significant and negative

impact on Vote share of winner. The coefficient of ST dummies, number of candidates, number of terms are statistically significant.

**Table 2: Vote Share of Winner**

| Vote Share of Winner | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---|---|---|---|---|---|---|
| Fractionalization Index | -13.012** (0.04) | -4.322** (0.02) | | -10.098 (0.11) | -4.090** (0.03) | |
| Polarization Index | 4.853 (0.14) | | -1.737 (0.08) | 3.315 (0.32) | | -1.754 (0.08) |
| incumbent (1 if incumbent) | 0.409 (0.39) | 0.392 (0.41) | 0.384 (0.42) | -0.113 (0.82) | -0.128 (0.79) | -0.135 (0.78) |
| Reserved for SC (1 if constituency is reserved for SC) | -0.909 (0.11) | -0.885 (0.12) | -0.892 (0.12) | -0.841 (0.14) | -0.825 (0.15) | -0.828 (0.15) |
| Reserved for ST (1 if constituency is reserved for ST) | -2.416** (0.03) | -2.531** (0.02) | -2.583** (0.02) | -1.971 (0.07) | -2.045 (0.06) | -2.084 (0.06) |
| Same Party (1 if candidate contesting the election with same party) | -0.129 (0.82) | -0.108 (0.85) | -0.122 (0.83) | 1.372 (0.07) | 1.394 (0.07) | 1.393 (0.07) |
| Number of Candidates Contesting the election | -0.057** (0.03) | -0.057** (0.03) | -0.058** (0.03) | -0.040 (0.13) | -0.040 (0.14) | -0.040 (0.13) |
| Number of terms for the candidates | 0.396** (0.01) | 0.405*** (0.00) | 0.412*** (0.00) | 0.492*** (0.00) | 0.496*** (0.00) | 0.501*** (0.00) |
| Constant | 50.840*** (0.00) | 51.4731*** (0.00) | 51.494*** (0.00) | 44.589*** (0.00) | 45.167*** (0.00) | 45.231*** (0.00) |
| Controlling for Party of previous winner | No | No | No | Yes | Yes | Yes |
| Controlling the State Specific Effect | Yes | Yes | Yes | Yes | Yes | Yes |
| Controlling the Time Specific Effect | Yes | Yes | Yes | Yes | Yes | Yes |
| Number of observations | 1407.00 | 1407.00 | 1407.00 | 1407.00 | 1407.00 | 1407.00 |
| F<br>Prob > F | 24.85<br>(0.00) | 25.41<br>(0.00) | 25.31<br>(0.00) | 11.62<br>(0.00) | 11.72<br>(0.00) | 11.69<br>(0.00) |
| R-squared | 0.42 | 0.42 | 0.43 | 0.49 | 0.49 | 0.49 |
| Adjusted R-squared | 0.40 | 0.40 | 0.40 | 0.44 | 0.44 | 0.44 |
| Joint test for State Specific and Time Specific Effect: F value (P value) | 25.60 (0.00) | 25.65 (0.00) | 25.44 (0.00) | 22.45 (0.00) | 22.47 (0.00) | 22.34 (0.00) |

The fractionalization index has negative impact on HHI as well as vote share of winner. The fractionalization index shows the religious diversity. More diverse the constituency, more division of votes will happen. Therefore, the concentration of votes will be lower for highly

diverse society. Since votes are getting divided, the winner will also receive the low vote share. As winner is getting lower share and votes are getting divided with diversity, the disproportionality at national level gets increased with religious diversity as winner is decided by maximum votes (not based on the criteria of getting votes more than 50%). Interestingly, for reserve constituencies (SC/ST), the concentration is on an average lower than general constituencies which suggests that votes are getting divided more in SC/ST reserved constituencies compared to general constituencies. The winner in reserved constituencies is on an average receiving lower vote shares compared to the general constituencies. This suggests that for reserved constituencies, parties which are not winning are also managing to receive the fair amount vote shares.

## CONCLUDING REMARK

It is well noted fact that the FPTP system does generate the disproportionality. This work tries to understand how FPTP is generating the disproportionality in diverse society. The diverse constituencies witness the division of the votes into many parties which leads to the lower vote concentration in given constituency as well lower vote share of winner. This suggests that in diverse constituencies, the parties not winning the election are also attracting the voters and voters are preferring these parties but as in FPTP system the candidate receiving highest votes wins the election, these preference remains unrepresented in house since these parties are unable to win the election. This leads to the disproportionality as parties are receiving the votes but not able to win the election. For SC/ST reserved constituencies, the vote concentration is lower than general constituencies. The parties losing the election in SC/Stare getting votes but failing to represent these votes in the house. It becomes then important to find ways to provide space to these parties in house.

The disproportionality is a concerning issue in FPTP. Are parties becoming seatless even though voters are preferring them? If candidates are winning the election by obtaining 30-40% votes, then what about remaining 60-70% votes? If it is also happening reserved constituencies then is it fair to reserve the seats instead of votes? These are important questions which should be investigated.

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## APPENDIX

**Table 3: Descriptive Statistics**

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| HHI | 2,803 | 0.372025 | 0.085857 | 0.1 | 0.813008 |
| Vote share | 2,803 | 47.82154 | 10.20984 | 15.04 | 91.67 |
| Fractionalization Index | 2,804 | 0.272003 | 0.155018 | 0.000277 | 0.730423 |
| Polarization Index | 2,804 | 0.643503 | 0.284259 | 0.002994 | 0.999764 |
| Number of Candidates | 2,805 | 13.86346 | 13.57579 | 1 | 456 |
| Number of Terms | 2,805 | 2.276649 | 1.588039 | 1 | 10 |

## Table 4: Descriptive Statistics

| State | HHI | Vote share | Fraction-alization Index | Polarization Index | Number of Candidates | Number of Terms |
|---|---|---|---|---|---|---|
| Andaman and Nicobar | 0.40854 | 50.855 | . | . | 8.333333 | 4.833333 |
| Andhra Pradesh | 0.39868 | 49.48293 | 0.204475 | 0.511016 | 12.01596 | 2 |
| Arunachal Pradesh | 0.417678 | 54.84 | . | . | 4.25 | 1.583333 |
| Assam | 0.313515 | 46.12532 | 0.379434 | 0.825199 | 9.367089 | 2.164557 |
| Bihar | 0.356299 | 46.72661 | 0.274368 | 0.656841 | 16.38976 | 2.192913 |
| Chandigarh | 0.340187 | 43.675 | 0.262676 | 0.730676 | 28 | 2.166667 |
| Chhattisgarh | 0.370729 | 47.02143 | 0.083478 | 0.217156 | 12.92857 | 2.214286 |
| Dadra and Nagar Haveli | 0.403404 | 54.68 | 0.11099 | 0.325983 | 5.666667 | 3.5 |
| Daman and Diu | 0.408417 | 51.59833 | 0.232871 | 0.61312 | 6.666667 | 1.666667 |
| Delhi | 0.414797 | 49.21207 | 0.358731 | 0.845813 | 38.68966 | 2.068966 |
| Goa | 0.368921 | 45.931 | 0.478103 | 0.95365 | 10.9 | 1.8 |
| Gujarat | 0.43665 | 51.4597 | 0.190185 | 0.494497 | 11.65909 | 2.606061 |
| Haryana | 0.320863 | 45.80614 | 0.164201 | 0.421461 | 18.45614 | 1.842105 |
| Himachal Pradesh | 0.456067 | 53.869 | 0.061711 | 0.164628 | 8.1 | 2.35 |
| Jammu and Kashmir | 0.318715 | 42.49143 | 0.36427 | 0.99 | 13.92857 | 1.535714 |
| Jharkhand | 0.248959 | 43.02684 | 0.36752 | 0.765092 | 15.47368 | 2.421053 |
| Karnataka | 0.35773 | 47.59603 | 0.272646 | 0.679166 | 14.14103 | 2.173077 |
| Kerala | 0.420849 | 51.52826 | 0.511832 | 0.969302 | 8.669725 | 2.477064 |
| Lakshadweep | 0.490385 | 56.86167 | . | . | 3 | 6 |
| Madhya Pradesh | 0.388574 | 47.82742 | 0.150995 | 0.411924 | 15.68681 | 2.67033 |
| Maharashtra | 0.38557 | 48.1836 | 0.335756 | 0.776998 | 12.8692 | 2.253165 |
| Manipur | 0.275831 | 41.84417 | . | . | 9.083333 | 1.75 |
| Meghalaya | 0.427055 | 55.221 | 0.565133 | 0.987269 | 5.9 | 3.6 |
| Mizoram | 0.414687 | 50.535 | . | . | 5.166667 | 1.666667 |
| Nagaland | 0.584948 | 72.415 | . | . | 3.5 | 1.333333 |
| Odisha | 0.407923 | 52.21125 | 0.103504 | 0.274171 | 7.455357 | 2.446429 |
| Puducherry | 0.34621 | 44.146 | 0.191402 | 0.519889 | 16 | 1.6 |
| Punjab | 0.39478 | 50.31197 | 0.45092 | 0.978622 | 12.0303 | 1.787879 |
| Rajasthan | 0.413416 | 49.40205 | 0.210558 | 0.552249 | 14.56818 | 2.25 |
| Sikkim | 0.576233 | 70.29333 | . | . | 5.333333 | 1.666667 |
| Tamil Nadu | 0.419308 | 52.28974 | 0.214247 | 0.545038 | 13.43455 | 1.879581 |
| Telangana | 0.282539 | 39.59333 | 0.421402 | 0.829392 | 16.25 | 1.666667 |
| Tripura | 0.482455 | 61.21538 | . | . | 8.076923 | 3.076923 |
| Uttar Pradesh | 0.282049 | 39.14889 | 0.275858 | 0.670787 | 19.54989 | 2.05765 |
| Uttarakhand | 0.340077 | 45.8 | 0.292704 | 0.655331 | 12.14286 | 2.571429 |
| West Bengal | 0.401048 | 52.58014 | 0.369467 | 0.841188 | 8.213636 | 3.109091 |
| Total | 0.372025 | 47.82154 | 0.272902 | 0.644683 | 13.86346 | 2.276649 |

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