



Indian Voting System with Borda count method

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Abstract.

India is a democratic country where it is "ruled by the people for the people." Although some circumstances attract attention whether the above statement is true. We can only see the 2014 Loksabha elections where Narendra Modi became the Prime Minister of the country with 31% votes. In this paper we will discuss Borda count method in Indian voting system. So far plurality method has been applied in India's politics.

MSC2010:35Q91, 91A35

Keywords: Election, Borda Count Method, plurality method, India

DOI Number: 10.48047/nq.2021.19.12.nq21297 NeuroQuantology 2021;19(12):892-896

1. Introduction

Elections are made up of candidates, voters, and a mechanism to decide upon a winner. The Indian election is based on public opinion (plurality Method). The method of Lok Sabha and Vidhan Sabha in India is same; both are based on public opinion. Under the plurality method, elections are conducted by dividing the geographical areas into different constituencies, where voters cast one vote for their favorite candidate and the one receiving the most votes' wins. It typically gives voters a clear choice between two main parties and is expected to result in single-party governments rather than coalitions [3]. A large part of the money and time is spent in the election process. Although at times, odd situations arise, such as the lack of a public opinion. In this

eISSN1303-5150

situation, a coalition has to be formed to form a government, which has very little chance of becoming stable or has to be re-elected. Like in the 2013 Delhi Assembly elections, there were a total of 70 seats in which 31 seats were won by BJP 24 seats by AAP and 4 seats by Congress Party, but due to lack of majority, coalition government of AAP and Congress Party was formed and in 2015 the assembly elections situation was created again. Such a situation does not allow Borda count method to be generated and by using Borda count can reach the right decision position and avoid re-election situation.

2. The Borda Count Method

In 1770, Jean-Charles de Borda objected to the commonly held plurality voting that "a plurality of votes in an election indicates the will of the electorate." He argued that this

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opinion, "only correct in the process of election between two candidates, may be an error in more than two cases." He provided an example in which two candidates, both preferred by a third of the majority of voters, could split the votes of that majority, allowing the third candidate to receive a plurality of votes and win the election. He used the example "election by order of merit, based on the now-known" board rule. "Borda's arguments were based on the assumption that each voter would vote with "complete honesty," cast a plurality vote for him or her most favored candidate, and report his or her preference under Borda's process [6]. Points are awarded for each place in a preferential ballot. The last place gets one point; the penultimate place gets

two points, and so on. So if there are N candidates, first place earns N points. Now multiply the point value of each location by the number of voters at the top of the column to find the points each candidate earns in a column. Finally, add up all the points for each candidate. The candidate with the most points wins. [2].

3. Indian election with Borda count Method

Suppose assembly elections are held in the state of India (Sikkim), where there are a total of 32 seats in which 3 parties participate. Suppose these parties are X, Y and Z. Each voter is asked to fill in the following ballot by marking their first, second and third place choices:

	Candidate	Preference
1	X	
2	Y	
3	Z	

Table1: Ballots cast for the Sikkim Election

Voter	Yoksam-Tashiding	Barfung	Chujachen	Dzongu	Maneybung-Dentam
first priority	X	Z	X	Z	Y
Second priority	Y	X	Z	X	X
Third priority	Z	Y	Y	Y	Z

Voter	Melli	Namcheybung	Namchisingi-thang	Soreng-Chakhung	Syari
first priority	Z	Y	Z	Z	Z
Second priority	X	Z	X	X	X
Third priority	Y	X	Y	Y	Y



Voter	Yangthang	Namthang Rateypani	Rhenock	Salghari- zoom	West- pandam	Yoksam- Tashiding
first priority	X	Z	Z	Y	Y	Y
Second priority	Y	X	X	X	X	Z
Third priority	Z	Y	Y	Z	Z	X

Voter	Gangtok	Sangha	Arithang	MartamRumtek	Tumen-lingi
first priority	Y	Y	X	Z	Z
Second priority	X	X	Y	X	X
Third priority	Z	Z	Z	Y	Y

Voter	Temi- namphing	Khamdung- Singtam	Lachen- Mangan	Gyalshing- Barnyak	Daramdim	Kabi- lungchuk
first priority	Z	Y	Y	Y	Z	X
Second priority	X	X	Z	X	X	Z
Third priority	Y	Z	X	Z	Y	Y

Voter	Rangang- yangang	Upper Burtuk	Rinchenpong	Upper Tadong	Poklok Kamrang
first priority	Z	Y	Y	Z	Y
Second priority	X	X	Z	X	X
Third priority	Y	Z	X	Y	Z

4. Preference Schedule for the Sikkim Election

We can count how many people liked each ordering. Looking at Table 1, you may notice that three voters had the order X, then Y, then Z. Two voters had the order X, and then Z, then Y. Nine voters had the order

eISSN1303-5150

Y, then X, then Z. Four voters had the order Y, then Z, then X. The other 14 voters chose the order Z, X, Y. Note that no voter liked the order Z, Y, and X. We can summarize this as the following information in a table, called a preference diagram.



Table2: Preference Schedule for the Sikkim Election

Voter	3	2	9	4	14
first priority	X	X	Y	Y	Z
Second priority	Y	Z	X	Z	X
Third priority	Z	Y	Z	X	Y

5. The Winner of the Sikkim Election—Plurality Method

Using the preference schedule in Table 2, to find the winner using the Plurality Method. From the preference schedule you can see that five (3 + 2) people choose party X as their first priority, thirteen (9 + 4) picked party Y as their first priority and fourteen picked party Z as their first priority .Now we see that Party Y has a majority of 13 and Party Z in 14 places but no one has a clear majority whereas according to the Plurality method, it needs 50% + 1 place to win. This means to win 17 seats. In this case, either a re-election or a coalition will form the government. If re-election takes place, it will be a waste of time and money and there will be a lack of stability if a coalition government is formed. In this way, there is no result in suspense. But this Borda count method will provide a decision which will save time and money.

6. The Winner of the Sikkim Election—Borda Count Method

Using the preference schedule in Table 2, find the winner using the Borda Count Method. Preference Schedule for the Sikkim Election

Voter	3	2	9	4	14
first priority	X	X	Y	Y	Z
Second priority	Y	Z	X	Z	X
Third priority	Z	Y	Z	X	Y

The third choice gets one point, the second choice gets two points and the first choice gets three points. Three voters chose the order X, Y, Z. So X gets $3 \times 3 = 9$ points for first place, Y gets $3 \times 2 = 6$ points and Z gets $3 \times 1 = 3$ points for these ballots. . The same process is performed for the other columns. The table below provides an overview of the points received by each party [2], [7].

Table3: Preference Schedule of the Sikkim Election with Borda Count Points

Voter	3	2	9	4	14
first priority	X	X	Y	Y	Z
Second priority	Y	Z	X	Z	X
Third priority	Z	Y	Z	X	Y
	9	6	27	12	42
	6	4	18	8	28



Third priority	Z	Y	Z	X	Y
	3	2	9	4	14

Adding these given points: - For X

$$X=9+6+18+28+4=65$$

For Y

$$Y=27+12+6+2+14=61$$

For Z

$$Z=42+4+8+3+9=66$$

Thus, party Z wins using the Borda Count Method

7. Conclusion

We can think of the Borda count as a “fair” outcome when choosing between fixed alternatives [1], because it maximizes mean plurality. Now that we have shown how to conceptualize the Borda victor in spatial circumstances, one avenue for future research would be to observe the extent to which results move away from the Condorcet victor and toward the Borda victor in spatial settings where concerns are emphasized for equity [4],[5]. Although past post method (plurality method) is prevalent in India. However, this method can be used not only in odd circumstances but also in normal circumstances for precise decision.

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