

FINAL DELIVERABLE

GROUP: ELECTION 2

PROJECT DONE BY:

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INTRODUCTION:

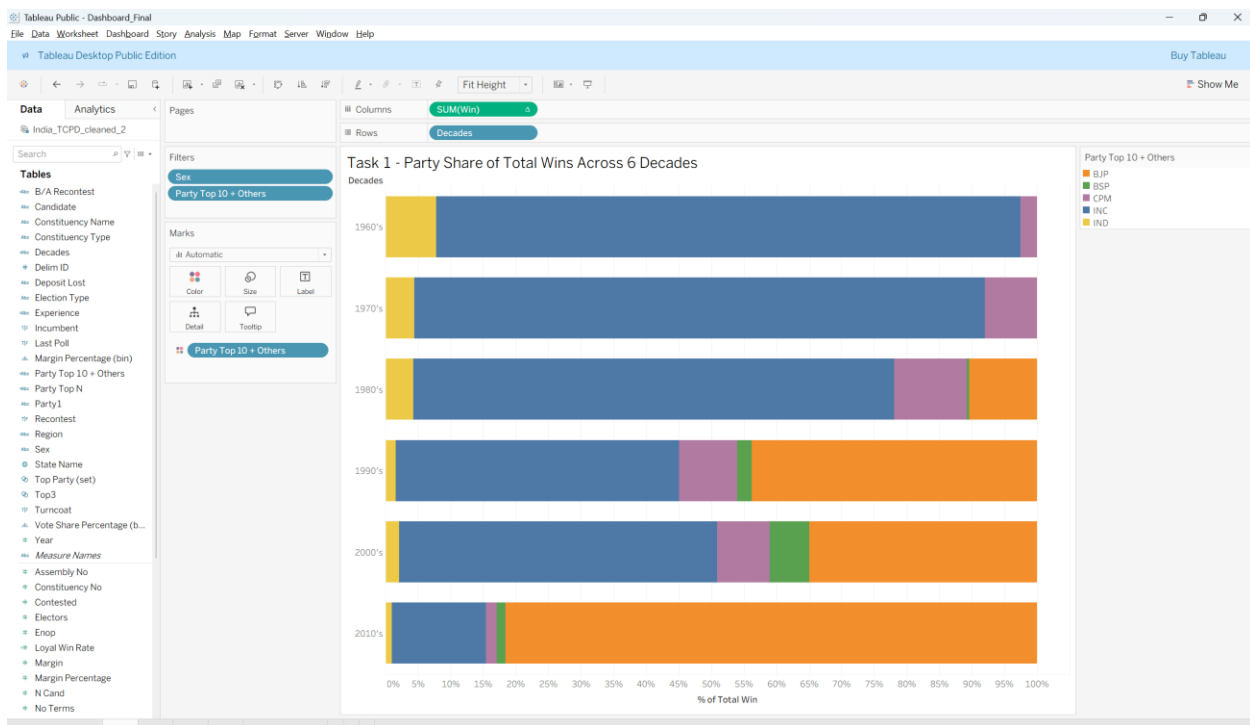
This project develops an interactive dashboard for analyzing Indian election data spanning 1962 to 2019, emphasizing clarity and comparability by focusing solely on the top five parties with the highest cumulative votes across all elections in this period. Key visualizations include party share of total wins across six decades, distribution of vote share by gender, turnout versus loyal candidates' win rate, and the relationship between turnout, vote share, and victory margins across constituency types.

DATASET MODIFICATIONS:

The project utilizes the 'India-TCPD_GE_all_2020-12-14' dataset, comprising 91,399 rows and 42 columns on Indian Lok Sabha elections from 1962 to 2019 across all states and union territories. Thirteen columns with >60% missing values or limited analytical value were dropped, namely, month, Candidate_Type, sub_region, pid, Party_Type_TCPD, Party_ID, Last_Party, Last_Party_ID, Last_Constituency_Name, District_Name, Same_Constituency, Same_Party, and Age. Party names were standardized (e.g., B.J.P. to BJP), and rows with misplaced data were corrected for accuracy.

VISUALIZATION TASKS:

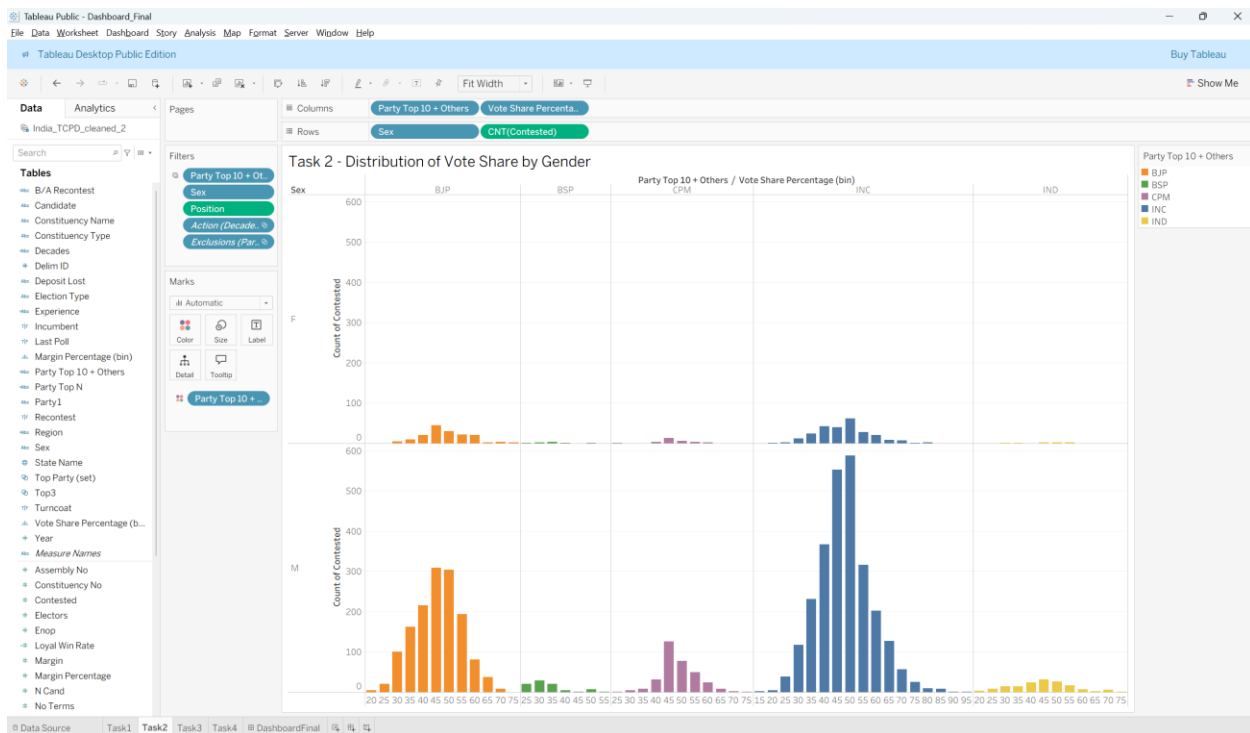
TASK 1: Party Share of Total Wins Across 6 Decades



The first visualization presents the party share of total wins across six decades using a stacked bar chart. Each bar is normalized to 100% to facilitate direct comparison across time periods. The x-axis represents the percentage of total wins, while the y-axis displays the six decades from the 1960s through the 2010s.

The chart reveals a significant shift in party dominance over time. From the 1960s through the 1980s, the Indian National Congress (INC) maintained strong electoral dominance, accounting for most of the wins. However, a notable transition occurred in subsequent decades, with INC's share declining substantially. By the 2010s, the Bharatiya Janata Party (BJP) emerged as the most dominant party, representing the largest proportion of electoral victories.

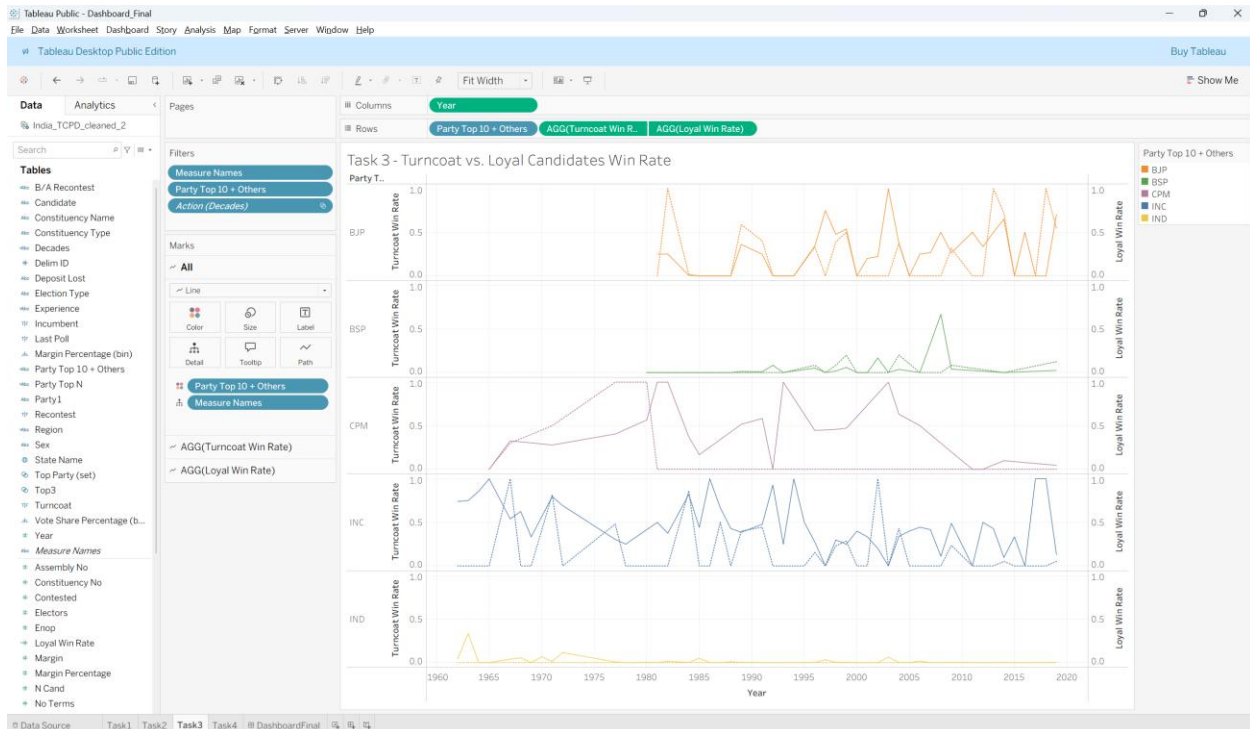
TASK 2: Distribution of Vote Share by Gender



The second visualization examines the distribution of vote share by gender using a histogram with spatial separation. The vote share percentage has been binned into intervals to create meaningful distribution categories. The x-axis displays the binned vote share percentage ranges, while the y-axis represents the count of candidates who contested elections.

Gender is encoded through spatial positioning, with female candidates shown in the upper panel and male candidates in the lower panel. This layout allows for direct comparison of distribution patterns between genders. The visualization is further segmented by party affiliation, with each major party (BJP, BSP, CPM, INC, and IND) represented in separate columns to reveal party-specific gender distributions in vote share performance.

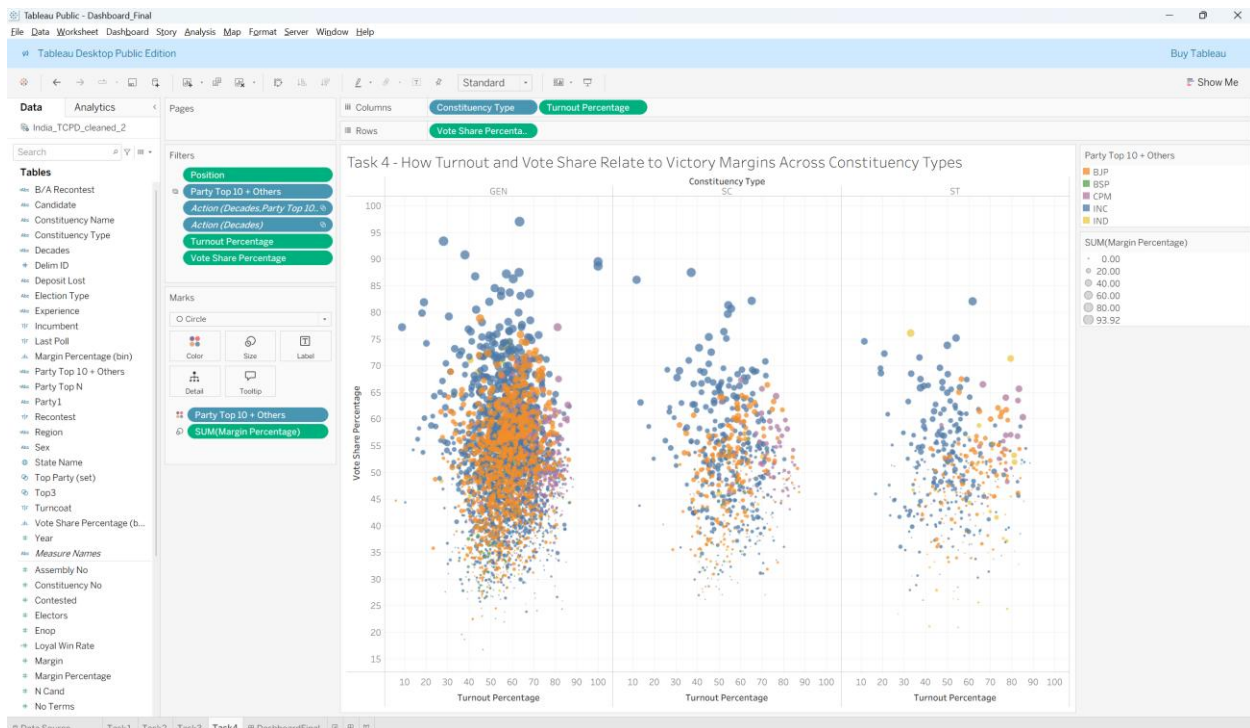
TASK 3: Turncoat vs. Loyal Candidates Win Rate



The third visualization compares the win rates of turncoat candidates (those who switched parties) versus loyal candidates across the top five parties. The design employs a dual-axis line chart with synchronized axes to ensure accurate visual comparison and prevent misleading interpretations.

Candidate type is encoded through line style: dotted lines represent turncoat win rates, while solid lines indicate loyal candidate win rates. The x-axis spans election years from 1962 to 2019, and the y-axis displays win rates ranging from 0.0 to 1.0 for both candidate types. Parties are separated through spatial positioning, with each of the five major parties (BJP, BSP, CPM, INC, and IND) displayed in individual horizontal panels. This small multiple approach facilitates both within-party comparisons of candidate loyalty effects and cross-party pattern analysis over time.

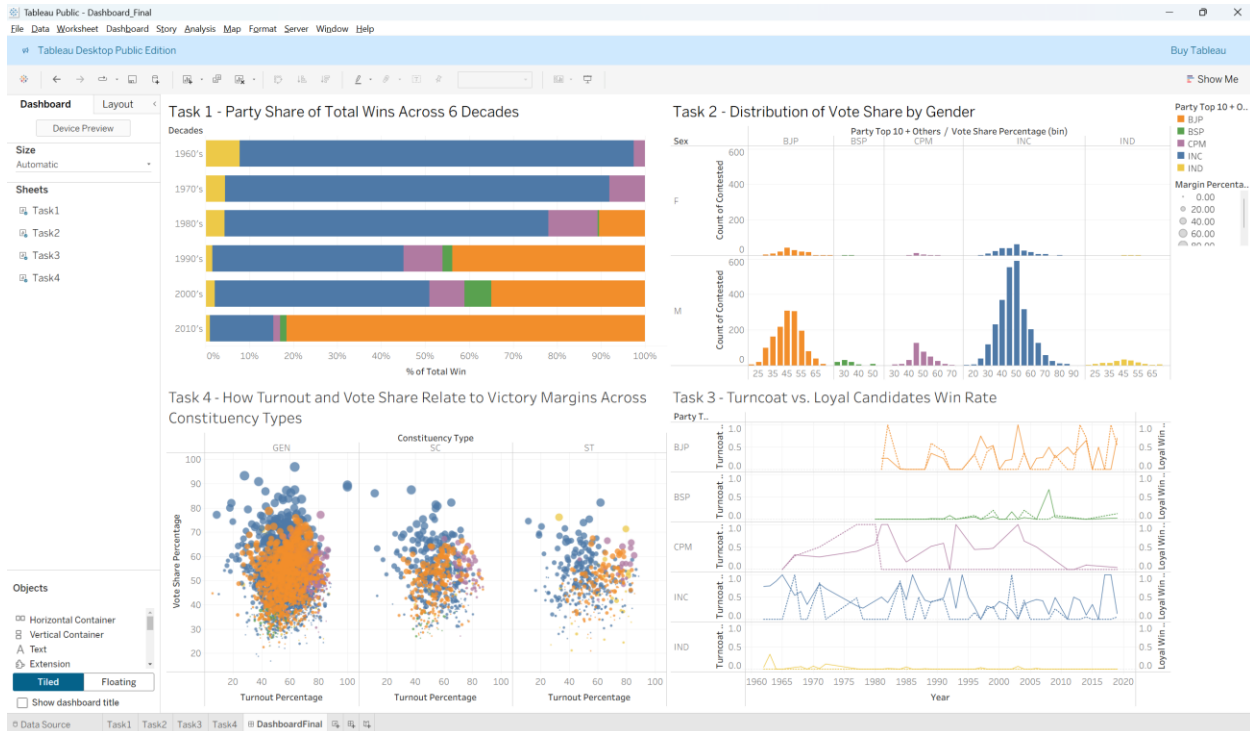
TASK 4: How Turnout and Vote Share Relate to Victory Margins Across Constituency Types



The fourth visualization explores the relationship between turnout percentage, vote share, and victory margins across different constituency types using a scatterplot design. The data is separated into three panels representing General, Scheduled Caste (SC), and Scheduled Tribe (ST) constituencies, encoded through spatial positioning.

The x-axis displays turnout percentage, while the y-axis shows vote share percentage. Victory margin percentage is encoded using circle size, with larger circles representing wider victory margins. Party affiliation is indicated through color, allowing for analysis of both party-specific patterns and overall trends across constituency types. This multi-dimensional encoding enables viewers to examine how electoral participation (turnout) and candidate performance (vote share) relate to competitiveness of races (margin) within each constituency category.

DASHBOARD:



Actions

Actions let you create interactive relationships between data, dashboard objects, other worksheets, and the web.

Show actions for

☒ This workbook
 ☐ This sheet

Name	Run On	Source	Fields
FilterCheck	Select	DashboardFinal (Task1)	Decades
HighlightCheck	Select	DashboardFinal (Task1)	Party Top 10 + Others

Add Action
Edit
Remove

Cancel
OK

Our final dashboard consists of the 4 tasks we discussed. Keeping Task 1 as the source sheet, we added filter and highlight actions which will allow the user to click on the source chart and instantly see how that selection impacts other charts. Color uniformly represents the top 5 parties across all the visualizations.