Modelling Assembly Constituency Results Based on Survey

Karnataka Assembly Elections – 2018

Contents

List of Figures

Introduction

The objective of this sample report is to demonstrate the methodology applied in modelling the assembly election results. This document discusses the primary variables—that is,

- Candidate profile (first-time contestant or runner-up) or candidate performance (sitting MLA)
- Party image in the constituency (public perception about the party)
- Constituency profile (voter turn-out, demographics, etc.)

Note: For illustration, Bellary city electoral data (year 2013) is used for modelling purposes.

Methodology

The approach applied in the study includes the following steps:

- Step 1: Survey
  - Candidate Profile
  - Party Profile
  - Constituency Profile
- Step 2: Data Analysis
  - Survey Data
  - Accuracy Levels (Confidence Intervals)
- Step 3: Strategy Formulation

Survey

The survey study will collect data pertaining to candidate, party, and constituency. Sample size will differ with each constituency as it depends on voting percentage and margin of error. For example, total votes polled in the Bellary city constituency is only 119521 out of 194202 voters. Therefore, only voting population is considered for the study and can be adjusted with ± 10%.

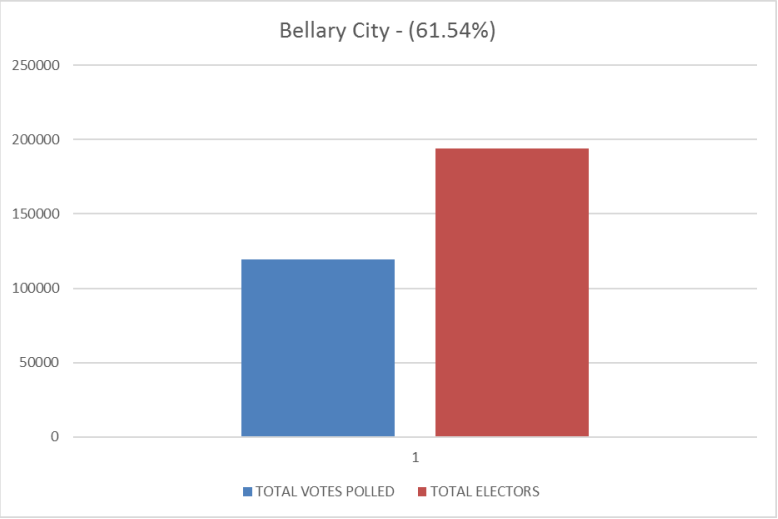

Figure 1: Bellary City Voting - 2013

Candidate Profile

The questions are designed to collect candidate information for both sitting MLAs and runner-up or new contestants. Candidate profile is a dynamic factor which depends on the performance and availability. People's perception varies significantly and changes over time, therefore the survey will help in preparing for the elections.

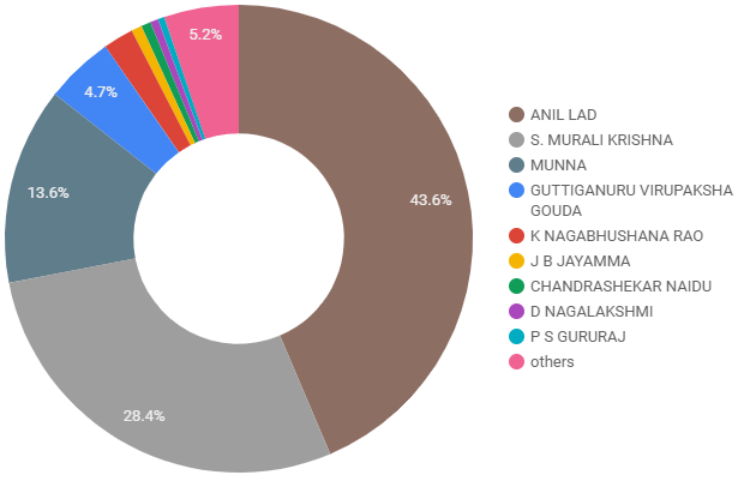

Figure 2: Bellary City Voting Share – 2013

A binary question asking whether the voter is willing to cast his vote will give an approximate first estimate. This number can be used to determine the number of votes the candidate may secure. In addition, questions about candidate profile will give us the overall perception of the people. For example, on a five-point scale, if the candidate gets the mean value of four implies positive perception about the candidate. This value can be used to correct the estimate based on the response. On the other hand, candidate will also get the ward-wise information, which can be used to focus on the areas that require further attention.

Based on the overall sample size, approximate range (confidence interval) of the estimate (with margin of error, say ± 5%) can be provided with 90%, 95% and 99% confidence levels. The mean score can be used for correcting the estimate derived from binary questions—Yes or No. Whereas, ward-wise information can help improve in drafting localized manifestos and instilling voter confidence.

Party Profile

This is a generic variable across the population with different views, ideologies, and values. Again, the perception of a party changes over time, however, this is attributed to specific population based on age, literacy rate, socio-economic status, etc. For example, some sections of the population are attached to a specific party irrespective of its presence in state or center, be it in power or opposition. Care should be taken to avoid these during the survey as such samples can lead to biased results. People form opinions based on their immediate personal benefit (often a case with weaker sections) and greater good for the society (educated and APL sections). A survey should extract the real position of the party with the questions covering if the people have benefited directly or indirectly.

Constituency Profile

Voting percentage differs significantly with the type of constituency—that is, voter turn-out in a reserved constituency is usually less, which means there is enough potential to target the non-voting population. It is inferred from the below graph that the average value of SC constituency is less than the unreserved constituency.

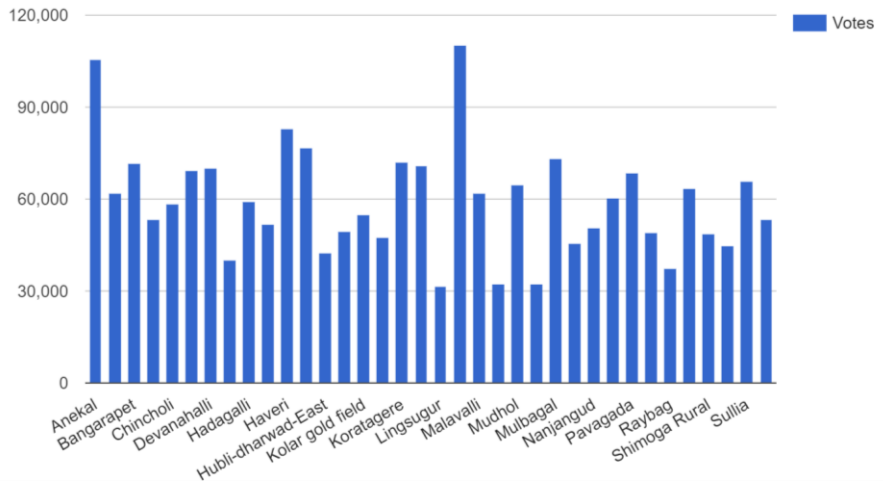

Figure 3: Voting Percentage in SC Constituencies

Similarly, voting pattern differs geographically too, which offers much scope for improvement and higher chances of winning.

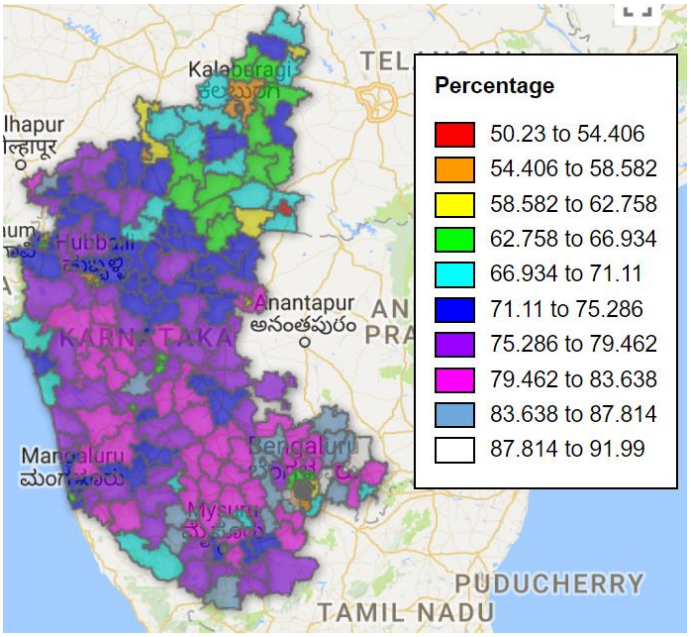

Figure 4 Karnataka Polling Percentage

Using the demographic data, a candidate can design manifestos, identify gaps, and eventually formulate the winning strategy. Some of the important factors to consider are, population spread, SC/ST concentrated areas, illiteracy, unemployment, etc.

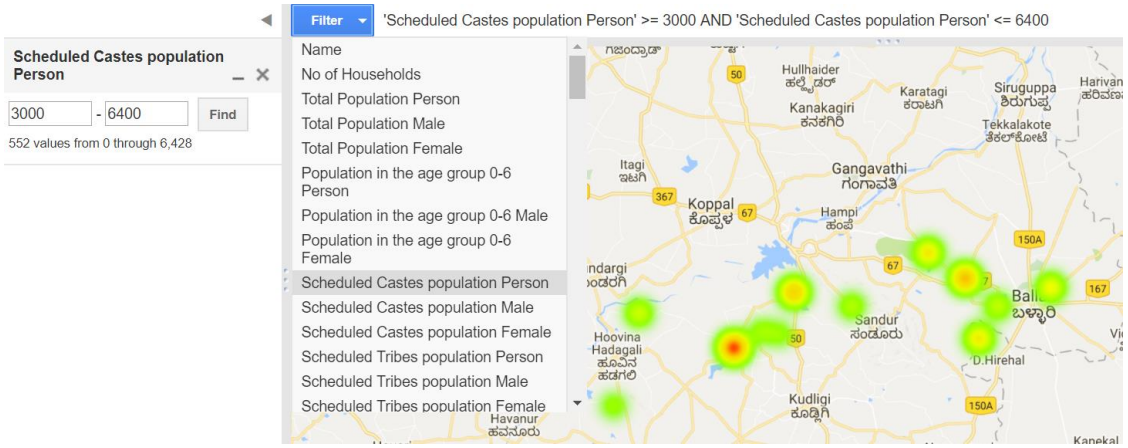

Figure 5: Demographic Data

Data Analysis

Survey Data

The field survey data obtained from online forms is processed and filtered for analyzing variables specific to the area under study. Firstly, the responses with YES and NO are segregated separately to estimate the probability of number of votes to be secured. It can be construed that the number of NOs implies votes going to other candidates.

Further, the questions that provide candidate information are helpful to correct the first estimate obtained. For example, a value higher than mean implies positive image of the candidate. This is obtained by collecting responses on a 1-5 point scale and calculating the mean and standard deviation.

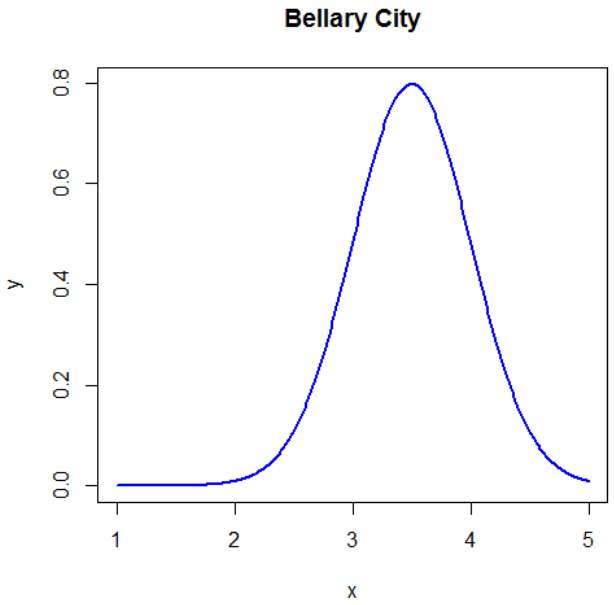

Figure 6: Population Spread

Accuracy Levels (Confidence Intervals)

For determining the survey sample size, voting percentage and the probability margin are considered. For example, if Bellary electoral population is 194202, the population estimate for the study is only voting population—that is, 119521. Additionally, sample size is chosen based on the desired level of margin of error. For example, for a population size of 119521, sample size is 383 for the error margin of 5% and 96 for 10% at 95% confidence level. The interval range thus obtained is used to estimate the probability of number of votes the candidate can get.

Strategy Formulation

The objective of the survey study is to bring the realistic view of the candidate and party position. The report provides key data to formulate the winning strategy by addressing the gaps or shortcomings identified in the study. For example, weaker scores in some wards can be identified as areas to be focused immediately. Similarly, weaker scores about party position may be useful for designing effective campaigning using social media, crowd-pulling star campaigner, etc.

The survey results thus obtained can be used to formulate the strategy by balancing the outcomes of candidate and party profile. Each constituency is different and will have its own dynamics, therefore an accurate unbiased survey combined with constituency-specific insights will help achieve the desired result.