Lok Sabha elections analysis

Agenda

- Problems statement

- Analysis

- Observations

- Recommendations

Problem statement

- Peter, a data analyst at AtliQ Media, is tasked with generating meaningful and unbiased insights from the 2014 and 2019 Lok Sabha election data.

- The focus should be on presenting less explored themes, such as voter turnout percentages and other relevant trends, without engaging in debates about potential election outcomes.

Terminology

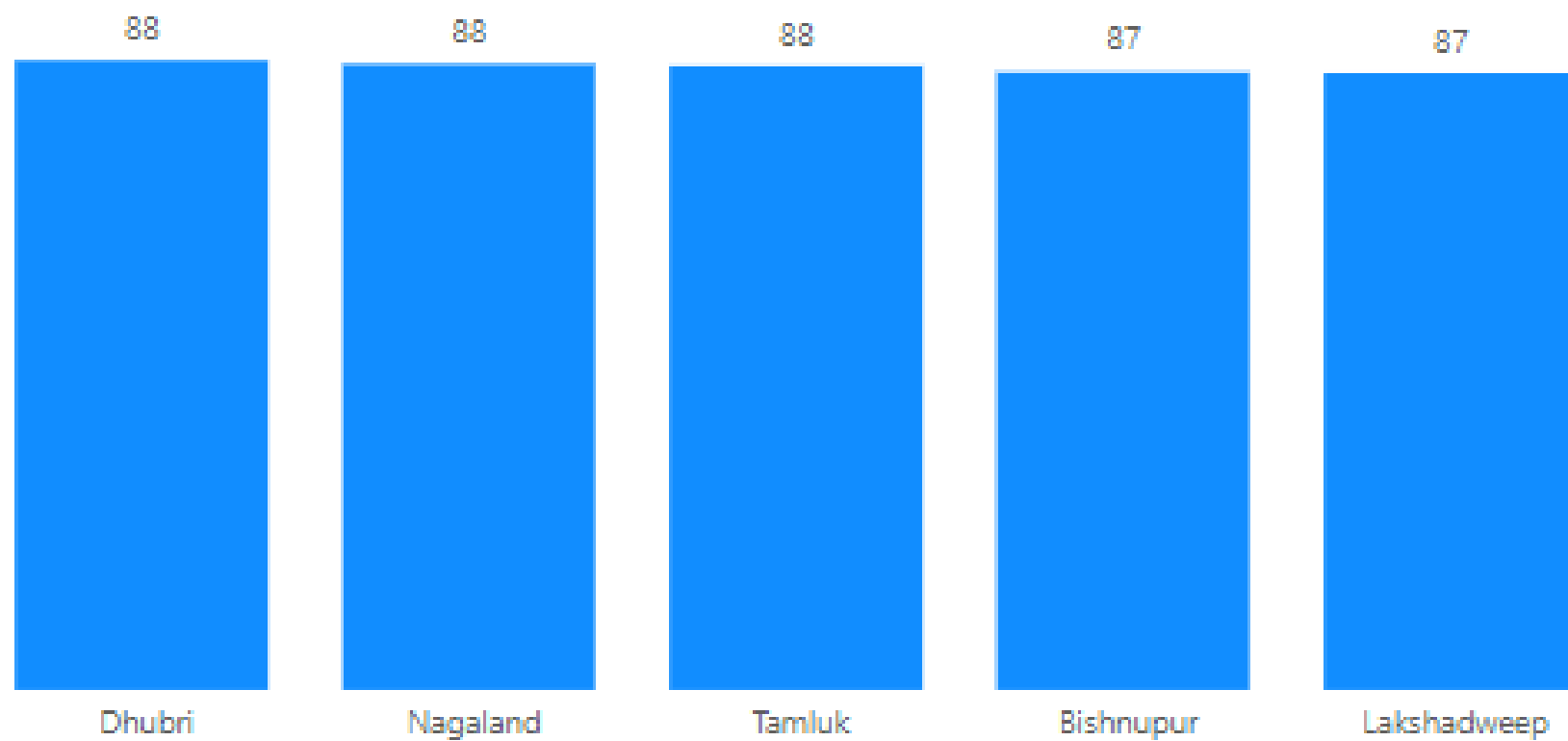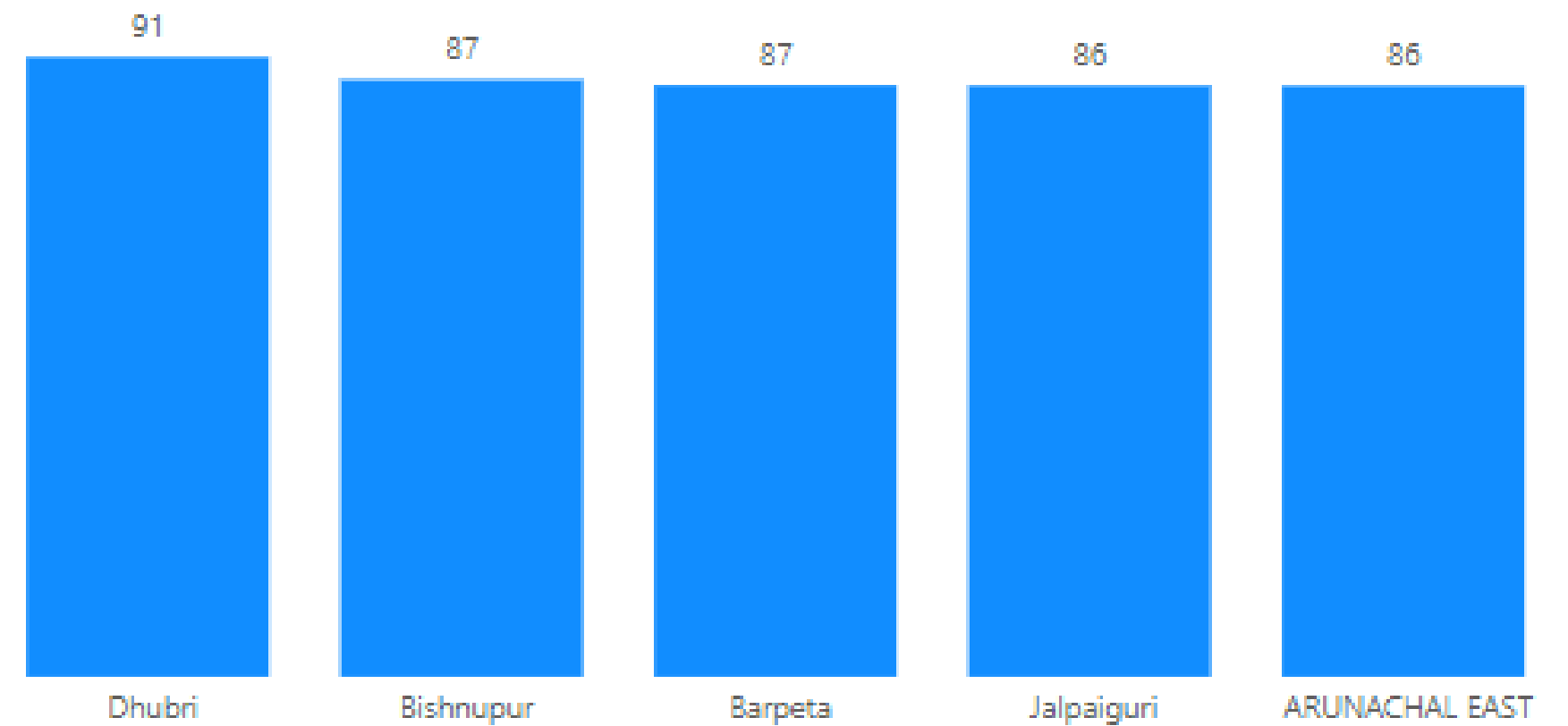|	
Voter Turnover Ratio	The percentage of people who show up to cast their ballot in an election is voter turnout. When voter turnout is high, democracies work better.
Margin DIfference	Is the difference between two amounts, especially the difference in the number of votes or points between the winner and the loser in an election or other contest.
NOTA	The "None of the Above" (NOTA) option allows voters to formally express their rejection of all running candidates. Selecting NOTA as a voting option signifies that the voter has not selected any party to support. If NOTA votes get the most number of votes in a constituency, the next candidate with the second-most number of votes is declared the winner.
Postal Votes/ballots	Postal ballots offer a convenient and secure way to cast your vote without having to leave your home. With postal ballots, you can exercise your right to vote easily and safely.

1. List top 5 / bottom 5 constituencies of 2014 and 2019 in terms of voter turnout ratio?
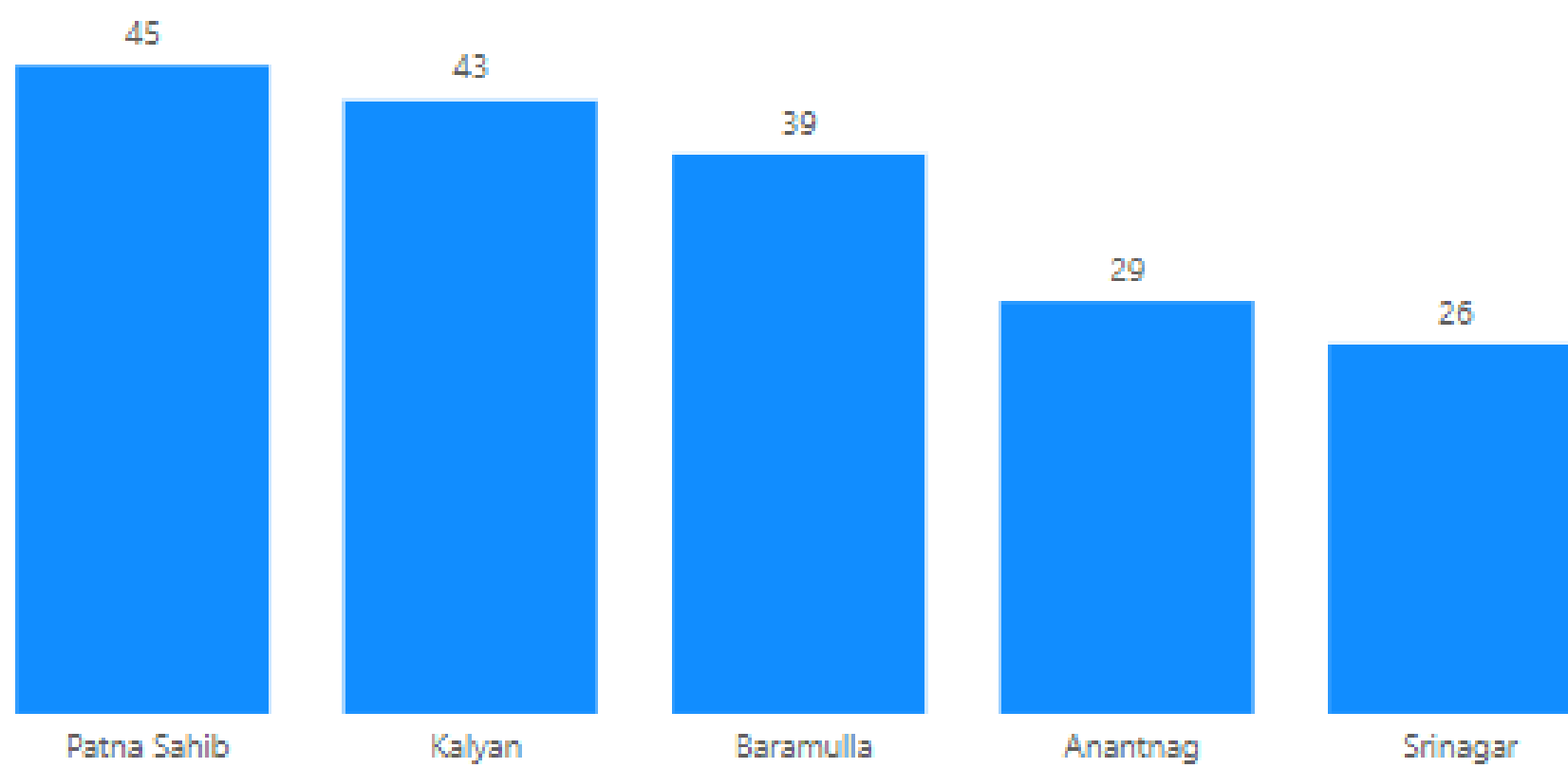
Top highest voter turnover in 2014

Dhubri	Nagaland	Tamluk	Bishnupur	Lakshadweep
88	88	88	87	87

Top highest voter turnover in 2019

Dhubri	Bishnupur	Barpeta	Jalpaiguri	ARUNACHAL EAST
91	87	87	86	86

Top lowest voter turnover in 2014

Patna Sahib	Kalyan	Baramulla	Anantnag	Srinagar
45	43	39	29	26

Top lowest voter turnover in 2019

Kalyan	Hyderabad	Baramulla	Srinagar	Anantnag
45	45	35	14	9

2. List top 5 / bottom 5 states of 2014 and 2019 in terms of voter turnout ratio?

Top highest voter turnover in 2014

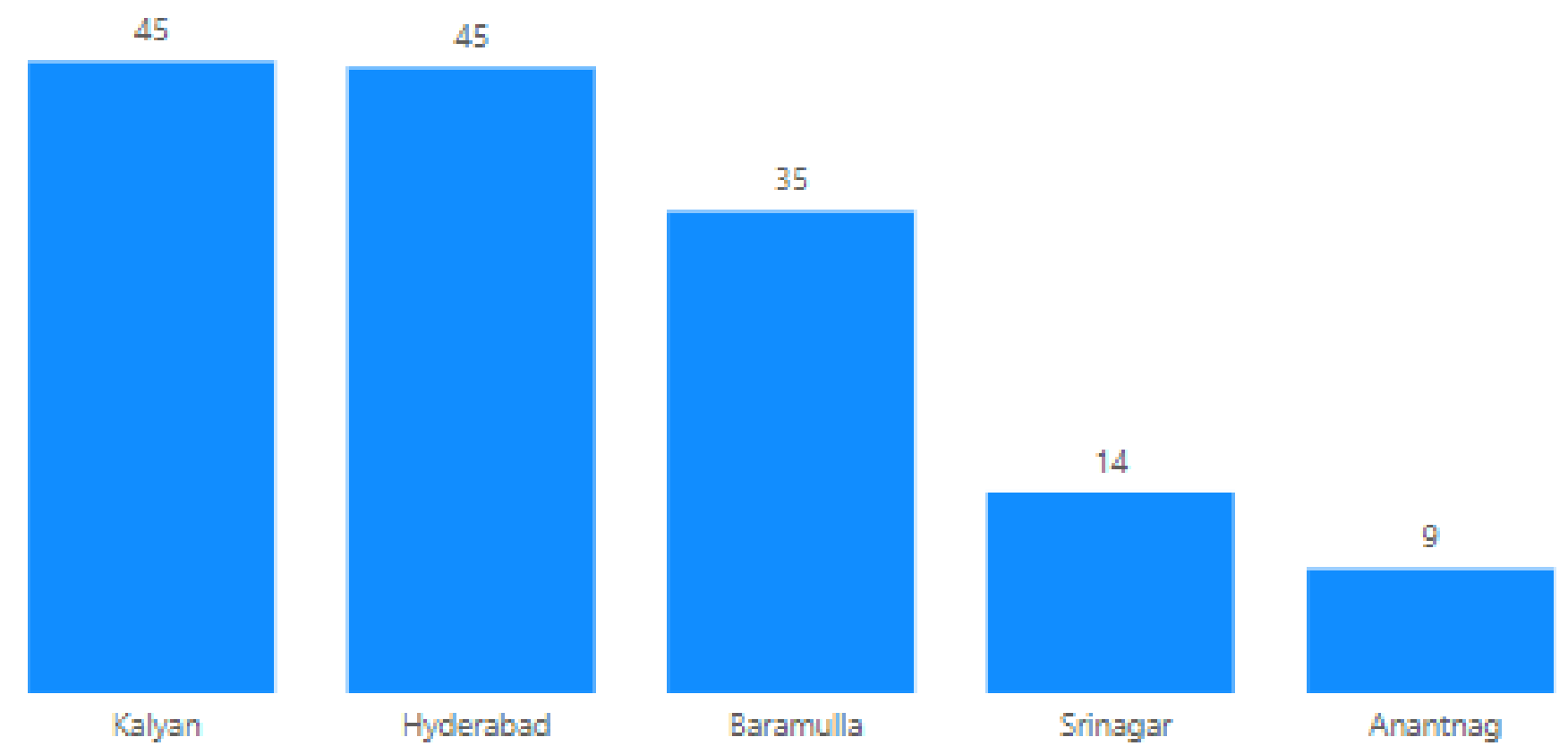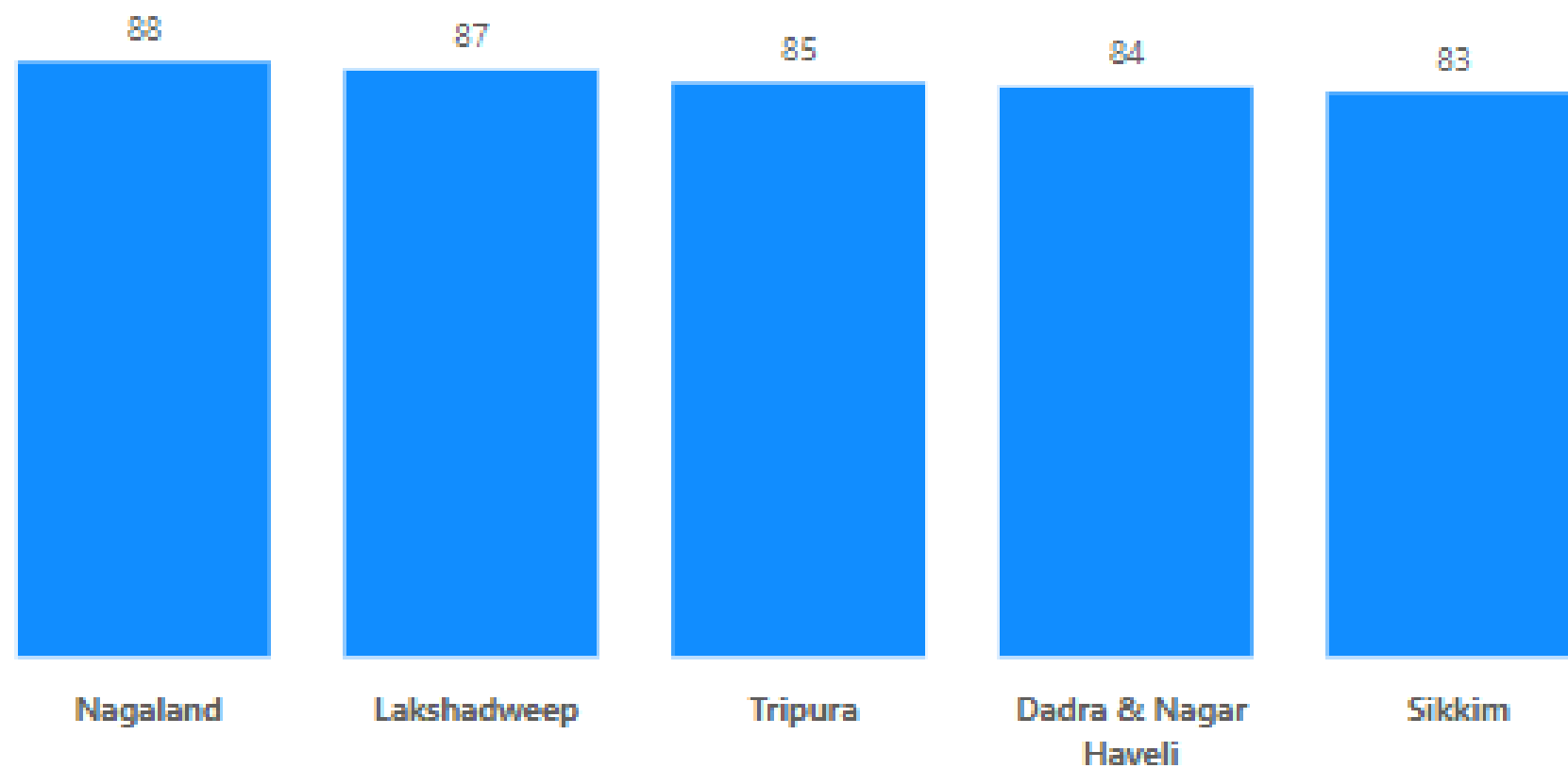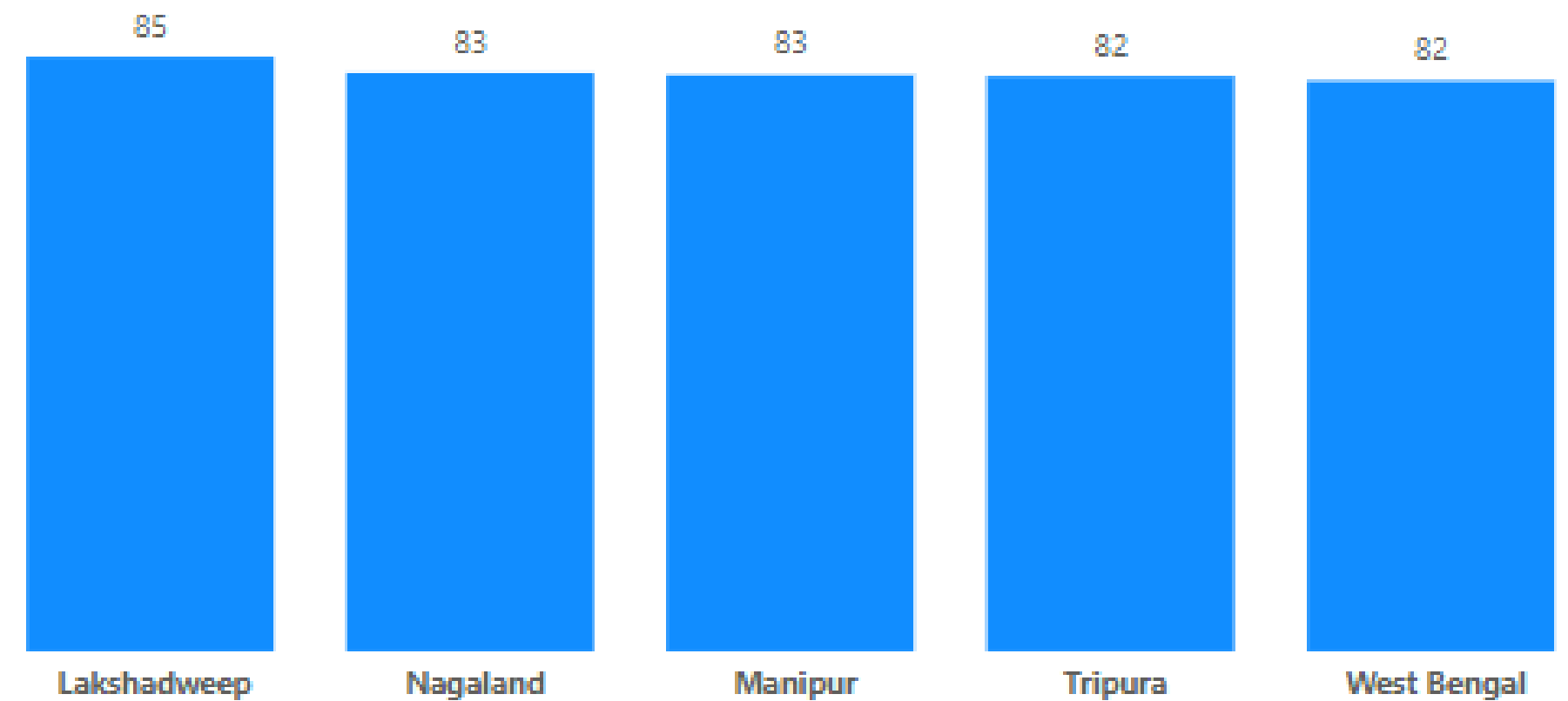| Nagaland	Lakshadweep	Tripura	Dadra & Nagar Haveli	Sikkim
88	87	85	84	83

Top highest voter turnover in 2019

Lakshadweep	Nagaland	Manipur	Tripura	West Bengal
85	83	83	82	82

Top lowest voter turnover in 2014

State	Value
Madhya Pradesh	62
Maharashtra	60
Uttar Pradesh	58
Bihar	56
Jammu & Kashmir	50

Top lowest voter turnover in 2019

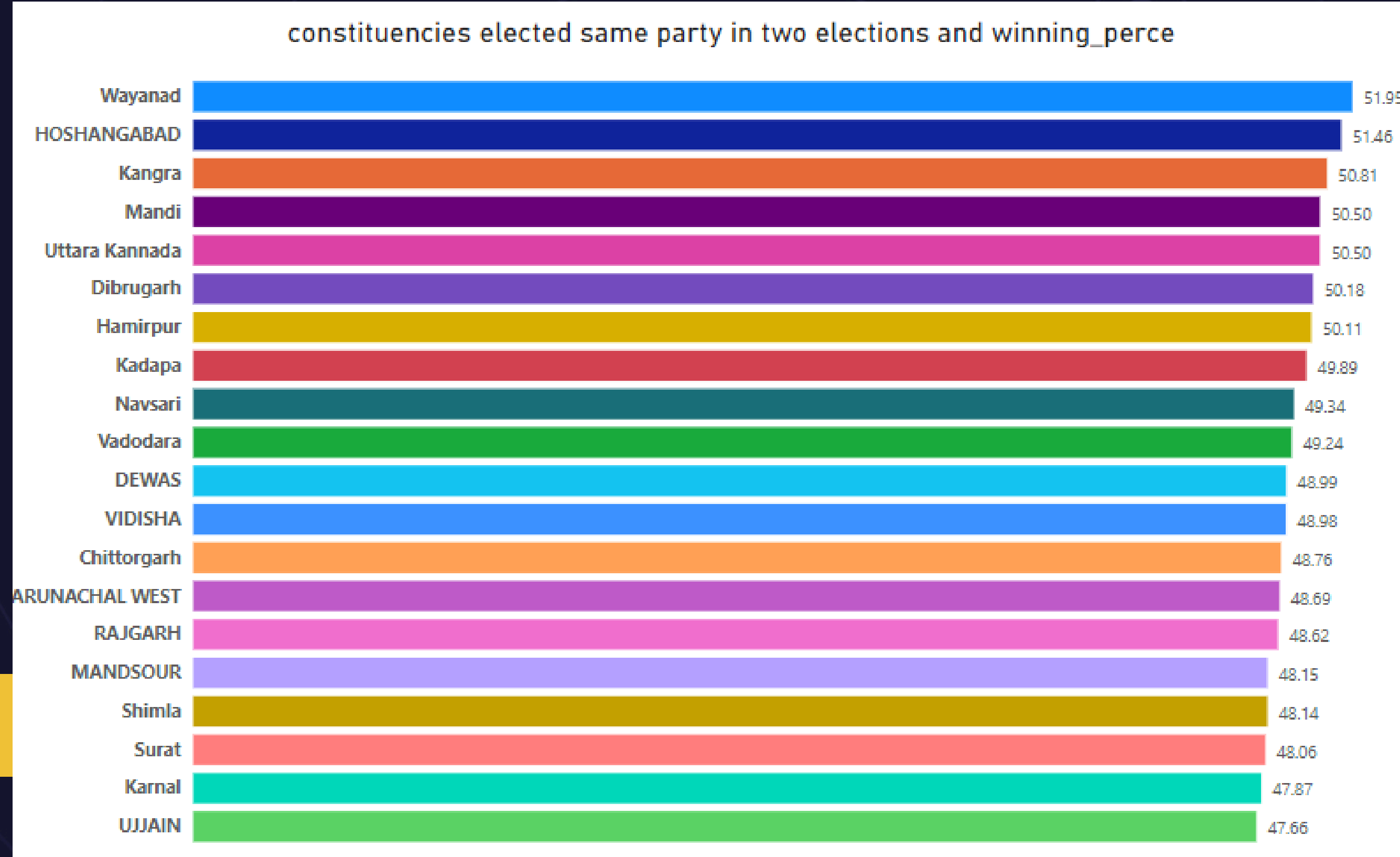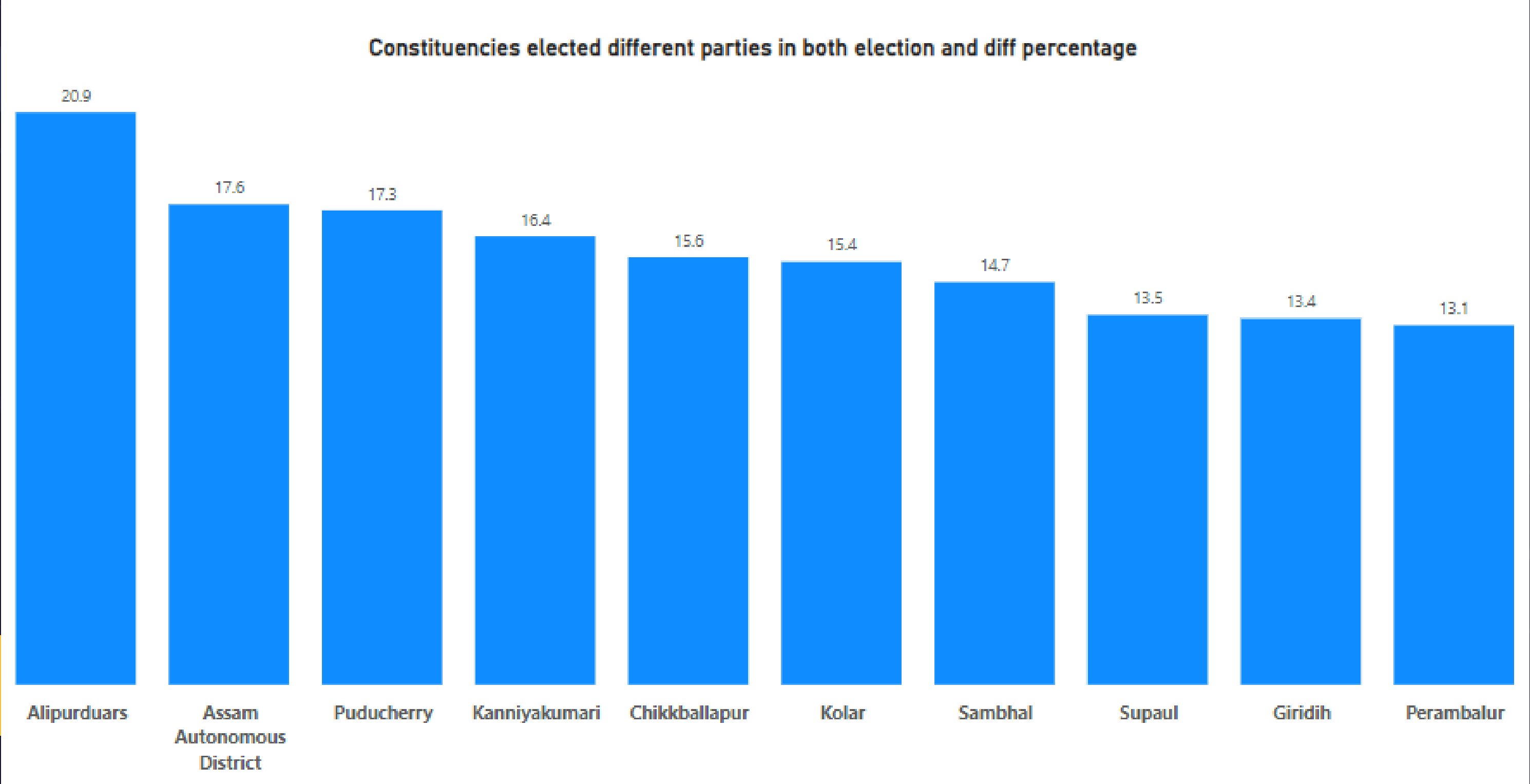| State	Value
Maharashtra	61
NCT OF Delhi	61
Uttar Pradesh	59
Bihar	57
Jammu & Kashmir	45
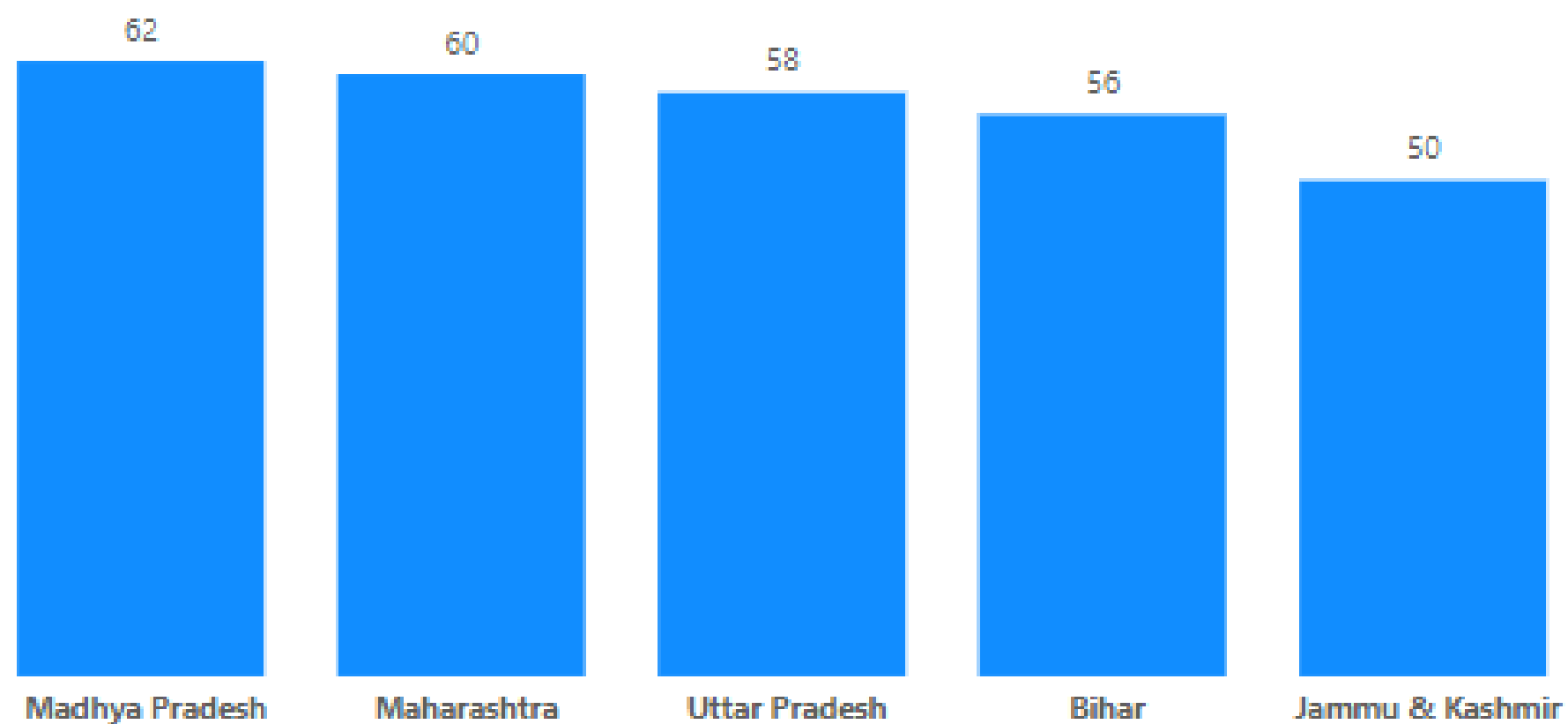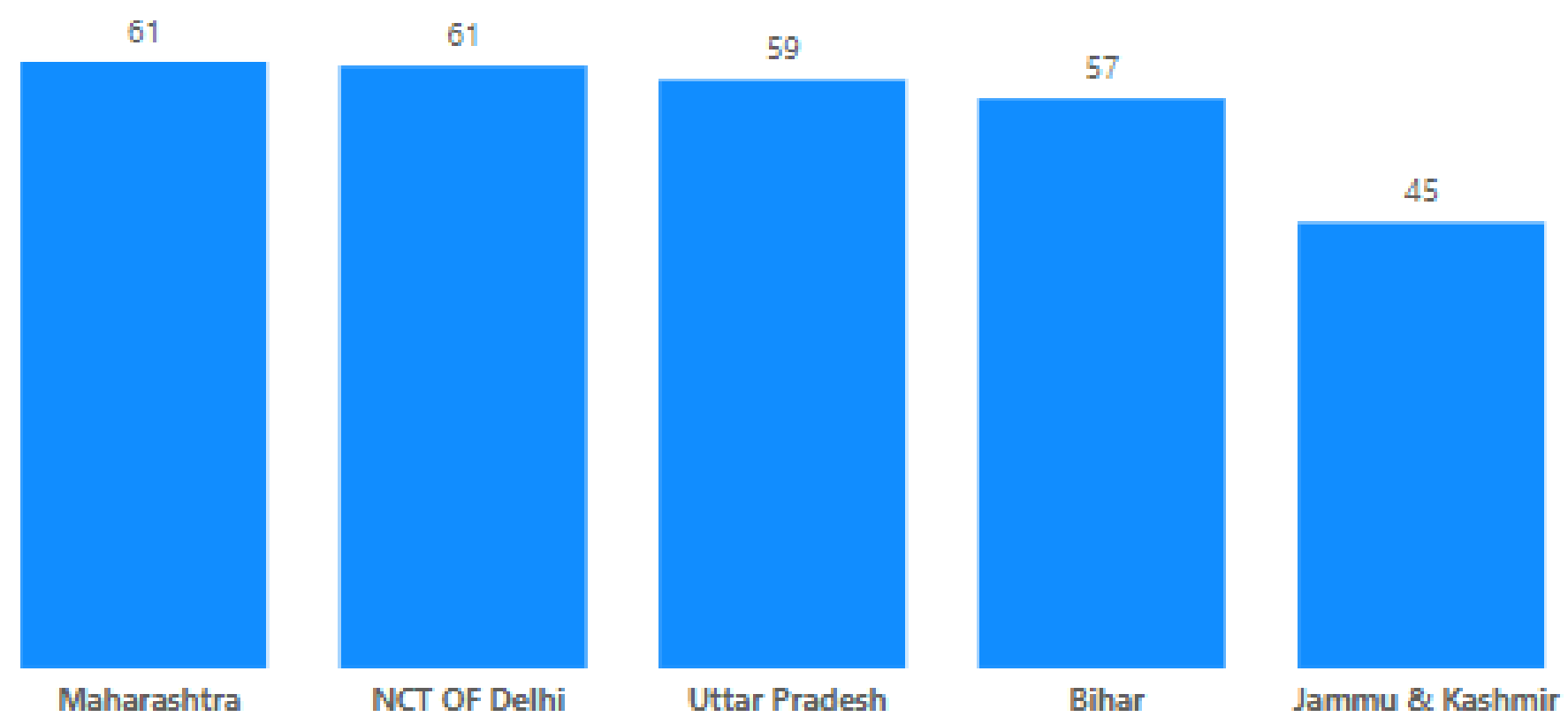
3. Which constituencies have elected the same party for two consecutive elections, rank them by % of votes to that winning party in 2019?

constituencies elected same party in two elections and winning_perce

Constituency	%
Wayanad	51.95
HOSHANGABAD	51.46
Kangra	50.81
Mandi	50.50
Uttara Kannada	50.50
Dibrugarh	50.18
Hamirpur	50.11
Kadapa	49.89
Navsari	49.34
Vadodara	49.24
DEWAS	48.99
VIDISHA	48.98
Chittorgarh	48.76
ARUNACHAL WEST	48.69
RAJGARH	48.62
MANDSOUR	48.15
Shimla	48.14
Surat	48.06
Karnal	47.87
UJJAIN	47.66

4. Which constituencies have voted for different parties in two elections (list top 10 based on difference (2019-2014) in winner vote percentage in two elections)

Constituencies elected different parties in both election and diff percentage

Constituency	Value
Alipurduars	20.9
Assam Autonomous District	17.6
Puducherry	17.3
Kanniyakumari	16.4
Chikkballapur	15.6
Kolar	15.4
Sambhal	14.7
Supaul	13.5
Giridih	13.4
Perambalur	13.1

5. Top 5 candidates based on margin difference with runners in 2014 and 2019.

Top 5 candidates & margin diff in 2014	
candidate	margin_diff ▲
GHULAM RAZA	0.02
ARAKERA SHIVANAGOUDA NAYAK	0.09
WANKHEDE SUBHASH BAPURAO	0.10
DEEPA DASMUNSI	0.12
TATKARE SUNIL DATTATREY	0.14

Top 5 candidates & margin diff in 2019	
candidate	margin_diff ▲
Tribhuvan Ram (T.Ram)	0.01
TAPAN KUMAR RAY	0.06
R. DHRUVANARAYANA	0.11
SURENDRA PRASAD YADAV	0.11
KALI CHARAN MUNDA	0.12
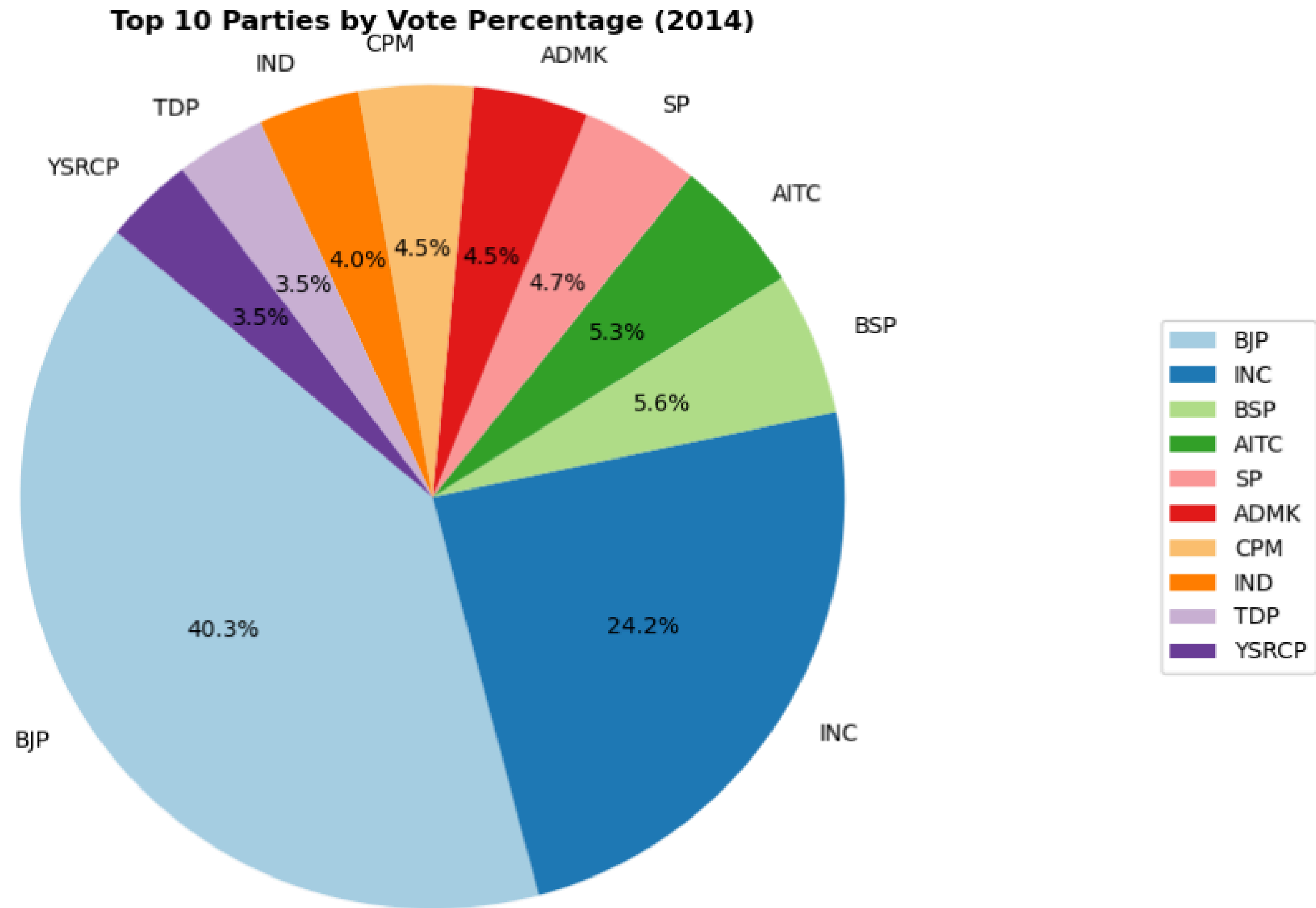
Top 10 Parties by Vote Percentage (2014)

Top 10 Parties by Vote Percentage (2019)

Split votes of party by state in 2014

Split votes of party by state in 2019

Legend: BJP, CPIM, INC, IND, NCP

States (x-axis): Dama..., Gujarat, Himachal Pradesh, Andaman & Nicobar I..., Lakshadweep, Madhya Pradesh, Dadra & Nagar Haveli, Goa, Rajasthan, Chhattisgarh, Tripura, Uttarakhand, Chandigarh, Haryana, Karnataka, Jammu & Kashmir, Arunachal Pradesh, Kerala, NCT OF Delhi, Assam, Jharkhand, Manipur, Maharashtra, Puducherry, Meghalaya, Uttar Pradesh, Odisha, West Bengal, Telangana, Mizoram, Punjab, Nagaland, Bihar, Tamil Nadu, Sikkim, Andhra Pradesh
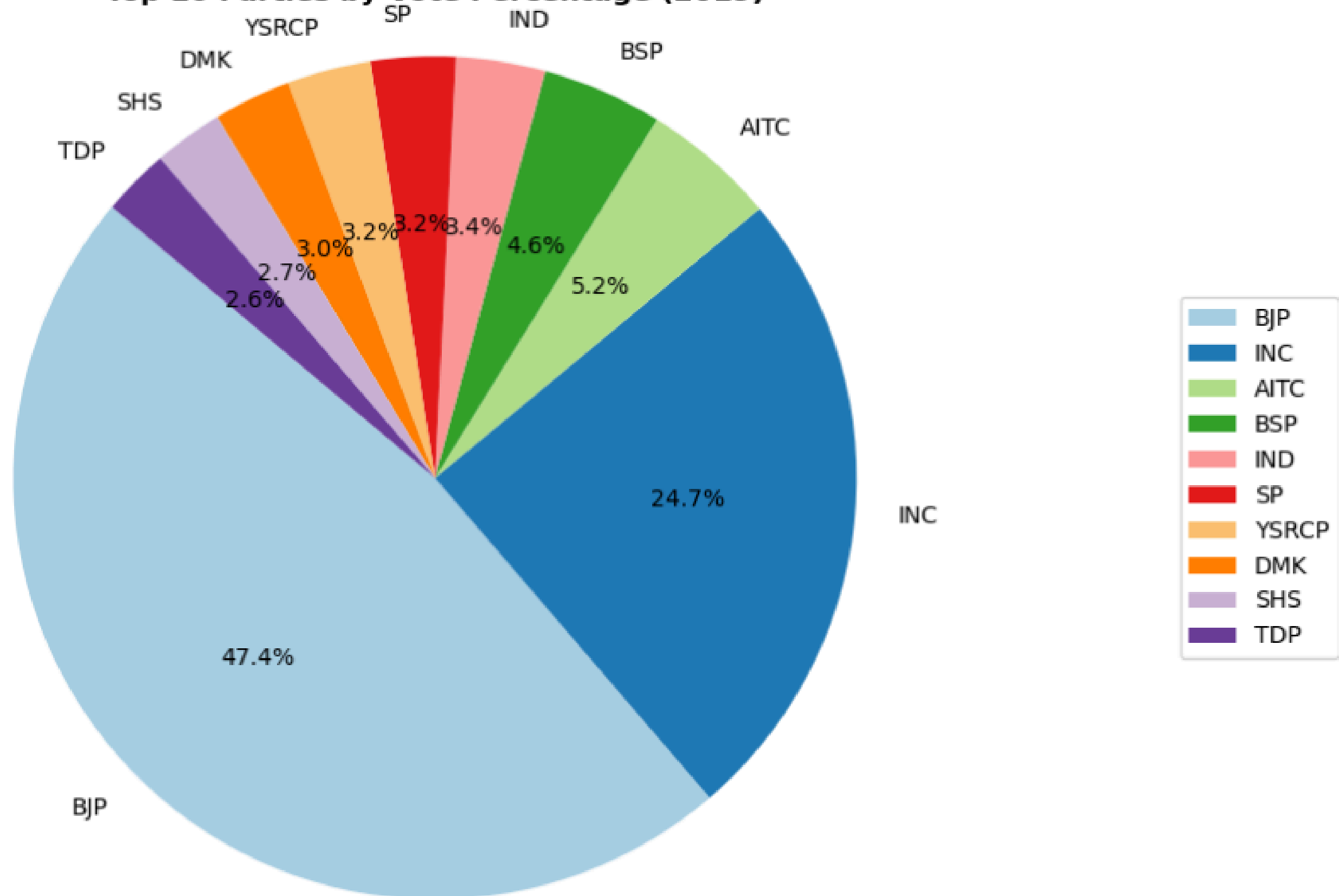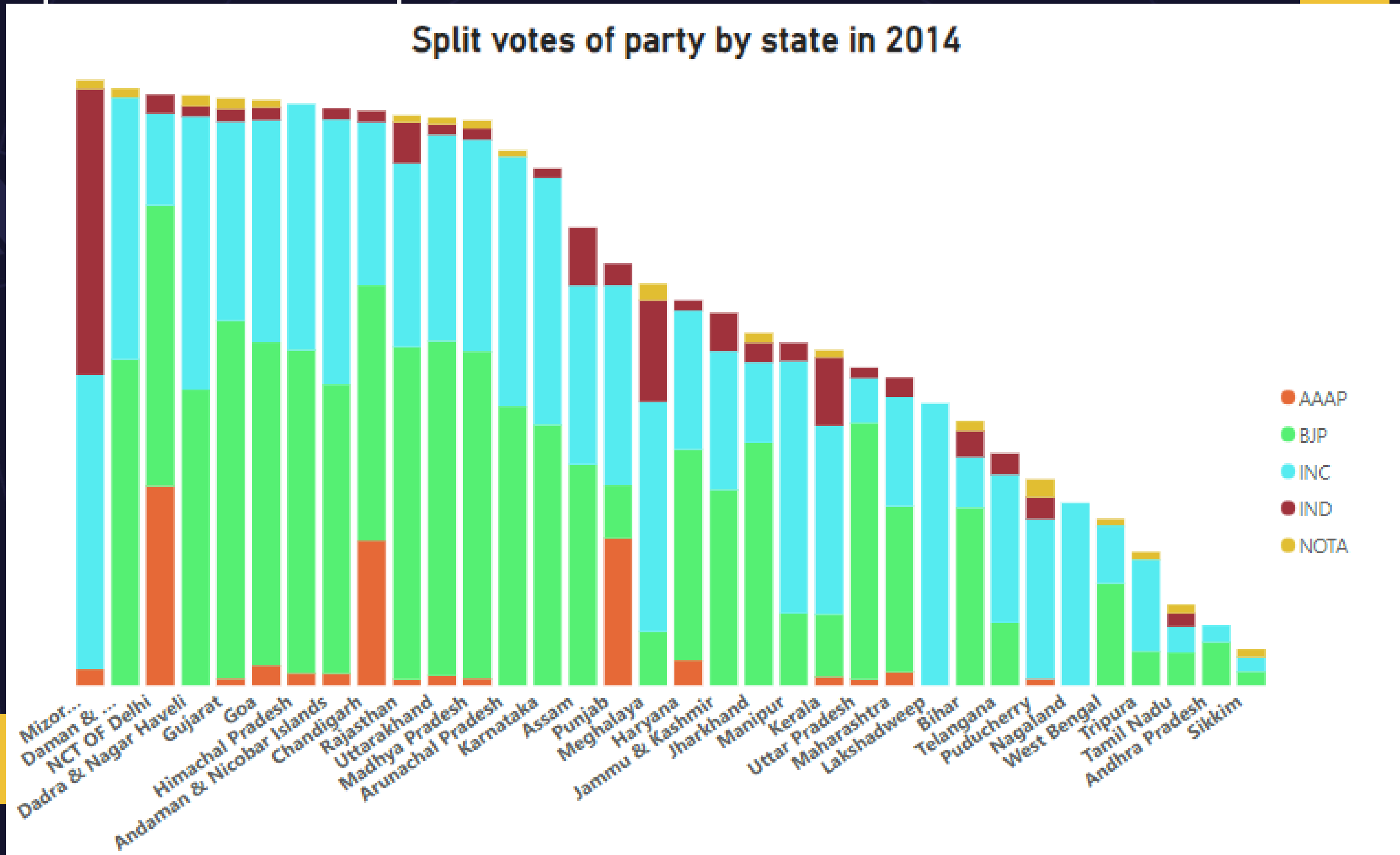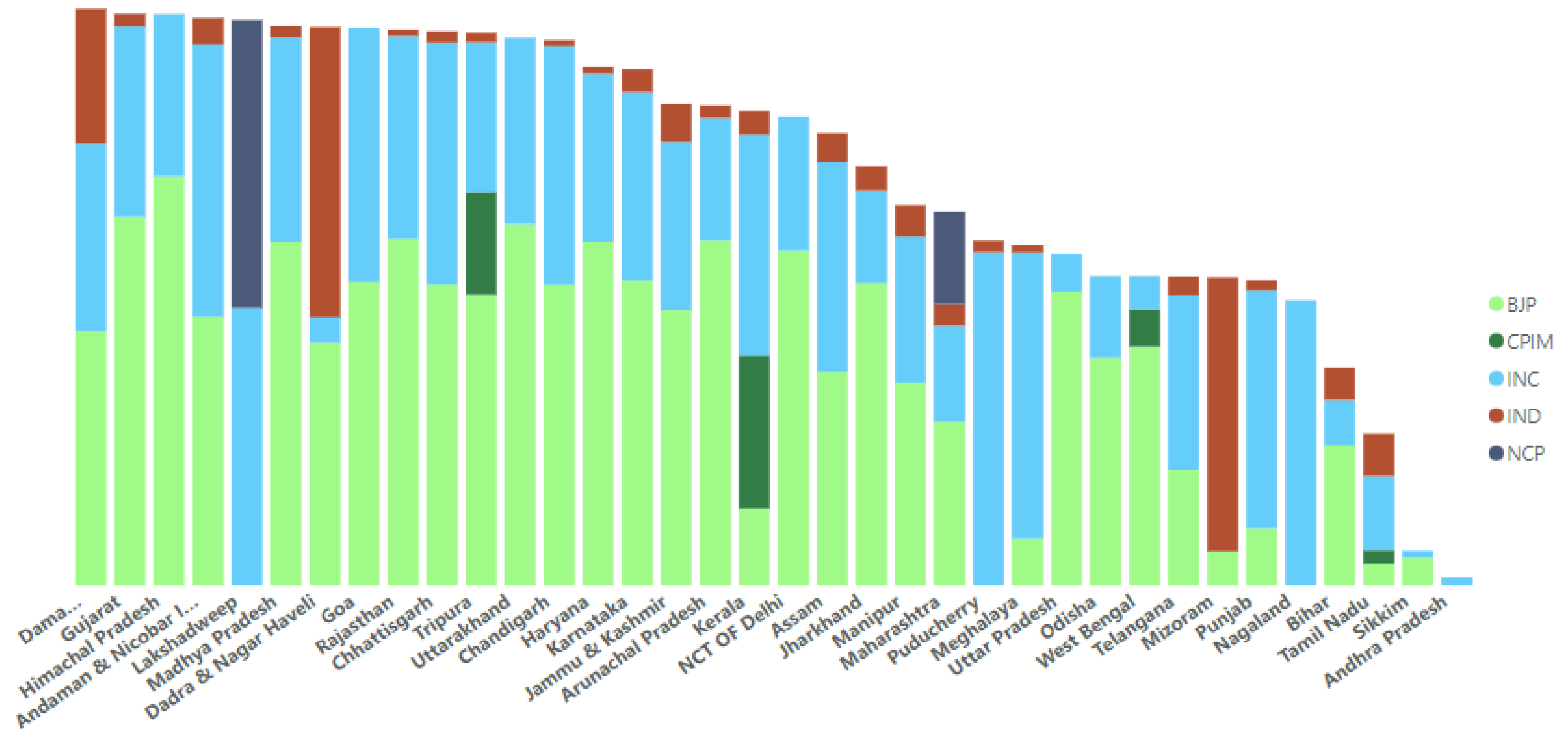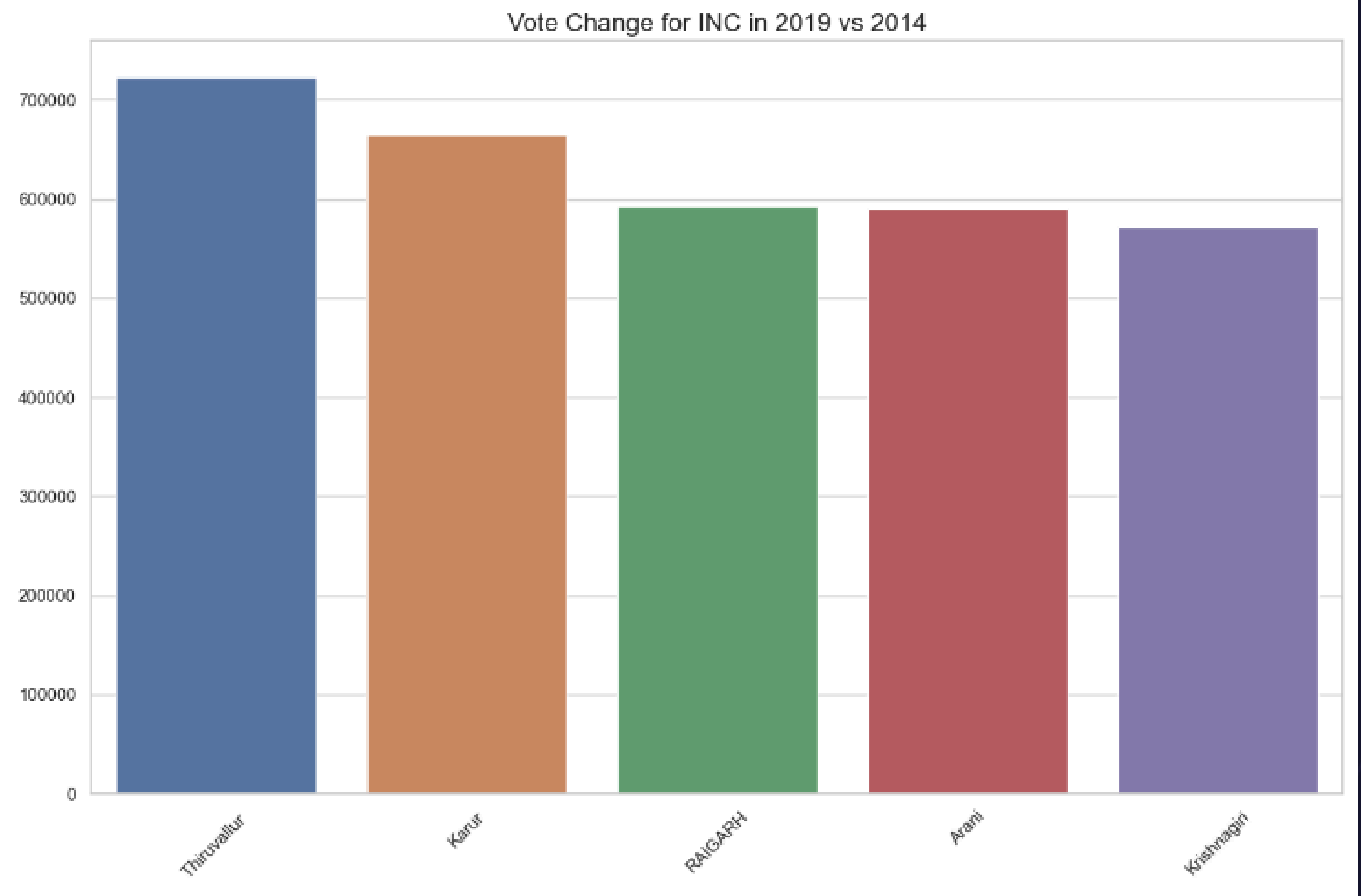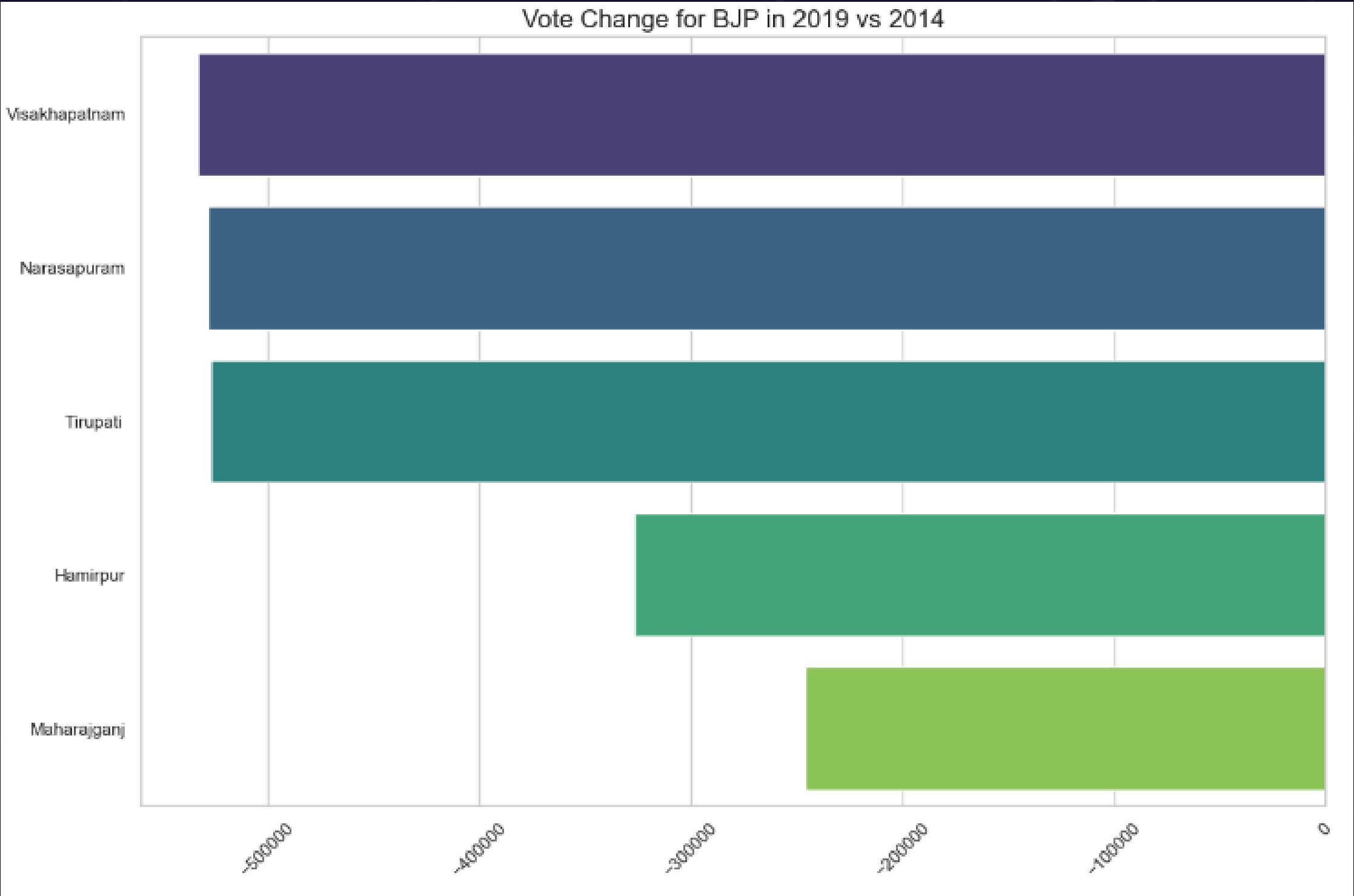
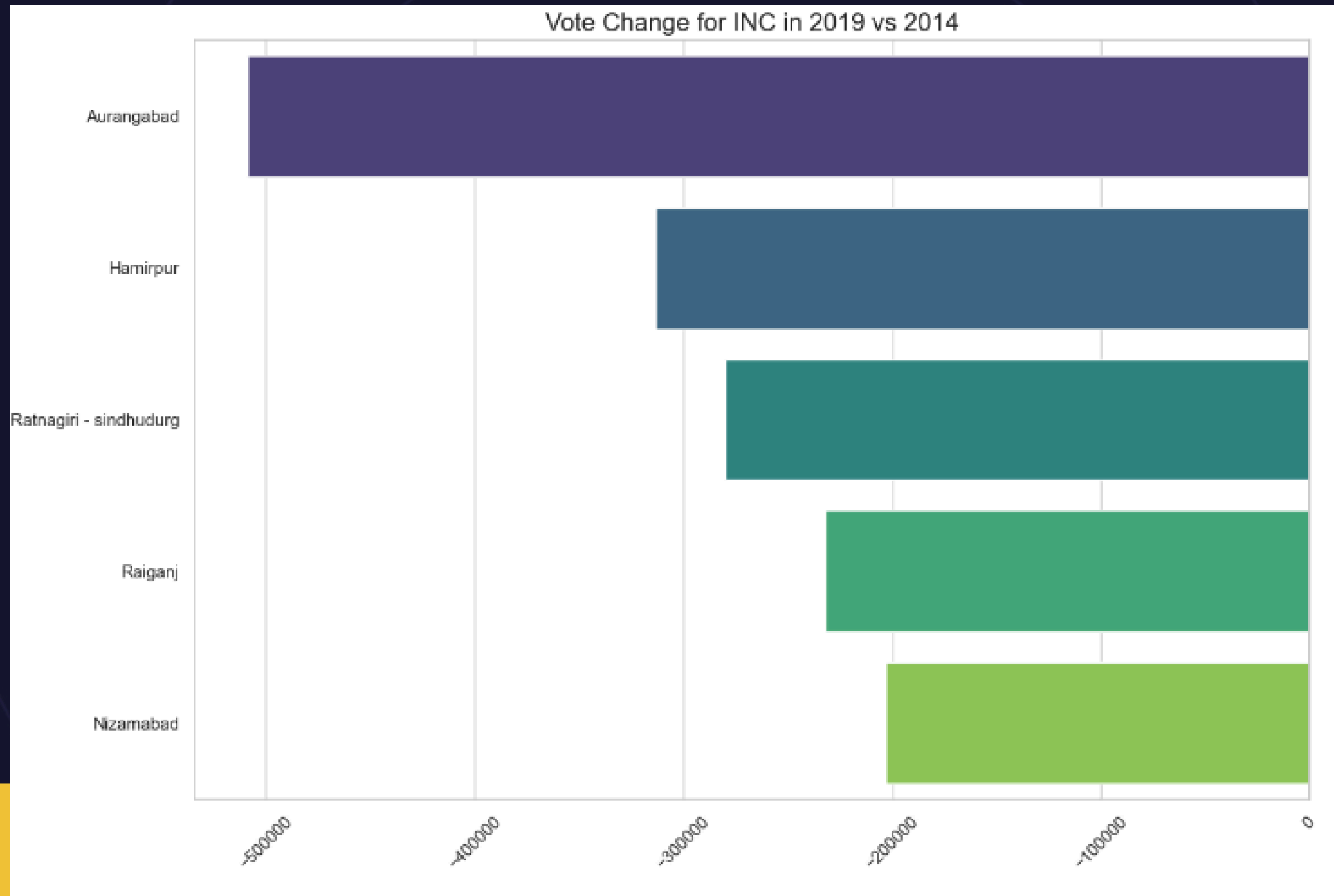# 8. List top 5 constituencies for two major national parties where they have gained vote share in 2019 as compared to 2014.

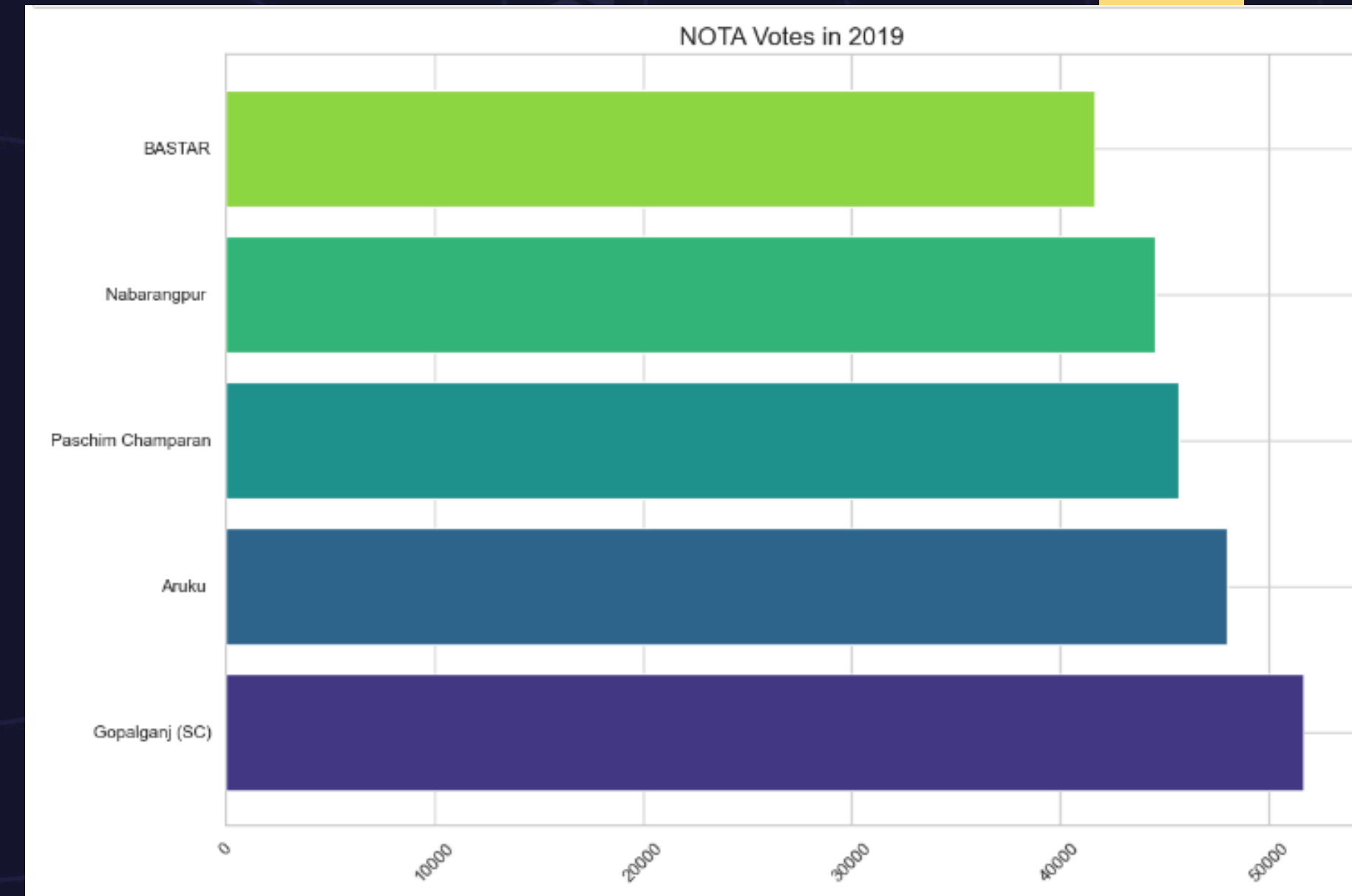
Vote Change for BJP in 2019 vs 2014

Vote Change for INC in 2019 vs 2014
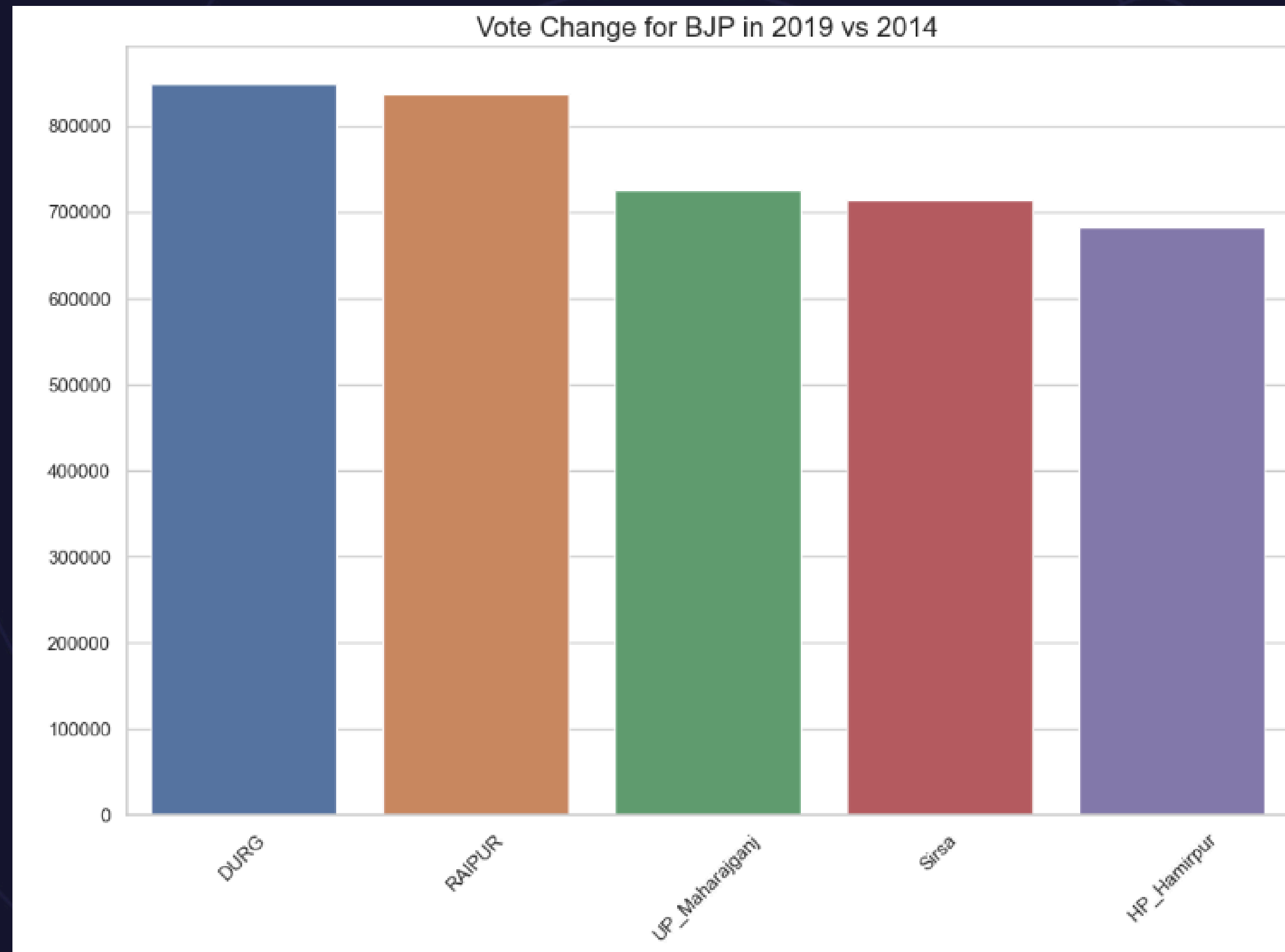
9. List top 5 constituencies for two major national parties where they have lost vote share in 2019 as compared to 2014.

Vote Change for BJP in 2019 vs 2014

Vote Change for INC in 2019 vs 2014

10. Which constituency has voted the most for NOTA?

NOTA Votes in 2014

- Samastipur (SC)
- RATLAM
- Dahod
- Banswara
- Nilgiris

NOTA Votes in 2019

- BASTAR
- Nabarangpur
- Paschim Champaran
- Aruku
- Gopalganj (SC)
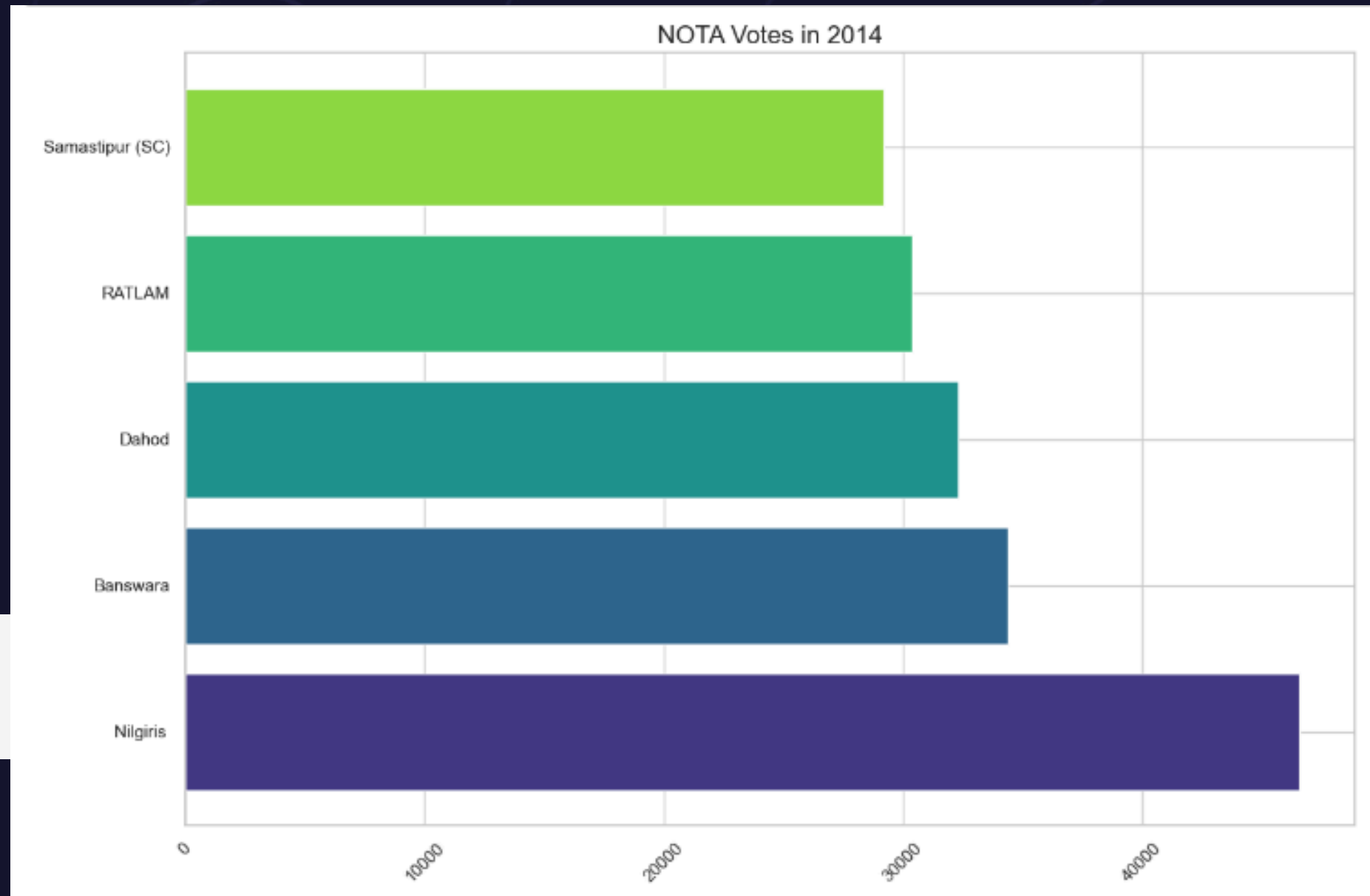
11. Which constituencies have elected candidates whose party has less than 10% vote share at state level in 2019?

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Top 20 constituencies have elected candidates whose party has less than 10% vote share at state level in 2019
+----------------+-----------------+----------+-------------------------------------+---------------------+
|     state      |     pc_name     |  party   |              candidate              |     votes_share     |
+----------------+-----------------+----------+-------------------------------------+---------------------+
|  Maharashtra   |   Aurangabad    |  AIMIM   |         Imtiaz Jaleel Syed          |  0.7197251575708808 |
|   Tamil Nadu   | Ramanathapuram  |  IUML    |            K. NAVASKANI             |  1.0829955436932932 |
|   Tamil Nadu   |   Chidambaram   |   VCK    |       THIRUMAAVALAVAN THOL          |  1.1527903976145029 |
| Uttar Pradesh  |    Mirzapur     |  ADAL    |        Anupriya Singh Patel         |  1.201967155988852  |
| Uttar Pradesh  |   Robertsganj   |  ADAL    |          PAKAURI LAL KOL            |  1.201967155988852  |
|   Rajasthan    |     Nagaur      |  RLTP    |          HANUMAN BENIWAL           |  2.034615757363356  |
|     Kerala     |    Kottayam     |  KEC(M)  |        Thomas Chazhikadan          |  2.06544782257887   |
|   Tamil Nadu   |   Coimbatore    |  CPIM    |          NATARAJAN. P.R            |  2.34831821733702   |
|   Tamil Nadu   |    Madurai      |  CPIM    |           VENKATESAN S            |  2.34831821733702   |
|   Tamil Nadu   |  Nagapattinam   |   CPI    |           SELVARAJ M             |  2.377387499756872  |
|   Tamil Nadu   |    Tiruppur     |   CPI    |          SUBBARAYAN, K.           |  2.377387499756872  |
|     Kerala     |     Kollam      |   RSP    |         N.K.Premachandran          |  2.45117343863174   |
|   Telangana    |    Hyderabad    |  AIMIM   |         ASADUDDIN OWAISI           |  2.7757008769292537 |
|  Maharashtra   |    Amravati     |   IND    |         Navnit Ravi Rana           |  3.684247185396817  |
|   Karnataka    |     Mandya      |   IND    |        SUMALATHA AMBAREESH         |  3.89269295871712   |
|   Jharkhand    |    Giridih      |  AJSUP   |     Chandra Prakash Choudhary      |  4.33283531473621   |
|     Assam      |    Kokrajhar    |   IND    |        Naba Kumar Sarania          |  4.829933495162315  |
|     Kerala     |    Ponnani      |  IUML    |       E. T. Mohammed Basheer       |  5.45344724333556   |
|     Kerala     |   Malappuram    |  IUML    |        P.K. Kunhalikutty           |  5.45344724333556   |
|  West Bengal   | Maldaha Dakshin |   INC    | ABU HASEM KHAN CHOWDHURY (DALU)    |  5.612062067395416  |
+----------------+-----------------+----------+-------------------------------------+---------------------+
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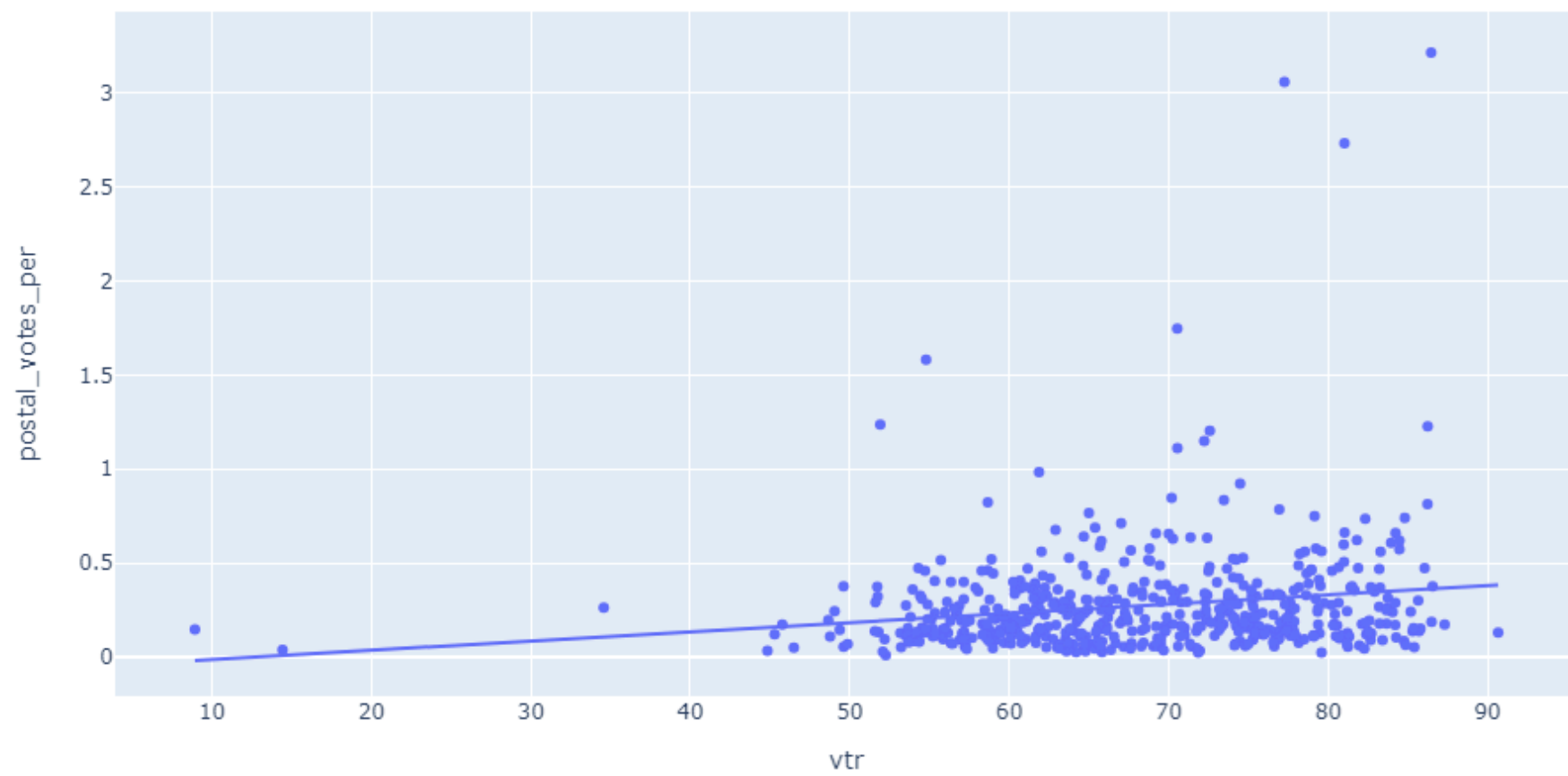
12. Is there a correlation between postal votes % and voter turnout %?

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Text(0.5, 1.0, ' postal votes % and voter turnout  2014 %')
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Text(0.5, 1.0, 'postal votes % and voter turnout 2019  %')
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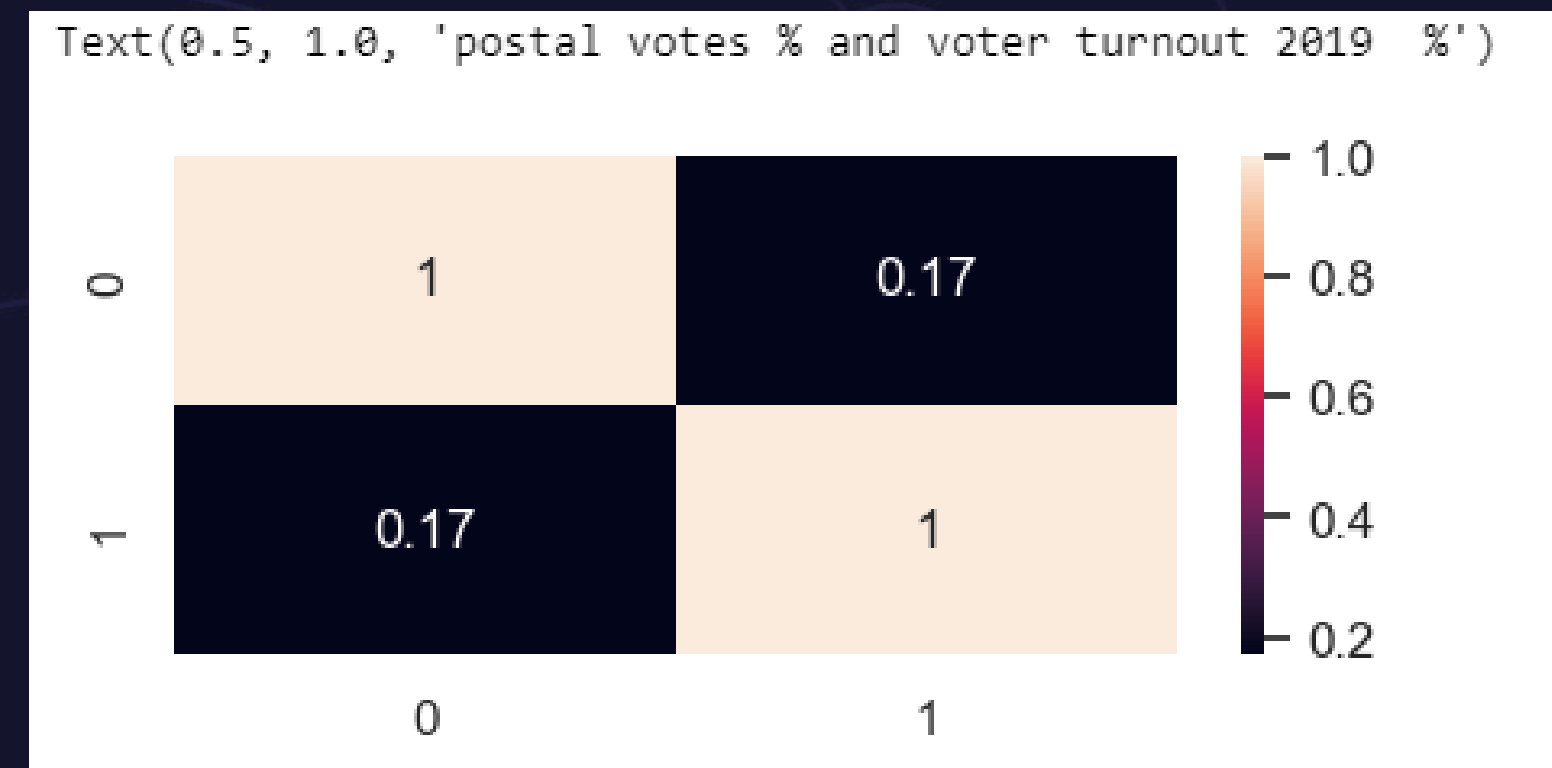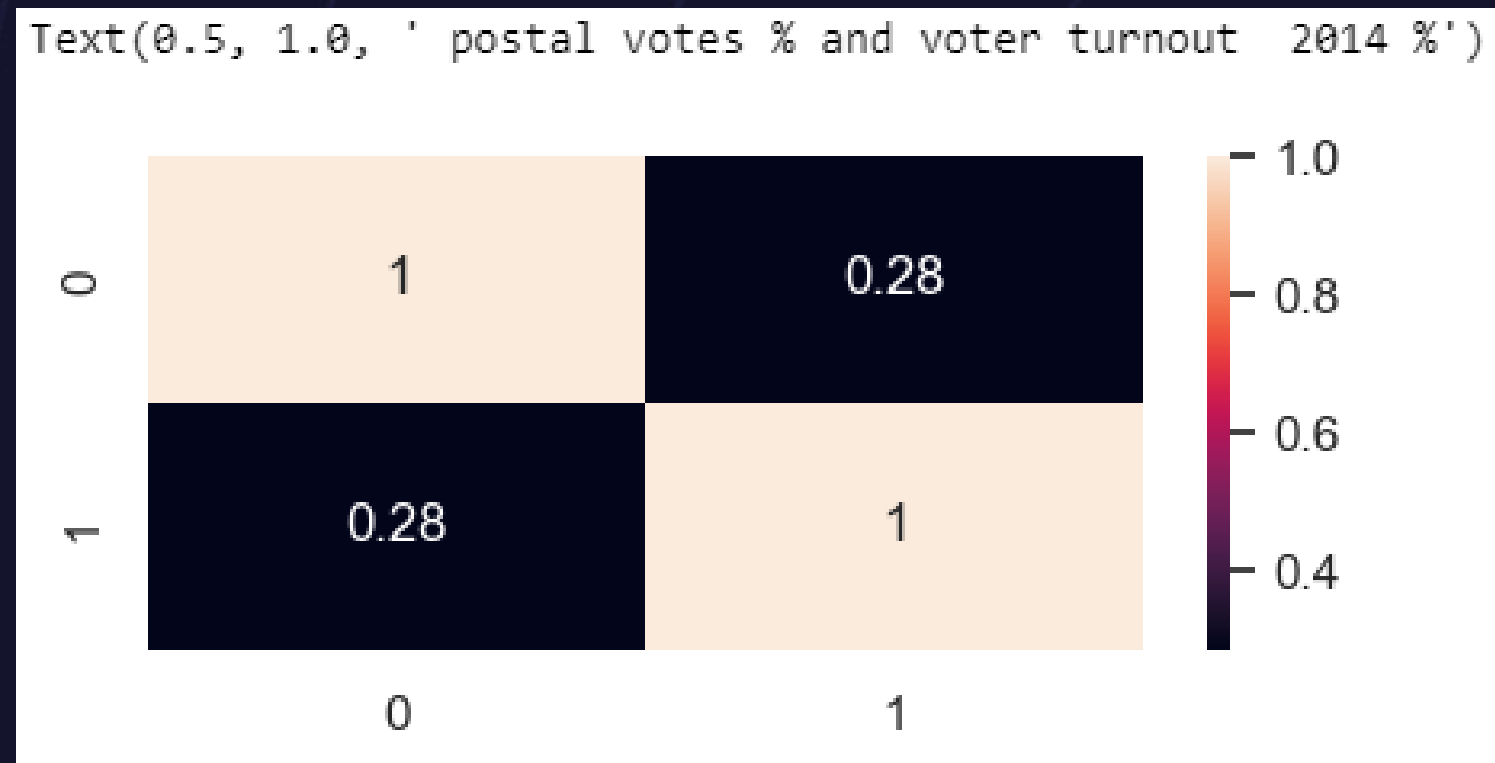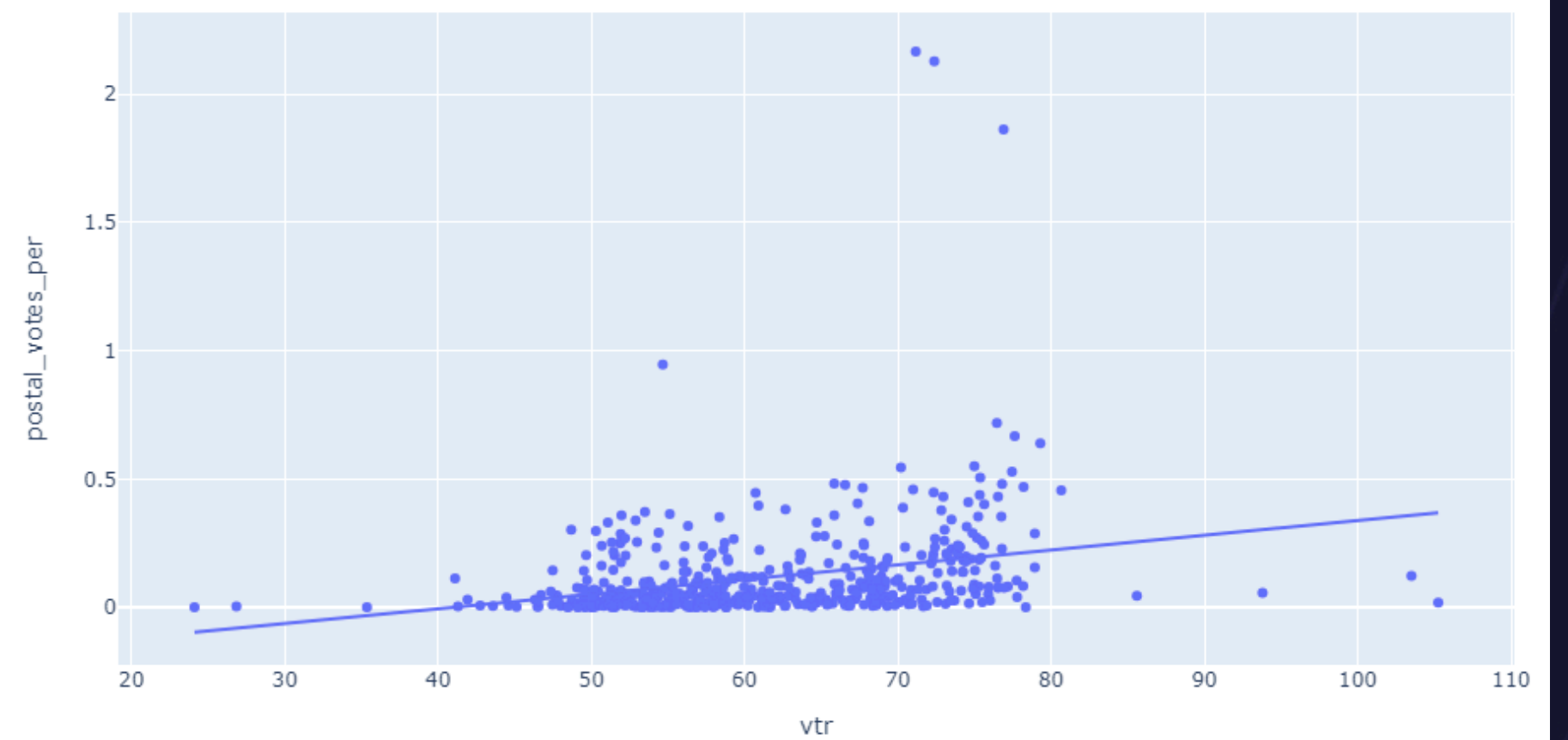

- A value of 0.28 suggests a weak positive correlation between the two variables. This means that as one variable increases, the other tends to increase as well, but the relationship is not strong.

- A correlation value of 0.172 suggests a very weak positive correlation between the two variables. This means that there is a slight tendency for the two variables to increase together, but the relationship is not strong.
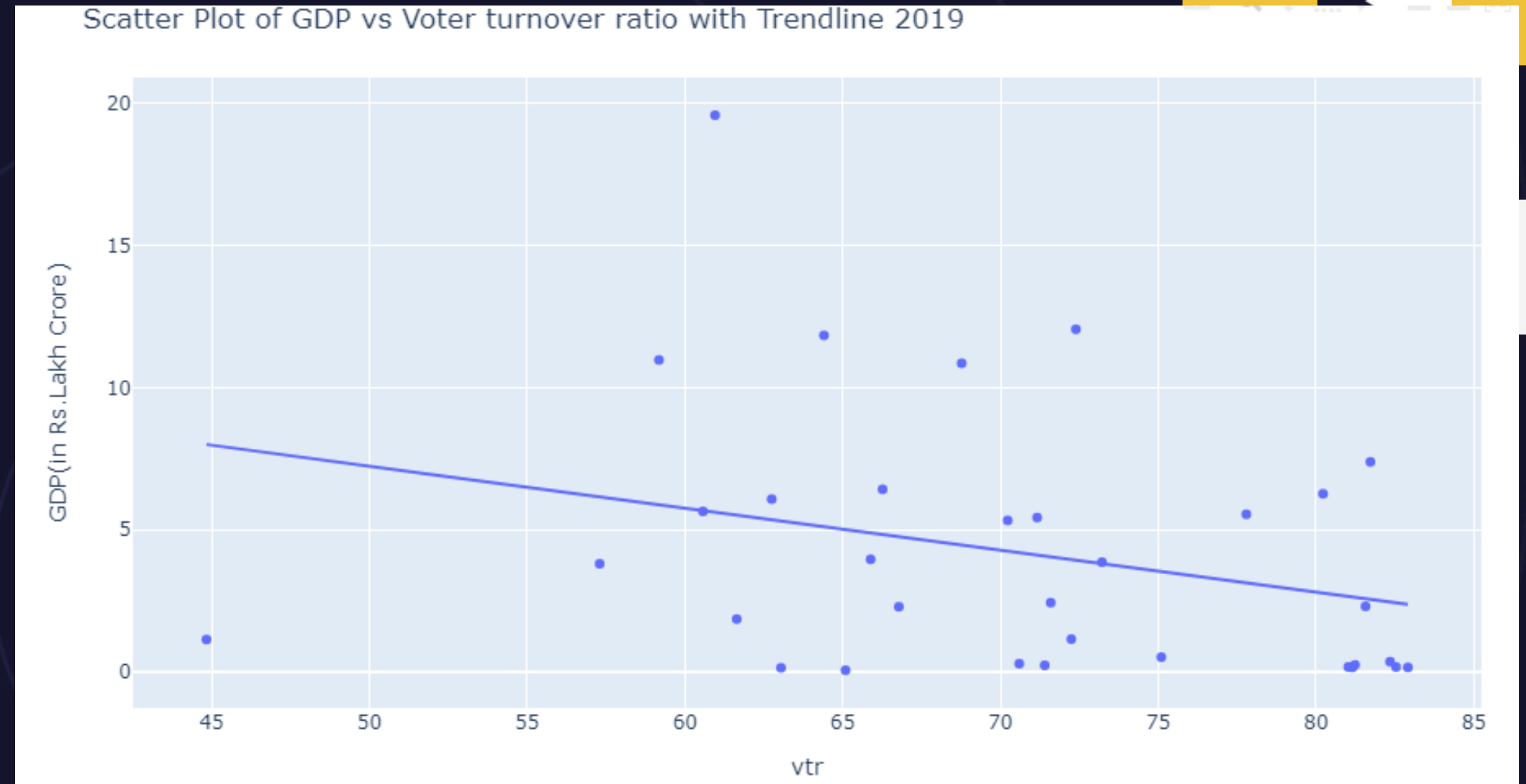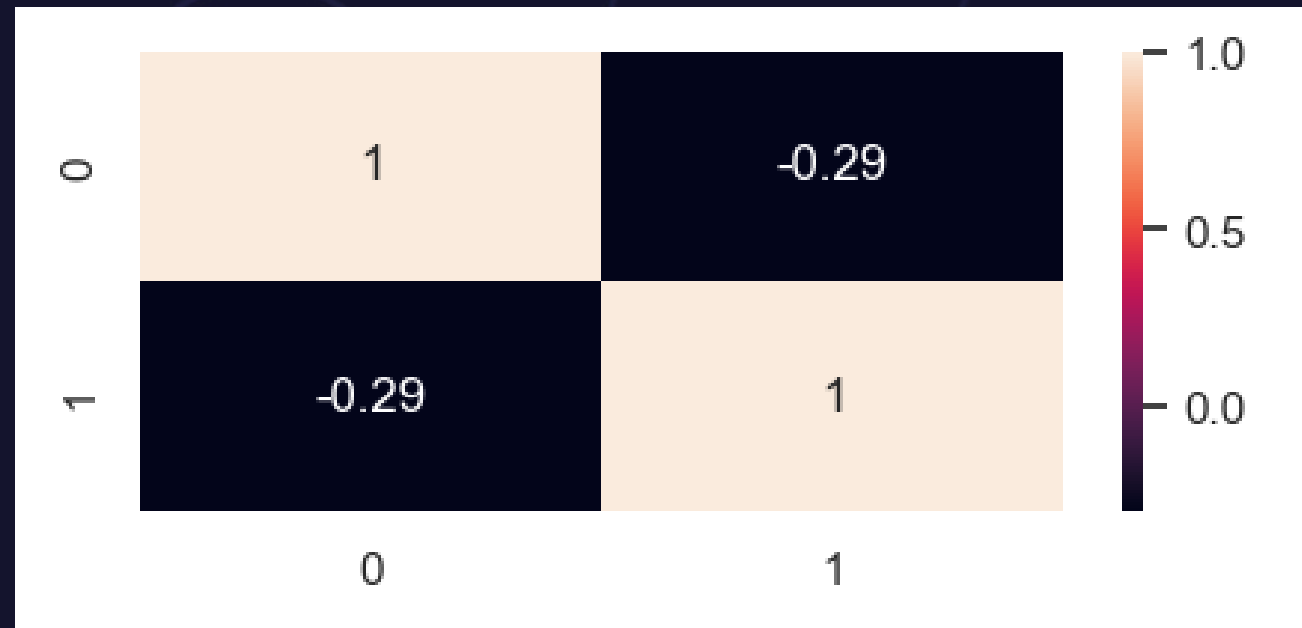
Scatter Plot of VTR vs Postal Votes with Trendline 2019

Scatter Plot of VTR vs Postal Votes with Trendline 2014

# 13. Is there any correlation between GDP of a state and voter turnout %?

Scatter Plot of GDP vs Voter turnover ratio with Trendline 2019

- A correlation value of −0.292 suggests a weak negative correlation between the two variables. This means that as one variable increases, the other tends to decrease, but the relationship is not strong.

14. Is there any correlation between literacy % of a state and voter turnout %?

Scatter Plot of Literacy Rate vs Voter turnover ratio with Trendline 2014
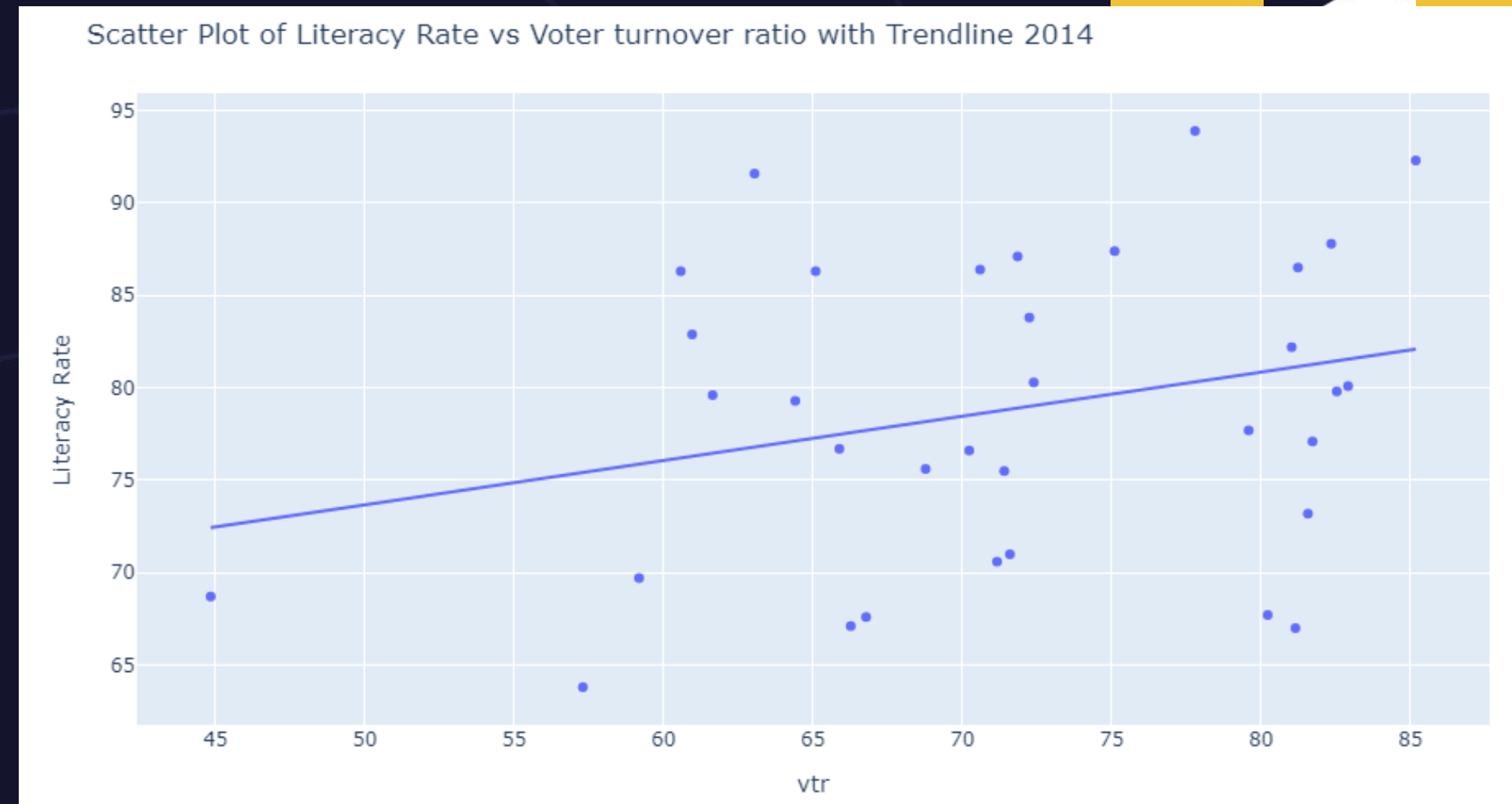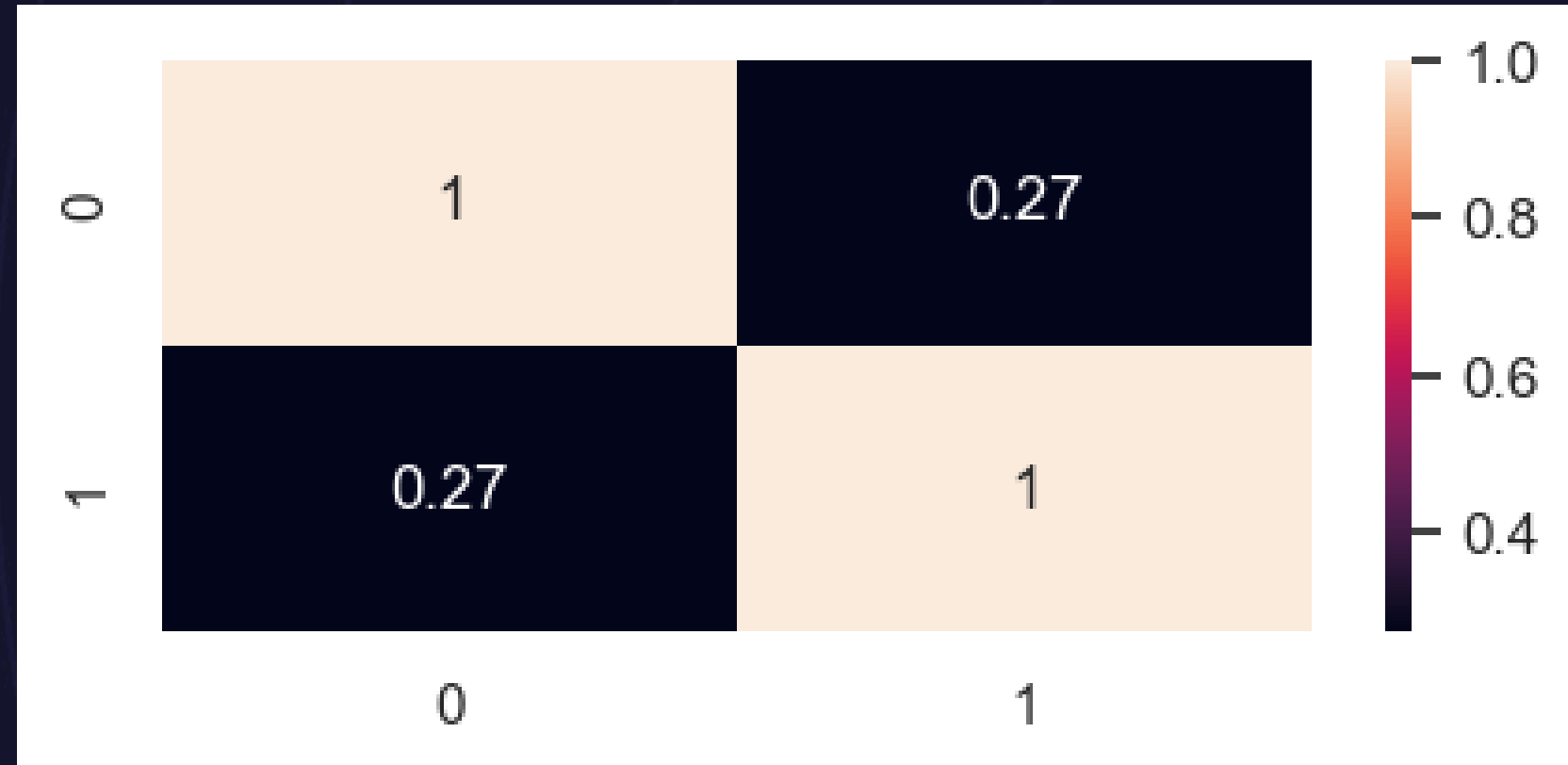
- A correlation value of 0.273 suggests a weak positive correlation between the two variables. This means that as one variable increases, the other tends to increase as well, but the relationship is not strong.

Observations

- Females participants is low.

- BJP is largest party in the india

- Nagaland and lakshadweep have highest voter turnover ratio

- Jammu & kashmir and Bihar have lowest voter turnover ratio

Recommendations

- Ensure Accessibility for Disabled Persons , Make all polling stations accessible to people with disabilities, providing necessary assistance or technology to help them cast their votes independently.

- Increase the number of polling stations to help raise the voter turnout ratio and provide easy convenience to the public.

- Launch voter awareness programs in urban and rural areas of the state, led by local political leaders.

Thank You

Made by Vishal Verma