CS 785

ASSIGNMENT 2

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The proposed voting system coupled with vote is as follows:

(i) Each voter gives his/her top 3 preferences in order.

(ii) Initially, the first preference is considered and if any candidate gets a majority then that candidate wins.

(iii) In case of no majority by 1st preference, the top 2 candidates in terms of 1st preference are selected and preference order of votes are is used to decide a winner between the 2.

(iv) In case, top 2 candidates chosen in the above discription are not in the top 3 preferences of a vote (assumption is that this case will be rare), then that vote is discarded/wasted.

JUSTIFICATION FOR USING THIS VOTING SYSTEM

- At the outset, we can see that this is a voting system that is a tradeoff between a situation where election results are more proptional to the votes and a situation where the voting system is feasible to be implemented in a country like India.

This voting system is certainly better than the plurality voting system as it allows voters to have an ordering of preference, and thus finally achieves a decent majority (generally ~ 40-45%) and hence is more representative.

Given the fact that there are on average more than 6 or 7 candidates, and a large voter density, we cannot afford to use a voting system that gives a preference over all candidates.

- Given the fact that there are a lot of uneducated and illiterate voters, a complex voting system could become unfeasible.

- Somewhat identical voting system is used in the elections of Srilanka and France which shows that this voting system is actually in use and could be used to gather data on how representative the winners are in those 2 countries.

- In Indian elections, most of the times the votes are divided majorly among 2 parties and therefore this voting system guarantees to be a good representation of the voters' choice.

- This voting system gives deserved weightage to candidates who are 1st on many preferences and 2nd or 3rd on a large % of votes as well.

- Since most votes are in general divided among 2 (at most 3) candidates, there are good odds that the percentage of votes that go wasted would be small.

SIMULATION OF THIS VS ON 2014 ELECTIONS

- Firstly, we can see that 102 seats out of 543 were won by candidates with less than 40% of the votes. Ideally, we would like to reduce this number.

- STATE OF ASSAM

- In Assam, BJP recieved 36.86% of the votes while INC recieved 29.9% of the votes in 2014.

- Assumption 1: Due to the general attitude of disappointment of public over the last congress government and the "swing" generated by Narendra Modi, I assume that 65% of voters prefer BJP over INC among those who didnot vote for either in 2014.

: Simulated result:

BJP: recieve 58.466% of the votes.

Thus, we get a majority for BJP.

Assumption 2: We could assume that the voters who did not vote for INC or BJP would prefer either of them in the proportion of votes they received in that state.

Simulated result:

Preference of BJP over INC is 55.2%.
Hence BJP recieve 55.2% of votes
Hence BJP get a majority

STATE OF HARYANA

In Haryana, BJP recieved 34.84% of votes and Indian National lok Dal received 24.43% of votes.

Assumption 3: Voters who voted for INC are generally going to prefer Indian National lok Dal over BJP because of the rivalry of BJP & INC
Thus, all votes for INC get transferred to Indian National lok dal.

Simulated result:

Indian National lok dal recieve (24.43 + 22.99)%.
= 47.42%.

Thus, Indian National Lok dal would have won Haryana with an impressive 47.42% votes.

- STATE OF MAHARASHTRA

In Maharashtra, BJP recieved 27.56 % votes, ShivSena recieved 20.82 % votes and INC recieved 18.29 % votes.

using Assumption 3 and dividing rest of the votes according to Assumption 2, we get the following result.

BJP recieves: 41.34 % votes

Shivsena recieves: (20.82 + 18.29 + 16.33) % votes
= 55.44 % votes.

Hence, Shivsena would have won with 55.44 % of the votes.

Thus, we see that this VS reduces the seats decided by winners getting less than 40 % of the votes.