Research Article

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Psephological Advancements and Pitfalls of Political Opinion Polls in India

Abstract: Political opinion polls in India are holistic snapshots in time that divulge deep dive information on electoral participation, ideological orientation and self-efficacy of the electorate and faith in core democratic values. The popularity of election surveys stems from the political socialization and crystal ball gazing curiosity of the citizens to foresee the outcomes of the hustings before the pronouncement of formal results. The opinion polls provide crucial data on voting behaviour and attitudes, testing theories of electoral politics and domain knowledge production. The obsession of the Indian media with political forecasting has shifted the focus from psephology to electoral prophecy, but it continues to furnish the best telescopic view of elections based on the feedback of the electorate. The ascertainment of subaltern opinion by surveys not only broadens the contours of understanding electoral democracy, but also provides an empirical alternative to elitist viewpoint of competitive politics in India.

1 Introduction

The terms 'survey' and 'opinion poll' would have remained a professional jargon restricted to the market research industry, had it not been used for predicting the outcomes of electoral competitions in India. The opinion polls to study Indian national elections began in the 1950s, but it caught the imagination of the people and became clichéd in the closing decade of the 20th century. The popularity of election surveys stems from the political socialization and crystal ball gazing curiosity of Indians to foresee the outcomes of hustings before the declaration of formal results. The electoral inquisitiveness of the stakeholders created a large canvas of opportunity for opinion polling industry in India and scope for scientific forecasting of political competitions. The proliferation of electronic media and the rapid monetisation in the 1990s provided the momentum to polling agencies to venture into opinion polling on national and state electoral politics. The opinion polls captured panoramic snapshots and divulged the socio-demographic characteristics of Indian voters, their voting preferences and reasonably accurate vote estimates of political parties for forecasting elections (Rai, 2021). The fixation for survey based election prediction turned a host of political scientists and television anchors in India into psephologists. The media election soothsaying became so definitive and encapsulating that it overshadowed the announcement of election results by the Election Commission of India (ECI) to a mere formality of medal distribution ceremony. The success of mediatised election prophecy was short-lived, as erroneous prediction of national election results in 2004 led to widespread public criticisms and calls for a blanket ban of Pre Poll[1], Exit Poll[2] and Post Poll[3] surveys during elections in India.

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1 Pre Poll survey as the name indicates is an election survey that happens much before balloting to measure popular choices about political parties, contesting candidates and political leaders. It gauges the voting behaviour and attitudes of sampled voters. (Kumar & Rai, 2013).
2 Exit Poll as its name overtly suggests is an election survey of sampled electorate as they come out or exit from the polling station after casting their votes. Since the survey takes place on the polling day, it also known as Election Day polling. (Kumar & Rai, 2013).
3 Post Poll survey is an indigenous method of survey for measuring voting behaviour developed in India. It is a unique technique of conducting an election survey pioneered by the CSDS in the 1960s wherein the interview of voters took place after the polling was complete in the relaxed confines of their homes or work places. The post poll survey for measuring voting behaviour is purely an academic exercise with the purpose of doing a post mortem analysis of the elections. (Kumar & Rai, 2013).

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The media-opinion polling industry facing an existential threat resorted to course corrections, but the election polling ecosystem turned from bad to worse, as some political parties were caught falsifying in-house election survey data for political mobilisation. This marked a tectonic shift in purpose, as initially political outfits commissioned election surveys to gauge the mood of voters, grassroot feedback for selecting 'winnable' candidates and in formulating election strategies and manifestos. The transition of democratic politics India in the 1990s from a bi-party to a multi-party system created a no-holds-barred electoral competition among the political establishments to win elections and propagate their ideologies. The spin-doctors of political groupings fudged internal survey finding for political communication to influence voters and vitiate free and fair elections. The credibility of opinion polls and its predictive prowess reached its lowest point in the 2013 assembly election in Delhi, as the fledgling Aam Adami Party (AAP) willfully tailored the in-house opinion poll data to declare a sure shot electoral success. Yogendra Yadav, one of the founders of the party and a leading psephologist, publicly admitted that the outing of the AAP survey was a battle strategy, because it was truthful, technically on firm grounds, as a political weapon (Ashraf, 2013). The BJP, which was the principal contender, declared that the survey conducted by them predicted a hands-down victory. The self-proclaimed victories by the two leading contestants came to a cropper as neither of them could muster a simple majority, resulting in a hung house. The election masquerading not only politicised opinion polls, but also damaged it scientificity and widened the trust deficit of election surveys in India (Rai, 2021).

Between 2014 and 2019, the correct election forecast of state elections by opinion polls led to rebuilding the confidence of people in quantitative analysis of election and balloting. The polling industry with increased accuracy in election forecasting faced a crucial litmus test in General elections 2014, as incumbent Congress led United Progressive Alliance (UPA) was up against a resurgent and combative BJP led National Democratic Alliance (NDA). The election prediction of most market research agencies correctly fathomed the direction of the 2014 mandate, but none of them (except one poll) could forecast a BJP majority for the first time in the Lower House of the parliament. The Lok Sabha elections in 2019 once again posed a major challenge for polling agencies, as most Indian and foreign media could not find the prevalence of the 'Modi wave' and predicted with aplomb that it will be a waveless national husting. However, the exit poll findings were diametrically opposite of the media narrative of fading saffron wave, as it revealed that the BJP-led right wing combine would do an impressive electoral rebound with a bigger mandate. The political forecast by the pollsters proved correct, but barring two polling agencies, none could prophesize that the BJP will win more than 300 out of the 543 Lok Sabha seats. The election predictions were once again in the right direction, but most of them could not assess the correct magnitude of the BJP's political triumph (Rai, 2021).

Thus, it becomes important to revisit and review the status of opinion polls for quantitative analysis of election and balloting from a historical perspective to fathom its intrinsic limitations, situational challenges and the accuracy errors in predicting election outcomes. This article comprises of three major parts. The *first* focuses on the origin of psephology as an academic exercise, the development and traction of public opinion polls and transmutation of purpose from understanding elections to a media utility for forecasting of electoral politics. The archiving will provide the growth continuum of election opinion polls and decipher the changes in psephological trajectory and the methods for summating public opinion. The *second* part theoretically discusses the various kinds of errors and bias in survey research and their impact on predicting elections in the multi-party competitive politics of India. It collates the accuracy levels of public opinion polls by media conglomerates during the national elections between 1998 and 2019. A comparative analysis of seat prediction based on election surveys with national election verdicts will not only help in foregrounding the precision levels achieved by the polling industry in the last two decades, but also maps the degree of deviations. The *final* part fathoms the biases and fallacies of psephology and the insurmountable challenges faced by the polling organisations in conducting accurate election surveys in India. It deconstructs the fundamental flaws in opinion polls, scrutinizes the reasons for erroneous poll predictions and probes the media sensibility in distinguishing between empirical and anecdotal evidence while reporting election data analytics.

2 Intellectual History of Political Opinion Polling

A trip down the memory lane of public opinion polling traces its historical beginnings in the US and India, with expanding footprints in two largest democracies in the world. The data disseminated by public opinion polls has been a central element of US media election coverage. The US presidential campaign in 1936 marks the origin of the

contemporary election polling, as George Gallup, in business collaboration with *The Washington Post,* published the results of his polls. Gallup offered a money-back guarantee that he could do a better job than *The Literary Digest*, the leading prognosticator of presidential elections until then, so the newspaper had little to lose. Gallup had a great deal to gain in public visibility that could stimulate business from commercial clients based on his reputation. This was the starting point of a long-term symbiotic relationship between news organisations and pollsters, taking into account financial pressures faced by news organisations due to the impact of new technologies and changing lifestyles on polling methods (Traugott, 2014). Gallup inspired a generation of pollsters to public opinion research that included Henry Durant of England and Eric da Costa of India.

The first institutional poll to measure political opinions and attitudes of the Indian voters was in 1950s by Indian Institute of Public Opinion (IIPO). Costa laid the foundation of IIPO and modeled it on the American Institute of Public Opinion in the early 1950s. An economist by training with primary interest on consumer-related studies, he started public opinion polls on economic and political issues. He pioneered election studies and is rightly conferred the title of father of opinion polling in India (Kumar and Rai, 2013). IIPO conducted a series of political studies in Delhi, West Bengal and Kerala and published the findings in the first issue of the Institute's journal *Monthly Public Opinion Surveys* (MPOS) in 1955. The first all- India election opinion poll before the second Lok Sabha Elections in 1957 focused on studying the voting behaviour of Indians, revealing how voting intentions and choices vary with caste-community, income, religion and occupational background of the electorate. It reported the popularity ratings of contemporary political leaders and quite accurately predicted the election verdict before the voters exercised their franchise. Costa said 'it was then seen for the first time that the great power of public opinion research abroad in predicting voting intentions and results, as well as opinions on a variety of sensitive subjects applied to India and was revealed almost as a new Indian discovery'.

While many western survey research practices are apt for replication in India, large challenges, peculiar to Indian conditions emerged in sampling, staffing in the field, methods of interviewing especially in villages, from low literacy levels, difficult logistics and the lack of a common national language. Moreover, modern data processing equipment and spare parts were often unavailable, making survey analysis more cumbersome (Dixon, 2006). Costa reviewing the operations of IIPO in 1980 said 'it was not known at that time whether in fact an all-India poll was truly feasible. The obstacles of illiteracy and difficulties of organizing random samples in many localities seemed overwhelming. Even the US Gallup Organization was surprised at the extraordinary manner in which illiteracy and huge language difficulties, and a massive spread of the sample to be managed with very limited resources, all turned out to be relatively small difficulties (da Costa, 1980). A series of polls, like those of all Gallup-affiliated institutes, measured party preferences in elections, while annual polls measured attitudes toward foreign countries. The ad hoc studies measured attitudes towards current foreign policy problems, including disputes with Pakistan and China and the emergence of Bangladesh. The issues that were covered in MPOS included attitudes toward poverty and development problems, household consumption patterns, five-year plans, discontent and deprivation, inflation, the plight of Harijans, employment and perception of improving and/or worsening economic conditions in India (Dixon, 2006). The first forecasting of national elections done by IIPO in the 1950s was spot on, but could not repeat its initial success and petered out after sporadic and incorrect predictions in the 1960 and 1970s. After the exit of Costa from IIPO in 1980s, public opinion polling on elections came to a grinding halt and did not figure high on the organisational agenda.

Apart from IIPO, S.V. Kogekar and Richard Park conducted another notable survey based study in the 1950s and published a *Report on the Indian General Elections.* It was mainly generic, covering patterns of party alliances, selection of candidates, role of the press, and a summary of the election results. It provided significant insights into the level of voters' awareness, party preferences and the relevance of the split vote theory (Narain, Pande etc. 1978). The study highlighted that socio-economic forces influenced voting behaviour and the importance of studying electoral competitions at state level in understanding national democratic politics (Kumar & Rai, 2013). V.M Sirsikar studied the Poona Lok Sabha constituency based on a sample survey during the general elections in 1967, yielding interesting points about democracy, elections and voters' political preference and behaviour at the micro level of a parliamentary constituency. The findings revealed that most people in India had faith in democracy, elections and political parties (Kumar and Rai, 2013). Faith in democracy had a direct correlation with educational attainments of the voters, but occupation, income and age of voters did not influence the voting behaviour and attitudes of voters.

During the General Elections in 1967, Kini conducted a panel survey using a detailed interview schedule in Nagpur. He used the 'split vote' technique to identify the respondents' preference of parties in concurrent Lok Sabha and state assembly elections (Kondo, 2007). The study also showed that voters exposed to election campaigns and party propaganda were more volatile in their voting intentions and were more likely to change. Socio-economic variables of gender, caste, religion, education and income were important variables in determining political awareness and efficacy. Eldersveld and Bashiruddin Ahmed conducted an all-India survey of the general elections in 1967 and 1971. The cross-country comparison revealed differences in state-wise voting behaviour, political preferences and participation of voters from upper castes and higher educational attainments was lower than for voters with less education and other caste communities (Kondo, 2007). Dr. Shriram Maheshwari (1982) conducted a sample survey of 393 people in four parliamentary constituencies of Delhi in 1977. His most significant finding was that people in rural areas came out to vote more than people in urban areas, women turnout was less than among men , and upper-class Delhiites were 'indifferent' to the political process.

Psephology as an academic discipline started at the Centre for the Study of Developing Societies (CSDS), Delhi, whose founder Rajni Kothari, stated that 'it would give a truly empirical base to political science and engage in a persistent set of writings through which our broad conceptualisation of democracy in India can be laid out. It will not just institutionalise the CSDS as a place of learning but as part of the larger intellectual process itself'. The quantitative analysis of national elections and balloting, branded as 'National Election Study' (NES), rolled into action during the 1967 and 1971 General Elections. The NES, primarily a scientific study of the political behaviour, opinion and attitudes of the Indian electorates, emphasized empirical methodology to map and measure the perception and opinion of voters at the pan India level, leading to detailed analytical understanding of the political processes. The 'people' came within that framework, as voters and citizens with desires, attitudes and opinions; our task as academics was to build from there a macro-theory of democracy, largely through empirical surveys of electoral choices, but also through broader surveys of social and political change (Kothari, 2002). The legacy of IIPO and CSDS opinion polling witnessed a baton exchange with Prannoy Roy, an economist turned owner of NDTV news channel, who started conducting market opinion polls to ascertain the mood of the nation's voters in the 1980s. In partnership with *India Today,* Roy revived election opinion polling, sophisticated analysis and statistical models for robust prediction of Indian parliamentary elections in 1980 and 1984. He presented opinion polls as a scientific way of studying electoral competitions to explain the trends and patterns in the prevailing elections based on grassroots data. The methodological innovations included 'Swing' (percentage change in vote for dominant party, Congress) to measure the shift in votes and 'Index of Opposition Unity' (proportion of the total votes for non-dominant parties) to measure the extent of split of non-Congress votes. Besides these, the novelties introduced were a new sampling frame with a huge sample of voters and selection of parliamentary constituencies from 'swing zones' to ascertain electoral shifts (Butler, Lahiri & Roy, 1995).

The election forecasts of Roy in the 1980 and 1984 national elections might appear in retrospect to be off the mark, but established the superiority of survey-based election predictions over earlier dominant speculative modes. The forecasts made in the 1989 and 1991 parliamentary elections proved more accurate, at least in predicting seats for the dominant Congress party. This proved that Indian elections can be predicted with a fair degree of accuracy, but also left open the challenge of methodological improvement and of developing a forecasting model suited to the special features of the Indian party system in the 1990s (Karandikar, Payne & Yadav, 1998). Roy conducted an exit poll among 77,000 voters during the 1989 national elections and predicted a Congress victory with seat estimation for major political parties. The almost accurate forecasting of the election mandate provided a strong motivation to pollsters and led to a higher growth trajectory of the opinion polling industry in India (Kumar and Rai, 2013).

Election studies were discontinued by CSDS in the 1980s, only to be renewed a decade later by academic turned politician Yogendra Yadav, under the banner of Lokniti, a research programme on democracy and competitive politics. The label 'survey research' stood for what was considered most inappropriate in the third world imitation of American science of politics: it was methodologically naïve, politically conservative and culturally inauthentic. Hence, the adaptation and objective of survey research to the political culture of countries of the global South should be to make survey research more relevant scientifically and use it as a politically empowering device to ensure that subaltern and suppressed opinions are made public (Yadav, 2008). The creation of an all-India network of political scientists in 1995 paved the way for undertaking the rebranded NES in 1996. The NES series incorporated several innovative ideas and research techniques that included 'Post Poll Survey' (Interview after polling is over and before the election results

are declared), 'Multivariate Probability Proportional to Size Sampling' and 'Secrecy of Ballot', recording the voting questions through a dummy ballot paper and ballot box. Because of these survey research techniques and ground procedures like strict face-to-face interview of sampled voters by trained university students, election opinion polls achieved higher levels of accuracy in aggregating behaviour and attitudes of the Indian electorate and vote estimates of political parties, with minimum statistical errors. The post poll surveys of CSDS accomplished a record-breaking 70 per cent success rate in correct election forecasting, which is not only phenomenal, but also a testimony of achieving benchmark accuracy in election studies.

The study of elections as an academic vocation at CSDS did not proliferate in the Indian university system as expected, mainly due to data illiteracy in the discipline of social science (barring economics and sociology) and fear of statistics among political scientists. In sharp contrast to many other social sciences, the discipline of Political Science in India has had a fraught relationship with things empirical, shunned anything to do with numbers. Irrespective of their ideological hues, Indian historians are very attentive to their 'sources', in sharp contrast to the attitude of most political scientists to the nature of 'evidence'. Economists in India have never shunned quantitative information, while the discipline of Political Science did not develop any protocol of external reference to archives, ethnographic fieldwork or surveys. There was simply no space for developing skills for data analysis, though the universities continued with the ritual of teaching some abstract statistics as a part of Research Methodology courses (Yadav, 2008). Indian political science is still engaged in outdated methodological battles between surveys and field studies, on the one hand, and between strictly compartmentalized notions of quantitative and non-quantitative studies, on the other. It is mainly due to its lack of confidence in dealing with data and the lack of any systematic training in research methods that mainstream political science in India undermines the importance of election studies (Deshpande, 2019). The other important reason that stunted the growth story of psephology as a sub discipline of political science is restrictive state funding and paucity of financial resources. The government of India provided financial support for election studies until the 1980s, but it dried thereafter due to ideological and economic oppositions. Thus, public institutions like CSDS had to rely on private media houses for funding election surveys, which provided legroom, but also created pressures and tensions for accurate election forecasting to hit the bull's eye in every election.

The election surveys over the last two decades in India have been a valuable and reliable source of behavioural information on India's electoral politics. However, the unfortunate part is the shift in the focus from psephology to election prophecy and election studies including the business of forecasting and predictions must not reduce themselves merely to an election time entertainment (Kumar, Rai & Gupta, 2016). The primacy of opinion polls has changed from an empirical feedback of voters to a media gimmick for winning the rat race of election soothsaying. Thus, it becomes relevant to review the status of opinion polls in India and analyse the accuracy levels of political forecasts on twin components: national verdicts and seat predictions for political parties.

3 Advancements in Accuracy of Election Surveys

Poll accuracy in the initial years of opinion polling was a measure of closeness of vote estimates of political parties (observation) with the vote share (true value) figures of the Election Commission of India (ECI). However, due to paramountcy of election forecasting in India, the paradigm of survey accuracy witnessed a paradigm change from comparison of vote shares to closeness of seat predictions regarding the number of seats won by political parties. Predicting elections became an integral part of public opinion polling and established primacy over mapping of electoral behaviour and attitudes. The goals of election opinion poll practitioners and the expectation of its targeted audience diverged, as the former focussed on quantifying voting behaviour and attitudes, while the latter's focal interest was prediction of election outcomes. A tension always existed between survey researchers who produced pre-election opinion polls and consumers who watched or read poll stories during election campaigns. The pollsters emphasized that their results is only an election 'Snapshot in Time' and not a 'Political Forecast'. They frequently downplayed measurements of vote preference, the so-called horse race as least important, compared with mapping the profile of voters and their political preferences and party choices. However, those who followed political news during campaigns appear to gravitate to polls for their apparent forecasting value.

Table 1: General Elections 1998 - Almost Accurate Prediction.

Seat Forecast	BJP allies	Congress allies	Others
DRS-Times of India	249	155	139
Outlook-C Nielsen	238	149	156
India Today-CSDS	214	164	165
Frontline-CMS	225-235	145-155	152-182
Actual result	**252**	**166**	**119**

Note: Seat predictions based on opinion poll conducted before the elections.

The divide between forecasting and measuring pre-election shots of voter preferences has been debated since decades, focused on measuring polling accuracy. The stark difference between opinion polls as election forecast and a measurement of everything but election outcomes becomes especially pronounced in measuring poll accuracy. While some pollsters dismiss the notion of treating pre-election polls primarily as a forecasting instrument, many in the field are happy to treat the apparent accuracy of polling near elections as a sign of its overall health. It became implicit in the scoring of poll accuracy in Crespi's resolution long ago that ruling out the forecasting value conducted 'immediately before an election' is to 'impugn meaningfulness of all polls'. If polls cannot achieve such predictability, why should we accept any poll results as meaning relevant to real life? (Crespi, 1988 & Blumenthal, 2014). It thus becomes contextual to compile and engage in a comparative analysis of poll predictions with the national elections results to ascertain the accuracy rates of public opinion polling in India.

The General elections in 1998 marked the mushrooming of opinion polls to read the minds of voters and the beginning of a media rat race for seat predictions and eureka moments. The majority of election polls predicted the seat tally of the BJP allies quite closely, except *India Today-CSDS*, which underestimated the victory margin of the saffron party and its political partners by a wide margin, but surprisingly got it right for the losing Congress alliance. The explanation for some discrepancies between the predicted and actual seats can perhaps be on the gap between the date of the election survey and the dates of the actual voting. The design of opinion poll was primarily to ascertain an all-India prediction of seats, and though CSDS method involved predicting seats for all states, the sample size at the state level was too small to offer any measure of confidence in the predictions (Karandikar, Payne & Yadav, 1998). The next big test for election forecasting was the general elections in 1999, which again proved to be a red-letter day for the polling industry. The polls correctly predicted a victory of the BJP alliance, with a slight overestimation of seats for the winning political combine. The election predictions based on surveys done by various media houses during the general elections in 1998 and 1999 were quite accurate and almost mirrored the election results. It not only received public kudos and appreciation, but also gave a big boost to the growing opinion polling industry in India (Rai, 2014).

The near accurate political prediction by the election survey industry in the last decade of the twentieth century provided an opportune time to improve its scientific validity and election forecasting models. The General election 2004 in India was a big moment for opinion polling to stamp its reliability, but proved to be its Achilles heel, as the election predictions turned out to be completely upside down. The media polls predicted with aplomb that the incumbent BJP led NDA alliance will retain power and be at the helm of affairs for the next five years. The various polls differed on the number of parliamentary seats the saffron combine will win, with some suggesting that it will return with a bigger tally, while others predicted some losses (Rai, 2021). The 2004 hustings proved a topsy-turvy election, as the NDA alliance led by one of India's most popular Prime ministers, Atal Bihari Vajpayee, was defeated by the Congress led alliance in a shocking turn of political event.

A dissection of seat predictions in the 2004 General election disaggregated at state level reveals that the pshephological shocks in Andhra Pradesh and Tamil Nadu had a multiplier effect on intensifying survey bias and margin of error leading to an erroneous election forecast. The structural reasons for election prediction missing the bull's eye is mainly due to the nature of Indian polity that include first-past-the-post (FPTP) electoral system, multi-party election competition and high volatility of the electorate. The challenge of converting vote percentage into seats

Table 2: General Elections 1999 - NDA Tally Slightly Overestimated.

Seat Forecast	BJP allies	Congress allies	Others
Times poll-DRS	332	138	-
Outlook-CMS	319-329	135-145	34-39
India Today-Insight	332-336	132-146	70-80
HT-AC Nielsen	300	146	95
Pioneer-RDI	313-318	140-150	84-86
Actual result	**296**	**134**	**113**

Note: Seat predictions based on opinion poll conducted before the elections.

Table 3: General Elections 2004 - UPA Seats Grossly Underestimated.

Seat Forecast	BJP allies	Congress allies	Others
NDTV-Indian Express	230-250	190-205	100-120
Aaj Tak-ORG Marg	248	190	105
Zee-Taleem	249	176	117
Star-C-Voter	263-275	174-186	86-98
Sahara-DRS	263-278	171-181	92-102
Outlook-MDRA	280-29	159-169	89-99
Actual result	**189**	**222**	**132**

Note: Seat predictions based on opinion poll/exit poll conducted during the elections

that confronts pollsters in India and why this flawed representative feature, in a built-in FPTP system, accounts for some measure of inaccuracies in a number of opinion and exit polls (Butler, Lahiri & Roy, 1995). The functional limitations of election survey based forecast is due to the ideological bias of the media, statistical rebalancing by pollsters, improper political interference, data tweaking for client needs, sample size inadequacy and unscientific survey methodology. The issue of methodology, rigour and underestimation bias (play-safe mode) on the part of pollsters is due to the need to predict the winner correctly, as getting it wrong incurs dangers of disrepute. The pollsters 'play-safe' to get the winner right, and prefer to err on the seats by using the lower bound of seats as predicted by their statistical models. Interestingly, along with the pollsters' play-safe approach, the exact seat prediction becomes difficult also because a sizeable number of respondent voters also prefer the play-safe approach in their replies to survey questions on their choice of political party (Butler, Lahiri & Roy, 1995). The stakes are so high for data aggregators during the elections that they stick their neck out only for predicting the winning political party (ies) and now refrain from stating the exact scale of victory.

The 2004 national opinion polls not only faulted on wrong seat predictions, but also failed to fathom correctly the electorate's choice and direction of the popular mandate. This created a trust deficit and raised critical questions on the credibility and reliability quotient of opinion polls. The leading public misconceptions ranged from election survey being an unscientific exercise to an instrument of political communication covertly used by media houses for false predictions, aimed at influencing the non-opinionated electorate in India (Rai, 2014).

The polling industry facing public heat and clarion call for a blanket ban in election survey after the debacle of the 2004 elections got another opportunity in 2009 to ward off allegations of influencing votes and vitiating the ecosystem of free and fair elections. The opinion polls predicted a tough fight between the BJP and Congress-led political alliances

Table 4: General Elections 2009 - Failed to Forecast Congress Upsurge.

Seat Forecast	BJP allies	Congress allies	Others
STAR News - AC Nielson	197	199	136
CNN-IBN	165-185	185-205	165-195
NDTV	177	216	150
Headlines Today	180	191	172
News X	199	191	152
Times Now	183	198	162
Actual result	**159**	**262**	**79**

Note: Seat predictions based on opinion poll/exit poll conducted during the elections

and a hung assembly with a slight edge for the Congress-led combine. It completely misread the upcoming verdict and failed to fathom the upsurge of the Congress party and substantial gains in number of parliamentary seats from previous election. Five years down the line, the poll predictions by different media houses in 2009 once again failed to predict the victory of the incumbent Congress-led UPA government (Rai, 2021). The only poll that predicted the Congress party would win around 200 Lok Sabha seats was its own internal survey but it did not meet public approval. The negative questions that arose after Lok Sabha elections in 2004 resurfaced and the credibility ratings of the opinion-polling industry was severely hit. The average record of pre-poll opinion surveys in 2004 and 2009 Lok Sabha elections reveals the implicit weaknesses and dangers of data rigging in election forecasting in a neck-to-neck electoral competition. In such a complex political setting, false seat predictions based on opinion polls can become a covert instrument in the hands of political parties for influencing the electorate in Indian elections (Rai, 2014).

The reasons for inaccurate seat predictions for the political party combinations in the fray was a carbon copy of the 2004 national elections. The erroneous political forecasting in 2009 is a testimony of the failure of election opinion surveyors in investing resources in research and development. The distortion between vote-shares and results in terms of seats-due to the voting system-is not a new phenomenon in India, as the electoral fate of parties always depends more on their adversaries' performances than on their own. Even if the Congress has often obtained a majority of seats in the Lok Sabha, sometimes with a considerable margin, it has never obtained more than 48 per cent of the vote share (General Elections1984). The Congress was losing its electorate support since the 1999 national elections, but this distortion was certainly more striking in 2009, due to increased fragmentation of the political scene. The Congress thus won seats in three states in which it lost the vote share (Andhra Pradesh, Maharashtra and Orissa). The same applies to the BJP in Gujarat, Jharkhand and Bihar incidentally. The multiplication of triangular-and sometimes quadrangular-competitions rendered any attempt at predicting the electoral outcome in national elections 2009 completely illusory. This optical illusion stems firstly from the single-round majoritarian voting system, which meant that the growing fragmentation of the regional political scenes, particularly in the case of triangular or quadrangular competitions, acted in favour of Congress, the most consistent though not dominant player (Jaffrelot & Gilles, 2009).

The political churnings seemed quite visible during the 2014 Lok Sabha elections. The political arena had changed diametrically for the Congress led UPA II government and it faced twin electoral disadvantages, a strong anti-incumbency and an amplified 'Modi wave'. The opinion polls predicted that the NDA led by the BJP would show UPA the exit doors and come back to power in Delhi, which came true. The correct prediction of the people's mandate brought a sigh of relief for pollsters and their part failure was lost in the celebratory din. A glance at table 5 shows (except one polling agency) that none of the opinion polls could predict the BJP riding high on a saffron wave could cross the majority mark on its own (272 out of 543 seats) in the lower house. The correct assessment of the national election verdict in 2014 reinvigorated the survey aggregation industry and provided traction to carry out improvements in computational capabilities. The scientific and technological advances made by the opinion polling industry resulted in greater public visibility and higher accuracy of poll predictions in state elections between 2014 and 2018. The election prediction

Table 5: General Elections 2014 – Failed in Predicting a Majority for BJP.

Seat Forecast	BJP allies	Congress allies	Others
ABP - AC Nielson	281	97	165
CNN-IBN-CSDS	276-282	92-102	150-159
Headlines Today-CICERO	261-283	101-120	152-162
India TV- C-Voter	289	101	153
News 24-Today's Chanakya	340	70	133
Times Now-ORG	249	148	146
Actual result	**326**	**60**	**157**

Note: Seat predictions based on exit polls conducted during the elections

triumph in 2014 rekindled the old controversy that election survey may unduly influence the voters and the political exigency to ban opinion polls during Indian elections (Rai, 2021).

The failure of opinion polls in correct seat predictions led to various misconceptions, with common allegations that surveys are covert operations by partisan media houses or ideologically slanted pollsters to influence Indian voters, especially those who prefer to vote tactically or jump the bandwagon (Kumar, Rai & Gupta, 2016). Several factors influence the voting choices of the electorate, including four distinguishing voting effects: strategic, supporting a winner, cue taking and contagion that helps in taking the finals shape (Bartels, 1988). A strategic (or sophisticated or tactical) vote is an electoral endorsement for a political party that is not the preferred one, primarily motivated by the intention to affect the outcome of the election (Blais & Nadeau, 1996). A strategic vote in a first-past-the-post election takes the form of supporting a second choice party perceived to have better chances of winning than the most preferred one. The polls may affect strategic considerations because it relies on the expectations about the overall outcome of the election, and may lead people not to vote for a given party because the popular perception is that it is unlikely to win. Thus under such a scenario opinion polls influence perceptions of the race, not preferences or the evaluations of the parties (Blais, Gidengil & Nevitte, 2006).

A second possibility is that polls affect expectations about the outcome and that these expectations, in turn, affect preferences or evaluations. In this case, voters evaluate parties more positively if their chances of winning appear to be good and to view parties more negatively if their chances seem to be slim. The contagion (or bandwagon) is a direct effect, encompasses cue-taking, independent of preferences and with a strategic calculus. This is the classical contagion effect when voters rally to parties that are doing well in the polls. Some voters might vote for the party that they expect to win simply because they enjoy the pleasure of being on the winning side (Bartels, 1988). The exit poll surveys during Indian elections to predict the outcome of the actual elections have historically been controversial, particularly for the elections in multiple phases, as they could potentially influence the behavior of voters in the latter rounds of voting. To avoid such issues, in 2009 national elections the ECI introduced a blanket ban on publication of exit polls findings in the media until all rounds of an election are completed. The potentially exogenous timing of this policy reform and the analysis of administrative data to compare states that went to elections before and after this ban reveals that the vote share increases for the front-runner and decreases for others. This is suggestive evidence of underdog voting by Indian voters, if dissemination of exit poll information takes place and is consistent with the possibility of influence resulting from publishing post-poll survey results in multi-phase elections (Chatterjee & Jai, 2020).

The empirical evidence for contagion effect in Indian elections is still quite preliminary, but it is possible for bandwagon voters to shift their loyalty towards parties performing well in the initial rounds and emerge victorious. Bandwagon voters generally have three voting choices: while some may choose a party/candidate who is most likely to win in their parliamentary constituency, others may prefer to vote for the leading political party in the state, and still others may opt for a national political establishment. The findings from the NES 2014 data clearly identifies a bandwagon effect in Indian elections, as 43 per cent of the electorate seem to go with the Direction of Election Wind (hawa), while 45 per cent voted on their own volition, without any consideration for who was ahead in the election race.

This is an interesting dimension of the contagion effect in Indian elections, but as most election surveys show national estimates for votes and seats, it is next to impossible for them to directly influence voters and generate a bandwagon effect. The Indian media houses rarely show seat predictions for parliamentary constituencies, so the probability of a national projection of seats for various political parties from an election survey influencing the minds of voters is practically out of the question (Kumar, Rai & Gupta, 2016).

The impact of election surveys on free and fair elections has always been a contentious and debatable issue. The decision to ban opinion polls finally reached the precincts of the Supreme Court of India, which directed the ECI to frame regulatory guidelines for conduct and dissemination of election survey findings. This has been a critical issue for the ECI, as national and provincial elections takes place in several phases and timelines due to security and logistical requirements. That political parties performing well in the initial phase of a staggered election in India often witness a momentum effect and tend to perform better in the remaining phases is more of a psephological conjecture than factual observation. This possibility and the role of opinion polls in inducing and enhancing the momentum effect was the rationale for a ban on the release of opinion poll findings before the end of the final phase of an election. While this specific restriction on the release of findings in between polling phases is necessary and proportionate, the suggestion for a complete ban of election opinion polls is naïve, as they are not the only source of information that the electorate depend on for forming their voting decisions. The public outreach and dissemination of opinion poll election forecasting is quite limited, as data from CSDS NES 2014 reveals that only two out of ten Indian electorate were aware of any opinion poll prediction (Kumar, Rai & Gupta, 2016). The restricted media outreach of political polls further weakens the public argument of surveys unduly influencing elections in India and distorting people's mandate. The spin-doctors of political establishments in India like in other democratic countries manipulate and exaggerate internal election survey data for their benefits, but is does not cut much with the voters and alter electoral verdicts. A majority of media polls does not add value to domain knowledge of election studies and diminish the value of political prognostication, but there is no evidence to prove their ulterior motives in creating a bandwagon effect and vitiating free and fair election in India (Rai, 2021).

The Lok Sabha elections 2019 is one of the sharpest ideological electoral competition between the right-wing BJP alliance and the centre of left party combine with incompatible political visions. The election writings by prominent political scientists and reporting by seasoned journalists indicated that 'Modi Wave' is absent and it is certainly going to be a wave-less election. They acknowledged that the saffron party alliance had a slight electoral edge over other political parties, which may or may not be enough to catapult the BJP and its allies back to power in Delhi. Academic and media experts found solace in pre-election surveys that played safe and forecast that the BJP and its political partners are losing electoral steam and may fall short of the majority mark needed to form the government. The exit polls after the last phase of the election and before the results revealed that BJP alliance would cross the 300-seat mark, with two polling agencies hitting the jackpot by predicting 350 plus seats. The correct predictions reinstated opinion polling in India to its pride of place as most authentic source of election information and political prediction (Rai, 2021). The psephological success not only vindicated the accuracy of empirically evidenced election assessments, but also trashed the political writings of public intellectuals and fourth estate specialists that predicted a doomsday election for the Modi-led BJP and its tireless quest for a reelection.

The analytical summary of survey-based election forecasting of national elections reveals a mixed bag, as it started with bang on predictions in 1990s, floundered in the first decade of the 21st century and regained lost ground in the last two Lok Sabha elections. The accuracy of election forecasting at the national and state elections in India has considerably improved in recent times; unfortunately, incorrect political predictions stick in the public memory, creating a perception deficit about their reliability, competence and neutrality (Kumar, Rai & Gupta, 2016). The pioneers of academic survey research and commercial opinion polling in our country had achieved for their time fairly high international standards of quality of research. The expansion of commercial opinion polling in the last decade has led to a visible decline in the quality of research, accuracy of findings and the extent of transparency. There is clearly a need to invest more in development of survey research and training of the personnel (Yadav, 2008). The public opinion polling to click an electoral snapshot and predict the political outcomes in India has become a money-spinning business venture for marketing agencies and mass media. The reasons for a high premium by the media of opinion polls is due to its political prominence and newsworthiness. The marketisation of election opinion polling, secrecy of survey methodology and classified forecasting models complicate the task of deconstructing opinion polls and their predictive prowess.

Table 6: General Elections 2019 – Correct Estimation of NDA 3.0 Seats.

Seat Forecast	BJP allies	Congress allies	Others
India Today-AXIS My India	339-365	77-108	69-95
Today's Chanakya	350	95	97
News18-Ipsos	336	82	124
Times Now-VMR	306	132	104
India-News	298	118	127
Republic-CVoter	287	128	127
ABP Nielsen	277	130	135
Actual result	**353**	**91**	**98**

Note: Seat predictions based on exit polls conducted during the elections

In such a scenario, CSDS election studies continue to be the only reliable resource material and reference that can aid in unravelling the flaws and limitations of survey research and its elements. The fallibility of opinion polls in estimating the correct vote share exposed its fault lines, as survey errors led to inaccurate election forecasts in national and state elections with impunity. The accuracy levels of elections surveys, unlike other opinion polls is comprehendible and easy to test on the yardsticks of the closeness of vote estimates with the actual vote share and the representativeness of sample with the demographic profile of the electorate. The review of media opinion polls based on election forecasting in earlier section show statistical miscalculation on both these comparative parameters. The error in vote share and imbalanced sample profile coupled with erroneous seat predictions point towards flaws in opinion poll design, fieldwork implementation at ground zero and statistical forecasting models (Rai, 2021). Thus, it becomes pertinent to dig deeper into election survey discourse to find the inherent fallacies and statistical limitations of polls and its adverse impact on elections forecasting.

4 Empirical Fallacies of Public Opinion Polls

A statistical assessment of opinion polls in India reveals that a strict adherence to survey accuracy protocols and standard operating procedures by market research agencies was quite rare, with CSDS election studies being the outlier. Survey research is a technique of data gathering in which a sample of respondents is asked questions about their political preferences and beliefs to draw conclusions about political opinions, attitudes and behaviour of the wider population of citizens. It is associated with election studies and research on voting behaviour and public opinion research, and includes academic as well as commercial use of this data gathering technique (Yadav, 2008). There are various kinds of fallacies in election surveys but the primary ones that are controllable include coverage, sampling measurement and non-response errors. The basic norm for an accurate election survey means that every member of the targeted electorate has an equal chance of selection. The probability sampling ensures everyone's equity in being selected, avoiding *coverage error*. The size of the sample selected should be adequate to achieve the required level of precision thereby minimising *sampling error.* The questions to be asked should be simple and clearly worded so that the respondent-voter can understand and answer it with ease. The questions on elections should be stimulating to elicit honest and correct responses. This reduces *measurement error,* but its complete avoidance is impossible. The voters interviewed during the sample survey should have similar personality traits as those who did not respond to the survey. This helps in avoiding *non-response error* (Rai, 2014).

The study of elections is perhaps more challenging in India than other democratic countries, as it involves understanding the interplay of overlapping social cleavages in one of the world's most demographically heterogeneous countries. The high political fluidity in a multiparty system and the complexities of a developing economy pose serious

difficulties in forecasting election outcomes. Moreover, contrary to what many believe, opinion poll based studies of elections are not just about picking likely winners and computing margins of victory/defeat, but also provide a nuanced understanding of the different factors which go into determining the election verdict (Rai, 2021). It provides quantitative evidence on why people voted the way they did, the changes and continuities from the past, and what the future might look like for its citizens (Kumar, Rai & Gupta, 2016). The FPTP voting system and multi-party electoral competitions makes it quite daunting for opinion polls to gather precise vote shares as compared with countries that witness bipolar election contests. In multipolar contests with three or more dominant political parties, a slight error in vote approximation can completely upset the applecart of seat predictions. Similarly, the parties that contest elections in political partnership or the formation of new alliances also pose a serious problem, as election surveys cannot capture the working of the alliance at grassroots and transfer of committed votes to each other. The uneven concentrations of votes for some parties in some regions and spatial pockets also make it difficult to obtain the right election forecast even if the vote share estimates of the main political dispensations are correct. The election opinion polls are quite limited in focus as they cannot measure the merger and split of political parties, political heavyweights changing political affiliations, factionalism in parties, influence of rebel candidates and the localised dynamics of electioneering.

The profiling of the Indian electorate reveals that it is highly heterogeneous. The multiple identities of voters on regional, caste community, linguistic and religious identity overlap and make it difficult to ascertain the patterns and continuity of their political affiliation. The Muslims in India are an apt illustration of heterogeneity marked by regional, linguistic, sectarian and spatial differentiations, reflected in their political choices and explaining the absence of enbloc vote for a particular political party, which debunks the vote bank theory of Indian electoral politics. Similarly, the voting behaviour of the electorate has been quite volatile like sand dunes, as they switched political allegiance between two elections on several occasions. The CSDS election studies data reveals that around one fourth of the voters finalize their voting choice after the election campaign is over (floating voters). The pre-election opinion poll forecasts generally tend to go wrong, as they cannot factor in the voting intention of floating voters (Rai, 2021). The intrusive surveillance of the electorate in India through personal visits by political party cadres and social media platforms in recent times has also created a 'Fear of Reprisal' electoral environment. Hence, voters with threat perception of fear desist in spelling out the correct voting preferences and play safe by naming the dominant party in their locality. There is a lurking fear that survey research on political opinions and attitudes can serve as an instrument, more effective and therefore more dangerous, of neo-colonial surveillance of global populations (Yadav, 2008).

The most critical functional component of election surveys is the selection of survey design and the sampling methodology as it not only determines the quality and accuracy of the survey but is also a precursor for foretelling the likely election outcomes. The samples drawn for CSDS polls are from the voter lists available with ECI and use multi stratified probability-sampling technique. The sample selection is generally accurate and yields a representative sample avoiding both the coverage and sampling error. On the other hand, media opinion polls rely on quota sampling for estimating vote share and election prediction. It involves a fixed number of respondents based on gender, education, caste communities and age differentials. This results in a skewed profile of voters with coverage and sampling errors in abundance, with incorrect vote shares. The polls suffer from urban sample bias due to high costs and logistical inconvenience in reaching far off villages and remote habitations. If a sample survey fails to gather the opinion of any important caste and community, the election predictions will be highly vulnerable to failure (Rai, 2021). The method of sample selection is crucial for election surveys and most Indian polls go wrong because their sampling methodology is poor, which makes the sample profile unrepresentative. Though a scientific and representative sample determines the accuracy of the survey, there is no guarantee that a forecast based on the survey will be right. A survey has its limitations, as it cannot capture the diverse and nuanced complexities and undercurrents of electoral behaviour and choices in India (Yadav, 2008).

The five basic procedures of opinion polling usually carried out in the ascending sequence include first, questions are written and organised into questionnaires; second, a sample selection to represent the population to be surveyed; third, designated respondents are interviewed; fourth, answers given are statistically analyzed; and, fifth, results are interpreted and conclusions reached (Young, 1990). The errors that creep in opinion polls mostly arise in the first two stages of framing the designing the interview schedule (questionnaire) and drawing a scientific sample from the universe of study. The fallacies that arise from question wording in opinion poll questionnaires include inappropriate and concealed use of persuasive definitions, broad definition to inflate statistical result, meaningless statistics, atypical example in place of a definition, question structure bias, dichotomous questions, and double negative in question

wording. The fallacies are especially deceptive in polls because of the misleading appearance of objectivity encouraged by the ways polls are typically presented to the consumers. The persuasive spin on the question is a concealment by the objective appearance of the announced poll result, especially when it is presented with a numerical calculation of the probability of error. These fallacies point to a deeper problem in evaluating bias in the questioning used in polls. The fallacy of question structure bias in polling is committed where the structure of the question introduces a bias into the poll that is deceptive, concealing a 'Yea-Say Effect'. This tactic is often employable in push polling in political polls, as the question in use is really an attempt to persuade or to influence voters, but on the surface, it appears as a routine parade for merely collecting information by taking a poll (Douglas, 2007).

The most crucial constituent for a perfect election survey is interview of sampled respondents in face-to-face situation by field investigation personnel trained in survey research. In the US and democratic countries in Europe, opinion polls rely on telephone and internet for gathering the opinion feedback of voters, but telecommunication network and internet connectivity in India is still not universal, hence interview in person is the only alternative left for conducting an election opinion poll. The election survey training of survey enumerators before the field investigation begins is imperative as it ensures standardisation of the survey and uniform data collection. The training workshop is a part of CSDS opinion polls and some other public institutions, but market research agencies have neither the financial resources nor the time for field training of investigators for every survey. The components of training include rapport building with sampled voters, standard method of asking questions/recording responses and strict adherence to fieldwork procedure and practices. The absence of rigorous training leads to inaccuracies in data collection that sometimes lead to the failure of surveys and any data analysis based on it becomes fallible and questionable (Rai, 2004). The market opinion polls need to address and overcome the structural and functional constraints and ascertain the right votes share estimates, but it depends upon the projection model to convert it into the correct number of seats that political parties are likely to win.

5 Statistical Pitfalls of Election Predictions

As noted, the forecasting of elections in a country like India is complicated and difficult due to a populace comprising of myriad caste community groupings combined with multiple political parties across the political spectrum. An election survey can estimate the vote shares correctly for the political parties, but predictions can still go wrong as due to intrinsic flaws in forecasting models or due to pollsters tweaking projections based on statistical wisdom or rebalancing by media to suit their political preferences. The prediction of election results is a relatively recent and increasingly popular part of political science research. Competitive elections are the hallmark of modern democracy and being able to foreshadow who wins them is a tantalising skill that has garnered significant scientific attention (Jackman, 2005). Election forecasting stands out from many other types of political science research in a number of ways. It is highly data-driven, focused on a very concrete and delimited task, and in most studies, the goal is not to explain election outcomes but to describe and predict them. In that sense, the question 'how' rather than the standard scientific question 'why' is in focus. The question 'how' is still highly relevant from a scientific perspective and for reasonable accuracy the need is to make the most out of the limited and flawed polling data, controlling seasonal fluctuations in public opinion, variability in measurements and bias associated with polling houses (Walther, 2015).

The parliamentary/state assembly seat projection models used by pollsters in India for forecasting elections is primarily based on a statistical method, the 'Probabilistic Count' that uses swing of votes between two elections. The socio-economic factors influence the voting patterns significantly, but it is reasonable to assume that the socio-economic profile of most of the constituencies does not change significantly from one election to the next. Therefore, while the differences in socio-economic profiles between two constituencies are a reflection in voting pattern in a given election, the change from one election to the next in a given constituency does not depend on them. The change in the percentage of votes for a political party in an Indian state from the previous election to the present is constant, and the change in the percentage of votes is the 'Swing' factor. The division of big states into geographic regions with the postulation that the swing in a seat is a convex combination of swing across the state and swing across the region (Karandikar, 2014). The model uses the votes share information for the previous election from ECI archives, gathers the vote estimates for the current election by a sample survey, and apply even swing of votes for all the political parties in

the fray across all the state assembly constituencies. It has been successful in making correct political predictions, but its assumption that a uniform swing of votes occurs in all assembly constituencies in an election is a major drawback, leading to failure on quite a few occasions. The uniform swing of votes seldom happens as only some constituencies may witness bigger shifts. The model also fails to take care of the uneven vote concentration in some regions and the marginal victories of political parties in a number of seats. The model is not very accurate if we look at historical data, but is a reasonably good approximation, to predict the seats for major political parties at national level elections (Karandikar, 2014).

The public interest is in the number of parliamentary seats leading political parties would get in national elections and not on the accuracy of vote shares, as it is the number of seats that determines government formation. A sample of 4,000 voters in 543 parliamentary constituencies can predict the seats accurately, but a sample size of over 21 lakhs would be impractical as it will entail a huge cost and require an army of trained and reliable field enumerators. Thus, predicting seats on a mathematical model of vote shares ascertained at state level from a cluster of 10-12 assembly constituencies increases the possibility of modelling error. The other limitation of a survey done well ahead of actual polling day is that though it measures the opinion of the whole population, what really counts is the group that actually goes out and votes. The CSDS election data reveals that the propensity to vote is much lower among the urban, upper middle class and upper class, college educated and high-income groups. The electorate is quite volatile and voting intentions undergo massive swings as voting day approaches in India. These two factors mean that the predictive power of any election opinion poll done weeks ahead of the poll is limited and fallible, as all it can measure is the mood of the nation at the time of the poll (Karandikar, 2014). Voters may change their minds between a poll and the Election Day, and this is the main reason why polls taken 6 months before an election have a much poorer predictive record than those taken close to election date (Northcott, 2015). The traditional polls are snapshots of public opinion at a certain point in time and do not provide predictions. The routine interpretation of polling results as election day forecasts can result in poor predictions particularly if the election is still far way, because public opinion can be difficult to measure and remains fragile over the course of an election campaign. (Campbell, 1996).

The voting intentions of a sample serve as a proxy for those of a population and the main reason for an unrepresentative sample is the sampling error, as small samples can lead to misleading flukes. A major issue for pollsters is to ensure that the samples are in appropriate balance with respect to various demographic variables, and if required use balancing procedures to put relevant weights. In addition to sampling errors and systematic bias, the phenomenon of herding can lead to forecasting error. Most polling agencies at the end of a campaign, it is widely suspected 'herd' and report headline figures closer to the industry mean, presumably to avoid the risk of standing out as having missed the final result by an unusually large margin. Some sensitivity to this turns out to be optimal for accurate election prediction (Northcott, 2015). The vote share estimates of an election poll and seat predictions can be fully correct, but as part of media manipulation different figures could be publicly released and the subsequent error be blamed on a faulty projection model. The main problems concern the unwarranted and misleading inferences drawn from polls by their readers and users, often an audience that may not be well aware of the limitations of statistical methodology. There are several statistical polls run by the media under the pressure of deadlines and to puff up a poll by published findings that may excite readers. There is no surety that opinions polls is fallacy-free and it is on critical thinking public to become aware of the biases and fallacies and to take a 'Buyer Beware' attitude. Social statistics are needed to conduct intelligent public deliberations and set social policies in a democracy, but activists, the media and private agencies can and often do use 'Mutant Statistics' as tactics to manipulate public opinion (Douglas, 2007).

In the absence of forecasting models of India polling firms in the public domain, it is quite difficult to assess the status of research and development in the field of accuracy and advancement. In contrast, the USA from the 1970s onwards witnessed an addition of a wide range of successful election forecasting techniques in the literature on electoral forecasting. The structural models were primarily applied in two-party and presidential democracies, but it runs into difficulty in more complex and multiparty democracies. In contract, the popular dynamic linear model (Jackman, 2005) is tried and tested and has shown that reasonable forecasts can be made despite the complexity of the party systems and the emergence of new and smaller parties. A novelty is set in motion, with the introduction of cyclical changes in party support in the model through a *seasonal component* before they are seen in the polls. The extension of this predictive component in the dynamic linear model helps in significantly lowering errors in early

forecasts and is thus something that could be useful in future applications of the model. Thus, elections forecast with reasonable accuracy is doable in multiparty systems (Walther, 2015). There has been much progress in the ability to forecast elections as the combination of polls yielded substantial improvements in accuracy compared to single polls. The researchers developed econometric models that can quite accurately predict election outcomes from structural information available months before the Election Day. The prediction markets reappeared as a powerful tool of electoral and political and forecasting (Graefe, 2014). The lack of transportability is really just the flip side of two facts: *first*, that no one has achieved satisfactory causal explanations, not even the poll aggregators and *second*, that predictive success requires case-specific knowledge rather than a search for generalizable causal mechanisms or theoretical underpinnings (Northcott, 2015). It is clear that improvements in the models of fundamentals is an unpromising route and might involve getting better polling data, analysing that data better, or understanding better how the implications of that data depend on local peculiarities (Rai, 2021).

6 Conclusions

To conclude, a stocktaking of opinion polling in the last forty years reveals that 75 per cent of the 833 (386 pre poll and 447 exit) election surveys correctly predicted the winning political party (ies) in India. The accuracy rates of exit polls (84 per cent) was 13 points higher than opinion polls (71 per cent) conducted during the elections. The success rates (aggregate of both exit and opinion polls) of polls differ quite significantly for the national and state elections. The correct prediction for Lok Sabha elections is 97 percent (2004 Lok Sabha polls was an outlier) while the success rate is 75 per cent for state Assembly polls. The strike rate of such polls may not match the global standards of the polling industry, but they are not as off the mark as public perception imagine, hence it is perilous to dismiss opinion polls (Roy & Sopariwala, 2019). The election forecast record of Indian polling firms may not match the world benchmark, but a post mortem of election polling reveals that precision in terms of vote share accuracy is at par with its US and UK contemporaries. The mathematical predictions models based on opinion poll vote share is fallible as well as fragile, but polling agencies in India guided by blue-sky thinking are trying their best to improve the craft of political forecasting and seat predictions.

A US study reveals that vote expectation surveys provides more accurate forecasts of election winners and vote shares than four established methods of studying elections: vote intention polls, prediction markets, quantitative models and expert judgment. The opinion poll based vote expectation survey is inexpensive and easy to conduct; results are easy to understand and provide accurate and stable forecasts and thus make it difficult to frame elections as horse races. The use of judgment of political insiders and experienced election observers to forecast elections had been in practice long before the emergence of scientific polling, and it is still invaluable. The common assumption is that political experts and media specialists have enormous experience in reading and interpreting polls, assessing their significance during campaigns and estimating the effects of recent or expected events on the aggregate vote. However, given their omnipresence, surprisingly little is known about the relative accuracy of experts' election forecasts (Graefe, 2014). The wide off the mark prediction of national elections 2019 by political scientists, public intellectuals and media experts in India due to their political bias or ivory tower approaches vindicates that opinion polls are the best and most reliable source for study and comprehension of Indian elections.

The utility of opinion polls extends beyond seat and vote share projections, more specifically, the production of public knowledge. The data from polls help in providing crucial social science insights and have great academic value. The social scientists have used survey research to answer many important questions about the polity and society. The time-series survey data in particular has been useful in studying long-term trends of Indian politics: political participation, ideological orientation of voters, trust in institutions, the efficacy of the vote, degree of belief in a democratic system and leadership choices, to list a few in the field of psephological advancement (Rai, 2021). The scientific models for forecasting are a common practice in pure sciences and social sciences like economics and sociology. Thus, election survey evidence can also be of use in preparation of similar projection models to understand political and social events like electoral competitions. The empirical models on studying human behaviour are more prone to error, but the intrinsic bias and trust deficit against election forecasting must be curbed, since elections remain the most opportune moment to study politics and people in India (Kumar, Rai & Gupta, 2016). The obsession

of media opinion polls in forecasting elections has shifted the focus from psephology to electoral prophecy and a few wrong seat predictions undermined its value, but it continues to provide the best telescopic view of electoral politics based on opinion and attitudes of common people. The ascertainment of subaltern opinion by election surveys not only broadened the contours of understanding electoral politics, but also provided an empirical alternative to elitist viewpoint of competitive Indian politics.

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