DETERMINANTS OF ELECTION OUTCOMES: AN ANALYSIS OF 2011 KERALA ASSEMBLY ELECTIONS

Dissertation Submitted to Jawaharlal Nehru University
in Partial Fulfilment of the Requirement
for the Award of the Degree of

MASTER OF PHILOSOPHY

KAVITA MEENA

CENTRE FOR THE STUDY OF REGIONAL DEVELOPMENT
SCHOOL OF SOCIAL SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI-110067
INDIA
2022

DEDICATED TO MY SOURCE OF INSPIRATION,

MY MOTHER ...

जवाहरलाल नेहरू विश्वविद्यालय
JAWAHARLAL NEHRU UNIVERSITY
Centre for the Study of Regional Development
School of Social Sciences
New Delhi-110067

Date: 27th June 2022

DECLARATION

I, **Kavita Meena**, hereby declare that the dissertation entitled **"DETERMINANTS OF ELECTION OUTCOMES: AN ANALYSIS OF 2011 KERALA ASSEMBLY ELECTION"** submitted by me for the award of the degree of **MASTER OF PHILOSOPHY** is my bonafide and that it has not been submitted so far in part or full, for any degree or diploma of this university or any other university.

Kavita Meena

(KAVITA MEENA)

CERTIFICATE

It is hereby recommend that the dissertation may be placed before the examiners for evaluation.

Prof. Amaresh Dubey

Supervisor

Centre for the Study of Reg Dev.
School of Social Sciences
Jawaharlal Nehru University
New Delhi-110067

Prof. Milap Punia

Chairperson

Chairperson
Centre for the Study of Reg Dev.
School of Social Sciences
Jawaharlal Nehru University
New Delhi-110067

Acknowledgments

It gives me immense pleasure to acknowledge the guidance and assistance of all those who have made it possible to complete this piece of work. At the outset, I would like to express my sincere thanks and profound sense of gratitude to my supervisor, **Prof. Amaresh Dubey,** Centre for the Study of Regional Development (CSRD), School of Social Sciences, Jawaharlal Nehru University, New Delhi, for his valuable guidance, constant encouragement, valuable suggestions at every stage during the preparation of my dissertation, and always inspired me to work hard for the successful completion of the work. It would not have been possible without his sincere efforts and immense patience to bear with all my shortcomings and enthusiastically correcting me whenever I went wrong.

I am greatly indebted to all the faculty members of CSRD, for their frequent words of encouragement. I also take an opportunity to express my thanks to staff members of Jawaharlal Nehru University for their help and co-operation.

My heartiest thanks to my friends Akhilesh, Chandan, Pallabi, Karan, Vaidyanathan, and papaiah for providing helping hands and support during the preparation of this thesis. I am also sincerely thankful to my friends Nikhil, Priyanka, Priyanka baa, and Jyoti for the moral support they had provided me during my hard times.

Last but not least, I would like to extend my sincere gratitude to my family, especially my mother (Mrs. Chhoti Devi), for always supporting me and inspiring me till today.

Date: 06.02.2022

Place: JNU, New Delhi **Kavita Meena**

List of Abbreviation

ADR	Association of Democratic Reforms
ADK	All India anna dravida munnetra kazhagam
AIADMK	All India anna dravida munnetra kazhagam
AKMDMP	All Kerala M.G.R. Dravida Munnetra Party
BJP	Bharatiya Janata Party
BLP	Bharratiya Labour party
BJS	Bhartiya jana sangh
C(S)	Congress (Secular)
CON	Indian National congress
CMPKSC	Communist Marxist party Kerala state committee
CPI(ML)(L)	Communist Party of India (Marxist-Leninist) (Liberation)
CP	Cochin Party
CPI	Communist Party of India
CPM	Communist Party of India (Marxist)
ECI	Election Commission of India
FBL	All India forward bloc
HC	High court
ILP	All India labour Party
IML	All India muslim league
INL	Indian national league
INC	Indian National congress
IND	Independent
INC(I)	Indian national congress(I)
INC(U)	Indian national congress(U)
ILP	All India labour party
ICS(SCS)	Indian congress (Socialist – Sarat Chandra sinha)
ISP	Indian socialist Party
INL	Indian national league
JD(U)	Janata Dal (United)
JD(S)	Janata Dal (Secular)
JP	Janata Party

JNP	Janta Party
JNP(S)	Janata Party (Secular)
JPSS	Janadhipathya samrakshana Samithi
KC(AMG)	Kerala Congress (Anti-merger group)
KEC(M)	Kerala Congress (M)
KC	Kerala Congress
KCS	Kerala Congress Secular
KEC	Kerala congress state committee
KEC(B)	Kerala congress (B)
KEC(J)	Kerala congress (Jacob)
KJ	Kerala janapaksham
LKD	Lok Dal
LJNSP	Lok Jan Shakti Party
MUL	Muslim league Kerala state committee
MLA	Memebers of legislative assembly
MP	Members of parliament
NCP	Nationalist congress party
NCO	Indian national congress (organization)
NDP	National democratic party
PIL	Public interest litigation
PDP	Peoples democratic party
PSP	Praja socialist party
RP act	Representation of peoples act
RSPK(B)	Revolutionary Socialist Party of Kerala (Bolshevik)
RSP	Revolustionary socialist party
SDPI	Social democratic party of India
SLAP	Social Action Party
SJD	Socialist janta (democratic)
SJP(R)	Samajwadi Janata Party (Rashtriya)
SOP	Samyukta socialist party/ socialist party
SSP	Samyukta socialist party
SUC	Socialist unity centre of India
SUCI	Socialist unity centre of India (communist)

SC	Supreme court
SHS	Shivsena
SWJP	Samajwadi Jan Parishad
UIPP	United India Peoples Party

Contents

Contents

List of Tables

Chapter 1

INTRODUCTION

1.1 Elections in India

India is the largest democracy globally, and elections in this democracy are the most significant electoral exercise in the world since its first Lok-sabha elections of 1951. The elections in India at both Lok-sabha (House of people in the Indian union) and state legislative assemblies (House of people in the state) take place every five years. Occasionally, elections are held in one constituency to fill the vacant seat; the vacancy can be caused due to the resignation or by the death of a candidate. Elections in India are conducted according to the provisions in part XV of the Indian constitution[1]. Articles 324 to 329 of the Indian constitution talks about elections in India[2].

India has a federal government system and has a government at three levels, first, at the central level, second, at the state level, and third, at the local level. At the Centre level, we vote for members of parliament (MPs) that consist of 545 members. Out of these 545 members, 543 members are elected directly, and the president selects the remaining two from the Anglo-Indian community. The elections at the central level are also known as the Lok-sabha elections. The legislative assembly elections take place at the state level, and we directly elect MLAs for each constituency. The uniqueness of elections in India is that the fixed number of seats are reserved for a discriminated stratum and socially backward people; scheduled tribes (STs) and scheduled castes (SCs). The number of seats is reserved based on the proportion of the population of these categories in each state. The schedule castes population is being discriminated against based on untouchability, and STs are socially backward communities and

[1] Part XV of Indian Constitution deals with elections, and establishes a commission for these matters.

[2] Article 324 of Indian constitution provides the power to ECI to supervises, controls, and direct the elections in India.

Article 325- No person to be ineligible for inclusion in, or to claim to be included in a special, electoral roll on grounds of religion, race, caste or sex.

Article 326- Elections to the house of the people and to the legislative assemblies of states to be on the basis of adult suffrage.

Article 327- Powers of parliament to make provisions with respect to elections to legislature.

Article 328- Powers of legislature of a state to make provision with respect to elections to such legislature.

Article 329- Bar to interference by courts in electoral matters.

live in isolated areas. Without reservation to these discriminated people, their representation was significantly less in Indian politics. (Duflo, 2004).

Similarly, at the local level, elections take place at the panchayat level in rural areas and municipal governments in urban areas. The town or village at the local level is divided into various wards (like constituencies at the center and state level), and one elected member represents each ward. Elections at the local level were not active in all the states till the 1980s because of political issues of each state government. In 1992, the 73rd and 74th constitutional amendments passed and constitutionally mandated the status of local bodies at both rural and urban levels. The reservation to SCs, STs, and women is also prescribed at the local level. (Kondo, 2007).

The 73rd constitutional amendment of 1992 provides that one third of all the seats are reserved for women at the local level. Two seats are also reserved for two disadvantaged minorities for the seats and Pradhan positions. (Duflo, 2004).

1.2 Importance of elections

Elections in India are not a new phenomenon; elections are held before India's independence also. But, the rights to vote were minimal and given to a few people only. After independence, elections in India are conducted by universal franchise/universal adult suffrage. Universal adult suffrage means every citizen of the country having age eighteen or above has the right to vote irrespective of their gender, caste, religion, race, or class. It is based on the principle of equality. The electoral process in India is successful because of its fairness, purity, and transparency. After independence, the elections in India were first held in 1951 (First Lok-sabha elections), and until now, 17 elections of Lok-sabha have been conducted. The last Lok-sabha elections were held in 2019; Mr. Narendra Modi became the country's prime minister for the second time.

In a democracy, the citizens elect their representative, and each representative elected by the electorate represents their respective constituencies. In elections, people choose a leader who will shape the government and make crucial decisions and laws (legislator). Through the election process, citizens vote for a candidate or party whose opinions and views match the voter's opinion and views and elect the leader of their choice. In a democracy, citizens can also change the leader if they are not satisfied with the ruling politician or ruling party's work, and in the next elections, they will not vote for the same candidate or party. In a democracy like India, if the citizen wants to be a leader or wants to introduce any new reform that is not a part

of any political party's manifesto, in such cases, the citizen can also contest the election independently and can also form a political party. Elections guarantee that one government is not elected permanently and becomes tyrannical (Chopra, 2017).

1.3 Background of the study

What are the various factors which determine the election outcomes? Media, think tanks, researchers, political analysts, and people have given multiple aspects as determinants of election outcomes such as caste, religion, class, good governance, alliance partner, corruption, anti-incumbency, the stability of the government, money power, muscle power, economic factors like inflation, economic growth, developmental policies, the overall performance of the economy, etc. But, sometimes, the election results are surprises with unexpected outcomes like the 1971s Bangladesh war, the assassination of former PM Indira Gandhi in 1984, and former PM Rajiv Gandhi's assassination in 1991, etc.[3](Duraisamy, 2014).

Caste politics in Indian elections plays an important role. Caste has deep roots in our society at every level. It is said that voters in India "vote their caste" rather than "cast their vote" (Verma, 2012). The political parties in India always keep in mind the caste factor while constructing the policies and election strategies. Even they give tickets to the candidate on a caste basis and demand votes on that basis. The election campaign slogans made on a caste basis like 'Jat ka vote jat ko,' jat votes vs. Brahmin votes, etc. Caste politics most influence states like Haryana, Andhra Pradesh, UP, and Bihar. By looking at various election outcomes, the leadership comes from Brahmins or Bishnois or Jats in Haryana, Reddys and kammas in Andhra Pradesh, Lingayat in Karnataka, Yadav's in Bihar, and Dalits, led by Mayawati in Uttar Pradesh.

The study by (Hazarika, 2015) explained that the voter's behavior gets influenced by factors like money, religion, caste, policy or ideology, language, political wave, community, the extent of franchise, the performance of the ruling political party, etc.

Money plays a vital role in determining voting behavior. As we know India is a poor county. A large number of families are still exiting below the poverty line. In such cases, the chances of winning the election of wealthy candidates are much higher.

The role of performance of the ruling political party is equally important. Every political party comes with a political manifesto when they contest. Voters also consider the parties' manifesto

[3] The former prime minister of India, Rajiv Gandhi was assassinatied on 21st may 1991, and before his assassination, Parliamentry elections were going on. The election for 211 Parliamentary constituencies out of total 534 were held before 21st November 1991, and remaining voting held in June 1991. Congress performed very poor in 211 constituencies and swept the polls in remaining constituencies.

When they vote. If the party wins and does not perform well according to their manifesto, there are fewer chances to win the next election.

Criminalization in Indian politics is increasing at an alarming rate. It means the criminal candidates are contesting and winning the elections at various levels. Many elected leaders in Indian politics face serious criminal charges like murder, attempt to murder, corruption, rape, etc. Many scholars say that criminalization in a democracy is worse than terrorism. As per ECI (Election commission of India) estimates, in the 1996 Lok-sabha elections, 1500 candidates had criminal cases, and 40 were elected. In the vidhan sabha, 700 sitting MLAs had criminal records out of 4072 sitting MLAs.

The association of democratic reports (ADR) shows that chances of winning the elections increase if the candidates face criminal cases. Data shows that Indian voters have no problem in electing criminal candidates as their leaders or as people's representatives. According to various ADR reports, 24 percent of candidates in the 2004 Lok-Sabha elections were pending criminal cases against them. It went up to 30 percent in the 2009 Lok-sabha elections, 34 percent in the 2014 Lok-sabha elections, and it further went up to 43 percent in the recent 2019 Lok-sabha elections[4]. Not only lok- Sabha candidates face criminal cases, but such candidates also contest in various state assembly elections.

Our government's first step to prevent the influx of criminals into the system is the representation of the people (ROP) act, 1951. ROP act deals with the qualifications and disqualifications of the members of Lok-Sabha (MPs), Rajya-Sabha (the legislature of the union), and state assemblies (MLA's). This act disallows the entry of candidates who have criminal cases in the elections, and thus, it decriminalizes politics. It also bans the convicted candidates in Indian politics. The time of disqualification of such criminal candidates is six years after the date of conviction; this time also depends upon the severity of the crime. Due to infirmities in the judicial system of India, the act was not that successful as we can see that the number of criminal politicians in the present time and the number is increasing day by day, and their proportion of winning is also growing.

Another step to prevent criminals in politics was the establishment of ADR. Association of democratic reforms (ADR) was established by some professors of the Indian Institute of management Ahmedabad (IIM-A) in 1999. They filed a PIL in 1999 to Delhi H.C. asking to disclose the candidate's educational, criminal, and financial background. Based on this PIL, the

[4] http://adrindia.org

Supreme Court gave a landmark judgment on May 2, 2002. The judgment made it compulsory that every candidate contesting in elections (Lok-sabha and Rajya sabha) will submit an affidavit to ECI. The affidavit will provide the details of contesting candidates in the polls (Lok-sabha, Vidhan-sabha) of their wealth status, education level, criminal cases, liabilities, borrowings from public institutions, and government dues. The court also ordered that the information (Affidavits) of contesting candidates will be publicly available so that voters can know about the candidates vying in their respective areas of constituencies before voting occurs. It is part of the voter's fundamental right. One of the purposes of this judgment was to motivate various political parties to nominate well-suited candidates only. But this judgment of SC shows that there is not much impact of this so far because the criminal candidates are still contesting and winning elections at various levels. During the 2004 parliamentarian elections, this information was collected first time from all contesting candidates from all states and union territories of the county (ADR website).

1.4 The motivation of the study

Most of the existing studies discuss the determinants of election outcomes and majorly focus on the factors like caste, class, voters' satisfaction with government, Incumbency status, etc. The detailed analysis of determinants such as candidate's characteristics, party's characteristics is lacking. So, our study focuses mainly on the determinants like candidates' characteristics, party characteristics, and incumbency status of the candidates as well as party. The candidates' characteristics include the candidates' age, gender, criminal cases against them, educational level, and wealth status. The party's characteristics include whether the candidate belongs to any of the major front/coalition.

In our study, we have analyzed the 2011 Kerala assembly elections. Elections in Kerala follow a unique pattern in India and 2011 legislative assembly elections were the closest elections in the history of the Kerala legislature. For the last three decades in the state, the main competition has been among two main fronts, i.e., the LDF and the UDF. In our view, the systematic analysis of the fourteen Kerala assembly elections is lacking. This study examines how the contesting candidate's characteristics, party's characteristics, and Incumbency at the candidate and party levels affect winning the polls.

1.5 Review of literature

Next, we review the existing studies related to our work. We have three different strands of literature. First, the previous studies which have also used the affidavit information of the

candidates to analyze the elections. Second is the criminalization in politics. Third, the incumbency advantage and disadvantages in developed and developing countries.

1.5.1 Studies using the affidavit information

The existing studies have used the candidates' affidavit information to analyze the elections. Some of the studies are closer to our work, and some are used for different objectives than ours. (Sastry, 2014; Dutta and Gupta, 2014; Tiwari and Golden, 2011; Jerome and Duraisamy, 2017; Paul and Vivekananda, 2004) are studies closer to our study which have used the candidate's affidavit information.

Other studies, whose objective is different from our objective, but they have used the candidate's affidavit information for their analysis are (Banerjee, 2010; Ferraz and Finan, 2008; Chang, Golden, and Hill, 2010; Bobonis and Fuertes, 2009; Borollo, 2009; Reinikka and Svenesson, 2005). These studies have analyzed the impact of the candidate's malpractice in public offices.

A study by (chemin, 2008) analyzes the effect of politicians who have self-reported criminal cases against them on poverty, illegal activity, and bribery cases. He found that criminal politicians reduce the behavior of bribe-taking by 34 percent but the poverty rates measured by the head-count ratio[1] increase by 22 percent. (Banerjee et al., 2011) have used affidavit information of 2004 candidates to see the criminality impact.

1.5.2 Criminalization of politics

The question comes to everyone's mind: after having the self-reported criminal charges against the candidates, why do political parties nominate such candidates? The situation suggests that there must be some electoral advantage associated with criminal candidates because parties nominate such candidates after having a great demand for election tickets. Existing studies also support this electoral advantage associated with such candidates having self-reported criminal charges.

Indian political parties have been using criminal candidates since the early days of the republic. According to ECI estimates, in the 1996 Lok-sabha elections, 1500 candidates had criminal cases against them, and 40 got elected. In-state legislative assemblies also, out of 4072 members, 700 candidates had criminal records[5].

[5] http://www.indiaelectionwatch.net

A study examines the voter's response towards the criminal candidates using the 2009 Lok-sabha elections. The study shows that voters do punish the candidates in elections who face criminal charges against them. Still, if other candidates have criminal charges in the same constituency, then the extent (magnitude) of punishment decreases. They also argued that the wealthy tainted candidates could overcome this electoral disadvantage in elections. Because wealth can increase the vote share in many ways, like increasing the election campaign expenditure, they also argued the parties nominate or give tickets to the candidates facing criminal charges because the criminal candidates are wealthier than the candidates with no criminal cases. So, they might be willing to contribute more from their wealth to the election expenditure and ask for less funding from the party. They also generate a positive externality to the other candidate of their party because they get more resources. (Gupta et al., 2014).

In Uttar Pradesh, Banerjee and Pandey (2009) have analyzed the elections and argued that parties give tickets to such candidates because voters may prefer the candidate who belongs to the same ethnic group

According to ADR report, in the recent October 2020 Bihar elections, out of 243 total winning candidates, 68% (142) have pending criminal cases against them, and 51% of total winning candidates have serious pending criminal charges.

An Avaaz survey conducted online shows that most Indians, i.e., almost 98%, do not want criminals in parliament and state assemblies. Nearly 96.6% of people think that candidates who have committed serious crimes such as murder, rape, electoral fraud, and other crimes against women should not be allowed to govern the country. 95.1% of the population think that it is a stigma on the democracy of the county that so many MP's and MLAs faces criminal charges, and 84.7% think that member of parliaments (MP's) should respect and adhere to the supreme court's judgment on the convicted politicians[6] (Business line, 2013).

A study has analyzed how money and crime play an essential role in elections using the data of 62,800 candidates who contested the national and various state assembly elections from 2004 to 2013 and found that money and crime play a crucial role in winning the elections at both levels in India. (Sastry, 2014).

[6] https://secure.avaaz.org
Avaaz is a U.S based NGO, that promotes global activism on issues such as corruption, poverty, human rights, animal rights etc.

Studies by (Jaffrelot 2002; Manon 2002) argued that India also had noted the reverse process in elections because many politicians when they joined politics, were not involved in any criminal activity, but after getting into power, they got engaged in such activities

The study analyzed the state legislative assembly elections held from 2003 to 2009 of 45,000 candidates using the affidavit information they filled. It argued that political parties nominate candidates having self-reported criminal charges against them because they are attracted to such candidates. They are attracted "because they have access to independent sources of wealth that allow them to function as self-financing candidates." He also concluded that money and muscle are linked to each other. (Vaishnav, 2011).

A study of the 14th and 15th Lok-sabha elections of 2004 and 2009 used the regression discontinuity approach to see the impact of criminal cases on the victory outcomes. It argued that the Indian political parties are more likely to select candidates who have self-reported criminal cases against themselves when the party faces more electoral competition and has more illiterate voters in that particular constituency. The parties choose such candidates because they use violent activities before the elections, intimidate the opposition party's voters, and depress voter turnout. (Aidt et al., 2011).

1.5.3 Literature on wealth

Cyndi Lauper, a political philosopher, said, "Money changes everything." This quote is valid in the case of Indian elections also. The various existing studies show that money power plays a vital role in winning the elections.

The analysis of Lok-sabha elections of 2009 showed a strong positive relationship between the wealth of the candidates and the chances of winning the elections. There are 343 contesting candidates whose wealth is more than 500 million rupees; out of 343, 112 won the polls. The chances of winning in the polls increase from 6 percent to 33 percent as the worth of assets increases from less than one million to more than 500 million rupees. P. Sainath, in an article (The Hindu), highlighted (15th Lok-sabha) that; first, if the candidate is worth rupees 50 million, then the candidate is 75 times more likely to win the polls in Lok-sabha than the candidate worth one million. Second, there are 23 cabinet ministers out of 64 whose personal wealth is more than 50 million. (Duraisamy and Jerome, 2014)

The wealth of the candidates is positively correlated with the probability of winning the elections. The data of candidates of the 2009 Lok-sabha elections show that wealthier candidates have higher chances of winning the elections. (Panagariya and Gupta, 2011)

compared probabilities of winning the elections of the lowest category of the wealth of candidates to that of the highest category and showed that the latter is 13 times more than the former[7].

1.5.4 Incumbency status

The study of incumbency advantage and disadvantage is relatively new in the context of India. A wide range of literature on electoral competition exists for developed countries (western democracies). The literature on the incumbency effects shows the divergent pattern for developed and developing countries. There is no specific pattern of the incumbency advantage and disadvantage in elections. Incumbency can be an asset, and it can be a liability, which also depends on many factors. The incumbency effect can be positive due to a variety of reasons. In democratic systems, incumbent parties and candidates have more money to spend on election campaigns, and as they have already name recognition among the people (Gupta, 2011). In most developed nations, the chances of winning the elections of incumbents are much higher than the non-incumbents, which happens mainly in the by-party system. However, the studies show that the incumbency factor might hurt the incumbent candidate and party in developing countries at the national and local levels (Klasnja, 2016; Linden, 2004; Klasnja and Titiunik, 2014; Eggers and Spirling, 2015, Uppal 2009; Ravishankar, 2009)or do not affect (De Magalhaes, 2015).

1.5.4.1 Incumbency status in Developed countries

The existing literature in developed nations shows higher chances of getting re-elected of the incumbent parties and incumbent candidates over non-incumbents in developed nations. Most of the studies of developed countries are in the context of the united states. These studies show an incumbency advantage to the incumbent over non-incumbents in congressional elections in the U.S. This incumbency advantage in the U.S. has increased after 1965(cover 1977; Parker 1980; Nelson 1979; Tufte 1973; Born 1979; Burnham 1975). The incumbent candidates are winning the elections, but their margin of victory in re-elections has also increased over time. The major studies in the U.S. have considered the congressional and state elections for their analysis. Gelman and King (1990) proved empirically and theoretically that the existing estimates of Incumbency are inconsistent and biased. He then provided the improved

[7] The study have categorized the wealth into five categories. The lowest category consists of the members whose wealth is between zeros to 50 lakhs rupees. The highest category includes the members whose wealth is above 50 million rupees.

estimation for incumbency advantage using the simple regression model. He showed that in the first half of the century, the positive incumbency advantage had been there since 1900.

The incumbency status of the candidate also affects the votes received by the candidates in elections. The study by (Erikson 1971) analyzed the northern representatives of U.S. elections using four-year intervals of 1952-1954 and 1958-1960. He has measured the effect of incumbency status on the vote share in congressional elections. He concluded that the incumbent candidates got an additional two percent of votes in the early 1950s and early 1960s congressional elections. Incumbency status has so many advantages associated. The Incumbent candidates can use the office to favor the public and provide additional financial support in the campaigns of the next elections. The people more recognize such candidates.

A study used the congressional elections data from 1960 - 1970 and has determined how the incumbent's interelection votes change with time. This study has considered 252 redistricting cases, and one of the findings was that between the period 1960 to 1962, the congressional vote share increased by 2.2 percent. The study concluded that out of 252 incumbent candidates, 158 candidates performed better than swing, and 94 did not perform better and fell behind during 1960-1970. (Cover, 1977).

The congressman incumbents received a more significant proportion of votes in the U.S. because they may have more resources to spend on a campaign and are more privileged than the challengers. (Mayhew, 1974).

"The incumbency advantage has diminished in conjunction with an increase in party loyalty, straight-ticket voting, and president-cantered electoral nationalization, products of the widening and increasingly coherent partisan divisions in the American electorate" (Jacobson, 2015).

The study by Lee (2001) used the house of representatives in U.S. elections from 1946-1998 by using the quasi-experimental approach to estimate the incumbency advantage in the electoral process. The study empirically founds that the probability of a candidate being reelected is higher for incumbent candidates.

The incumbency effect has been analyzed using revised district-level data from the Inter-University consortium of political and social research of the house of representatives in the U.S. of 45 states from 1968- 89. The study has used the quasi-experimental approach, regression discontinuity design (RDD). This approach is mainly adopted because it resolves the non-comparability of incumbents and challengers and compares the winners and losers'

candidates. The current method of estimating the incumbency effect compares the margin of victory of the candidates. According to the regression discontinuity design, the winners and losers in the elections are the bare winners and bare losers. (Uppal, 2010).

It has been concluded that there is an incumbency advantage in the lower chamber of legislative elections in the U.S, and incumbent candidates are 30% more likely to win on average. Also, they receive higher votes, around 5.3 percentage points, than the challenger.

A study by Breaux (1990) used the ICPSR-1989 (Inter-university Consortium for Political and social research) state legislative elections data for 19 states of 1968-86 to examine how Incumbency affects the district marginality. To check the impact of Incumbency, he studied the magnitude of the sophomore surge and retirement slump. He found that over 20 years and more, the state legislators (incumbents) are winning the re-elections by the more significant vote margins.

Other factors like expenditure on the election campaign, media attention, etc., also affect the incumbency status. The study by (Prior, 2006)has examined the role of television on election outcomes. He found that the rise of television has contributed positively towards the incumbent candidates (i.e., incumbency advantage) during the 1960s in the U.S elections. He has proposed two hypotheses in his study. First, the less educated voter increases his political information mainly via television. There is more coverage of incumbent candidates on tv than the challenger who is not an incumbent candidate. Second, there is an incumbency advantage because of various subsidized production facilities available. The aggregate analysis mainly shows that if there is a direct relationship between the number of television stations available in the district and the vote margins of incumbents.

The study by (Ansolabehere et al., 2001) examined how the incumbency advantage has grown and its sourcing at executive and legislative elections from 1942 to 2000. They have adopted such a statistical model by comparing the incumbency advantages of both executive and legislative. Most of the studies have adopted OLS regression, slump, surge, etc., to see the incumbency effect. Still, they have the methodological advantage because they have examined each state's election in each year over time. This study has tested mainly three ideas. First, executives have fewer incumbency advantages than legislators. Second, the incumbency advantage increases if there is a party decline in the system, and third, if the quality of the challenger declines, it drives up the incumbency advantage. They found limited support for these arguments, which support incumbency advantage. Empirical evidence shows the

incumbency advantage has increased from 2 percent in the 1940s to 8 percent in the 1990s in all statewide offices.

A study Analyzed the incumbency advantage size using the district-level electoral data of 24 states, lower house elections in the U.S. from 1968 to 1986. The data used in this study is from the Consortium for political and social research (ICPSR) of state legislative elections of almost 123,000 records. The methodology for estimating the incumbency advantage size is not conventional, such as retirement slump and sophomore surge. It has used the regression-based measures because the statistical properties of this method are superior to other traditional measures mentioned above. Another study by (Gelman and King) has also proved that the conventional methods of estimating the incumbency advantage are biased. The study's main findings are the following: first, the incumbency advantage has almost doubled over the estimated period. Few states have not seen any incumbency advantage, but most states have gone through the incumbency advantage. Second, we can also notice the incumbency advantage in statistical terms by the growth in the legislative operating budget. (Cox et al., 1993).

The study by Cox and Katz (1996) used the two-equation model. It analyzed the U.S. house elections using the data from 1948 to 1990 to see how the increase in quality effect increases the incumbency advantage. They concluded that due to the rise in the quality effect (low-quality challenger), the incumbency advantage increased after the 1980s.

There are so many studies that have examined the nature of incumbency advantage. The study by Campbell (1983) used the CPS national election data from 1978 and 1980 to see how voters' perception changes when the candidate becomes incumbent from the challenger in the last election. The study surveyed 2,304 voters of the 1978 election and 1,614 from the 1980 elections. The survey was conducted in the 108 congressional districts. They argued that the incumbents are being rewarded because of the following reasons. First, they are more familiar to the voters than non-incumbents. The candidates in the 1978 elections as the challenger were less known to the public. But in the 1980's re-elections, were more familiar to the public and had an incumbency advantage. Second, voters also consider the candidates' experience and ability when they vote, and incumbents have that advantage associated.

The incumbency advantage increased sharply during the 1960s in U.S. house elections, but it has also fallen over the past various polls. Explanations have been given for this phenomenon. Most of the studies support that the increase in the constituency services leads to greater

electoral advantage o the incumbent candidate. Still, some empirical studies show that the constituency services decrease the inherent advantage. There has been an incumbency advantage rise due to both direct and indirect effects on the votes. The immediate effects are more resources available to them like individual staff etc., which can be used in election procedure. The use of constituency service and the indirect effects are media exposure of the incumbent, and the voters cannot identify the potential of the challenger as he had never been into power (Gary and Katz, 1996). the constituency service plays a vital role in winning the re-elections for incumbents. (Cain et al., 1987).

1.5.4.1.1 Incumbency status in Canadian elections

The studies show that the incumbency status affects the election outcomes, and there is an incumbency advantage in the U.S. elections. The debate in the U.S. revolves around how much the magnitude of Incumbency has increased or decreased. The studies show that the incumbency status also affects the votes received by the incumbent party and incumbent candidates. Krashinsky and Milne (1983) analyzed the impact of incumbency status on the percentage of votes received by the political party in provincial elections of Ontario. The study uses 1971, 1977, and 1981 provincial elections published by the chief electoral officer of Ontario and applied two techniques, ordinary least square and generalized least square. They argued that the Incumbency plays a significant role in the ridings in provincial elections of Ontario and concluded that the incumbent adds at least five percentage points to votes cast in the riding when going for re-election.

Another study by Krashinsky and Milne (1985) used the data of 10 elections at the federal level (liberal and conservative parties) held between 1926 to 1980 and estimated the impact of Incumbency at votes received by parties and also compares the results of the federal level elections with the provincial elections. The study used a random coefficient model to measure the impact of Incumbency in federal elections. The study found that the Incumbency had impacted federal politics. It was about four percentage points for the new democrats, liberals, and conservatives, a little more for social credit.

The impact of Incumbency is more in provincial elections in Ontario than in federal elections. This is because the politics of Ontario is much more stable than the politics at the federal level in Canada.

The extension of the studies done by Krashinsky and Milne on Incumbency in federal elections in Canada and Ontario provincial elections in 1984 and 1985 is done in 1986. They tested the

same hypothesis of earlier studies to check the incumbency effect in voters' preferences. They found that the incumbency effect has not reduced at all.

A study has estimated the impact of incumbency effect on vote share and the probability of winning the elections in Canada using the Canadian parliamentary elections data before and after the 1950s. The study has used RDD to measure the incumbency advantage and argued that the incumbency advantage is more in post-1950 than in prior 1950s in Canada. Their study's main findings were that incumbents have 9.4 to 11.2 percent more chances of winning or having a high probability of winning the elections over non-incumbents in Canadian parliamentary elections. (Kendall and Rekkas, 2015)

1.5.4.1.2 Incumbency status in German elections

There is an incumbency advantage in almost all the elections in developed nations. Hainmuller and Kern (2005) have estimated the incumbency effect for post world war two elections using the RDD approach. He shows that there is a positive effect of Incumbency on the probability of winning the vote share received in Germany

A study analyzed mayoral elections of state Bavaria to estimate the party incumbency advantage in Germany. This study uses the data of 25000 mayoral elections held between 1945 to 2010 and applied regression discontinuity design. The study considered the close mayoral elections for the analysis. The study's main findings are that there is a 38-40 percentage points advantage associated with the incumbent party when they go for re-elections in the Bavaria state of Germany. The fascinating highlights of subgroup analysis are a higher incumbency advantage for full-time mayors than others. Also, the incumbency effect increases with the size of municipalities. (Freier, 2011)

1.5.4.2 Incumbency status in Developing countries

There is extensive literature on incumbency status in American elections and developed democracies. Most of the literature proves an incumbency advantage in developed countries. However, the literature in developing countries shows that the Incumbency might hurt when they go for re-elections, or there will be no effect[8]. The chances of getting re-elected of the incumbent candidates and parties are lower in developing countries like Brazil, India, and some parts of Europe, i.e., central and Eastern Europe, than in developed nations.

[8] Incumbency might hurt in reelections- Klasnja and titiunik, 2014 ; Ravishankar, 2009 ; Eggers and spirling, 2015 ; Uppal, 2009 ; Linden, 2004, Molina ,2001
No effect of incumbency – De Magalhaes.

In Brazil, the first serious effort was made by Titiunik (2009) to understand the impact of Incumbency in the mayor elections of Brazil. She used the data of the 2000 and 2004 municipal mayor elections and used the RDD approach to see the impact of Incumbency on the probability of winning the polls and voting share. This study has considered the only Incumbency at the party level but not for candidates. They considered the three biggest political parties for the analysis; PMDB (Partido do Movimento Democratico Brasileiro), PFL (Partido da Frente), and PSDB (Partido da Social Democracia Brasileira) and finds that there incumbency disadvantage[9]. In the 2004 elections, there was a negative effect on Incumbency on both probabilities of winning the polls and vote share. These results of Titiunik are supported by Miguel and Zahidi (2004) in Ghana's national parliamentary elections. He also used the RDD approach and found that there is a negative effect of Incumbency. Still, he finds an insignificant impact of Incumbency on both probabilities of winning and vote share.

Another study by Brambor and Cenevia (2011) examined the incumbency advantage for the Brazilian municipal elections of 2000 to 2008. This study uses the Difference-in-Difference method to check the incumbency advantage. They find that the magnitude of Incumbency in municipal elections has decreased in this period over time.

(Klašnja, 2015) Studies the Brazilian mayoral elections and gave a new explanation for the incumbency disadvantage in the polls. He used the regression discontinuity design to check the incumbency disadvantage in Romania empirically. He mainly tested the two predictions in this study. First, there is more incumbency disadvantage as there is less opportunity cost of corruption and the deterioration in the candidate pool. Secondly, there will be more incumbency disadvantages when the incumbent's corruption gain increases

After testing these two predictions, the findings of the study were consistent with these predictions. The study concluded that there is incumbency disadvantage, and corruption plays an important role. There is more incumbency disadvantage; when the opportunity cost of corruption declines, the candidate pool's deterioration and corruption increase over time spent in the office.

1.5.4.3 Incumbency status in India

The study of incumbency advantage and disadvantage is relatively new in the context of India. The wide range of literature in the context of electoral competition developed in western democracies. The literature on the incumbency effects shows the divergent pattern for the

[9] The incumbent parties and candidates are losing elections when they go for reelections.

developed and developing countries. The Incumbency can be an asset, and it can be a liability which also depends on many factors. The incumbency effect can be positive due to a variety of reasons. In democratic systems, incumbent parties and candidates have more resources to spend on election campaigns, and as they have already name recognition among the people. In most developed nations, the chances of winning the elections of incumbents are much higher than the non-incumbents, which happens mainly in a by-party system.

The first systematic study is given by (Linden, 2004). He studied the impact of Incumbency on the probability of winning in re-election and used the RDD method. He finds that before 1991 in Indian parliamentary elections, the incumbent had an incumbency advantage of almost 6 to 11 percent over non-incumbents. But the relationship got reversed in India after 1991, with incumbents having a disadvantage over non-incumbents. He estimated that after 1991, the incumbents are fourteen percent less likely to win elections than non-incumbents. He also assumed that both incumbents and non-incumbents are similar in all respect. He compared the probability of winning the candidates who had barely lost and barely won the elections in India. The findings by Linden (2004) in his study match with the arguments given by (Bhagwati and panagariya, 2004) in their article, who commented that the anti-incumbency factor has dominated Indian elections since 1991. Following studies has also shown that in India, after 1991 the anti-incumbency is prevailing (Vaishnav 2010, Linden 2004, Boorah 2006, Uppal 2011, Duraisamy et al. 2014)

A study have analyzed the performance of one of the biggest Indian political parties, i.e., the Indian national congress (INC) and its marginal constituencies and its status as an incumbent and non-incumbent, the data of Lok-sabha general elections between the period 1962-1999. The study has considered 11 parliamentary elections (Lok- Sabha elections) of 16 major Indian states, including Delhi. He has also analyzed the Indian national congress (INC) performance as incumbent and non-incumbent in marginal constituencies.[10]

According to this study, anti-Incumbency can be of the following types in India. first, the vote in favor of the opposition party at the center level is named 'national government incumbency.' Second, vote against the ruling party in the state at constituency level called state government incumbency. The third is a vote against the current ruling party (center and state level), known

[10] Vani kant borooah has defined marginal constituencies as the winning margin which exceeds 10 percent of the total valid votes.

as the party incumbency. Finally, the vote against the candidate in the next election is candidate incumbency.

This study mainly considers the party incumbency, which is the vote against the incumbent party. Since 1996, the anti-incumbency factor has been working against INC. In the 1998 elections, INC lost nearly 50% of the constituencies, and further in 1999, INC lost around 67% of the constituencies. (Borooah, 2006)

The quantitative study by (Karnik et al., 2019) analyzed ten parliamentary elections using constituency level data from 1980-2014. They focused on party incumbency and not on candidate-level Incumbency. They defined party incumbency as the particular political party that won the elections in previous elections in that specific constituency. They find a weak incumbency advantage in elections before 1998 and a substantial incumbency disadvantage after that. They also checked the incumbency dis (advantage) Hindi and non-Hindi speaking states, south and non-south and costal and non-coastal area-wise, concluding that there is some incumbency advantage in the non-Hindi speaking south and coastal states. At the same time, there is a strong incumbency disadvantage in Hindi speaking, non-south, and non-coastal areas. Some studies have used the stale legislative elections and have seen the incumbency dis advantage.

State legislative assembly election's study by (Uppal, 2008) examined the incumbency effects using the data of India's stale legislative elections from 1975-2003 for all the states and have not considered the state Jammu and Kashmir. He examined the incumbency effect on the candidate's electoral outcomes in the next elections. This study has used a vast dataset covering 24,592 elections and more than 2 lakh candidates' data to check the incumbency effect on the subsequent election outcomes. He has used the methodology "regression discontinuity approach," which is valid for closely fought elections. He finds an incumbency disadvantage in Indian state legislative elections in this time-specific period of twenty-seven years. The main results of the study are that before 1991, the incumbency disadvantage was 15percentage points, which has increased further to 22 percentage points after 1991, and the vote share was 2.2 percentage points lower when compared the bare winner and bare loser candidates and which has increased to 2.8 percentage points after 1991. His findings also confirmed Linden's (2004) study, stating that India's incumbency disadvantage has increased after 1991.

Uppal has also done a comparative state analysis across Indian states. He finds that the incumbency disadvantage is at the candidate level mainly due to state governments' inability

to provide essential public goods, like health facilities, lower employment, lower growth in terms of per capita income, and other government indices. The study by (Powell et al., 1999) also states that the voters have started considering the distribution of public goods by the government.

A study by Ravishankar(2009) analysed the anti-incumbency factor for Indian elections by using the data from 1977 to 2005 for national and state assembly elections in India using the probit model. They showed that the incumbent candidates who belong to the national ruling party have more chances of losing the polls than winning when they come for re-elections at both the center and state levels. Their results show that the incumbents from the national ruling party have 9% fewer chances of winning the elections than the incumbents from the other opposition parties. It shows that incumbents from state ruling parties have 14.5% fewer chances of winning the elections than the incumbents from other state opposition parties.

It showed a direct cost associated with the ruling parties at national and state-level India elections. He has also measured the "Honeymoon period," which suggests the benefits that the state party candidates derive from the party affiliation in national elections.

Another study of Indian elections by Lee(2001) has tested a hypothesis on the Indian national legislature that there is a negative incumbency effect on Indian election outcomes in the future using the data of each election between 1977 to 2014. The incumbents and non-incumbents might differ and might be similar in the candidates' observed and unobserved characteristics. The study has used the regression discontinuity design to deal with this problem, which compares the closely fought elections (barely won and barely lost). He concluded that there are weak or negative incumbency effects in Indian politics, and all incumbent candidates are not hurt by holding office.

Most studies have estimated Incumbency at the party level, but not at the candidate level, while Aditi(2016) has estimated Incumbency at both candidate and party levels. She has used the Lok-sabha elections data from 1977 to 2014 and applied RDD. The analysis shows an incumbency disadvantage at both levels (candidates and party), but it is more at the candidate level than the party. The study argues the votes are more aligned with the ideologies of political parties than the candidates because there is more disadvantage associated with the incumbent candidate than the incumbent party in re-elections and vote share.

A quantitative study by Gupta and Panagariya (2011) analyzed the 2009 Lok- Sabha elections using the data set of all candidates (winners and losers). The data set includes the candidate's

characteristics, party affiliation, and incumbency status. The candidate's characteristics include their wealth status, education level, criminal cases, and gender. The party affiliation tells us that the candidates belong to the main party, and the incumbency status shows whether the candidates are incumbent or not. They considered the incumbent party the main current ruling party in power in the last two to three years. Additionally, they have also checked how economic performance at the state level affected the election outcomes in 2004.

The study results show that the incumbency status helped win the fourteen Lok-sabha elections in India. The incumbent candidates had higher chances of winning the elections if that particular state had exhibited higher economic growth. If there is slower economic growth in any state, the incumbents get punished for the lower growth. They have also concluded that the wealthier and more educated candidates are more likely to win the elections.

Duraisamy and Jerome (2017) also studied the 2009 Lok-sabha elections to see the election outcomes of criminal, wealthier, educated, and incumbents by using 8070 total candidates who contested in the fourteenth Lok-sabha elections from the 543 constituencies. They have also compared the various characteristics of the contestants and winners and found their relationship with election outcomes. They have categorized the education level and found higher chances of winning the elections if members are highly educated. If the candidate is a graduate and above, the vote share received by the candidates also improved. The Incumbency, criminal cases, and wealth status effects are interconnected. If there are severe criminal cases against the candidate, there are fewer chances of winning the elections than those facing no criminal cases. Such candidates who are facing serious criminal charges also receive a lower vote share. Wealthy candidates have more chances of winning than the less wealthy. Finally, incumbency status shows an incumbency advantage, and incumbents also receive a larger vote share than non-incumbents.

1.6 Research questions

1) How do candidates characteristics (Pending criminal cases, Age, Gender, wealth status, and education) affect the election outcomes and vote share in Kerala?
2) How do party-specific characteristics (candidates from the major coalition, independent candidates) affect election outcomes and vote share in Kerala?
3) How does the Incumbency status of the candidates and party affect the election outcomes and vote share in Kerala?

1.7 Objectives of the study

1) To examine the determinants of election outcomes of the 2011 Kerala assembly elections.
2) To examine the determinants of the vote share of the 2011 Kerala assembly elections.

1.8 Structure of the dissertation

Chapter 1 presents the introduction to the topic and its related concerns, followed by a concise review of the literature and aims of the study and research questions.

Chapter 2 provides the details of data sources and their shortcomings. It also discusses the detailed methodologies used in the study for the analysis.

Chapter 3 of the dissertation provides the factual study of the Kerala assembly election and the emergence of the coalition in the state.

Chapter 4 is a quantitative study based on secondary data analyzing the various determinants of election outcomes and vote share of the 2011 Kerala assembly elections candidates.

Chapter 5 is the final chapter that presents the study's summary and conclusion. It also offers policy implications.

Chapter 2

DATA AND METHODOLOGY

2.1 Introduction

This chapter aims to give a detailed description of the data sources and methodology used to analyze the determinants of election outcomes in the 2011 Kerala assembly.

The study has used the data from election commission of India (ECI) website and from the website of myneta.info. We have used the logistic model and multiple regression model as our methodology.

2.2 Data source

The data used in the dissertation is compiled from the websites and publications of the election commission of India (ECI) and the association of democratic reforms (ADR). The constituency-wise data of candidates' names, age, gender, category, valid votes polled (General and postal), total votes polled of the candidates of 2011 and 2006 Kerala assembly elections are taken from the official website of the election commission of India[11].

The data of candidates' education level, their criminal cases, details of their wealth (and liabilities) are collected from the website http://myneta.info[12] maintained by an association of democratic reforms (ADR).

2.2.1 Election Commission of India

The election commission of India (ECI) provides detailed statistical reports of every Lok Sabha, Rajya Sabha, and state assembly election. The election commission of India is an autonomous constitutional body established on January 25, 1950 (71 years ago), which is also celebrated as National voters' day. The main task assigned to ECI was the superintendence, direction, and control of all elections at the national and state level. It administers the electoral process in India at both state and national levels and the offices of vice president and president. It was given the responsibility of prepare the electoral roll and revise it regularly (Katju, 2006). The E.C. "directly derives its authority from the constitution of India" and it has "considerable autonomy of actions" (Singh, 2004).

[11] Official website of ECI is https:/ https://eci.gov.in

[12] Myneta.info is an open data depository platform run by association of democratic reforms (ADR).

2.2.2 Association of Democratic reforms

The ADR is a non-governmental organization that mainly works for political and electoral reforms. The main focus of the ADR is to bring accountability and transparency to the election process and reducing money and muscle power in Indian elections. It is the single data source that compiles all the details of the characteristics of all the candidates in one place. It was established by some professors of the Indian Institute of Management Ahmedabad (IIM-A) in 1999. They filled public interest litigation (PIL) in the Delhi high court, asking to disclose the candidate's financial, educational, and criminal background of the contesting candidates in the elections. In 2002, the Supreme Court gave a landmark judgment and made it compulsory for all the contesting candidates to file an affidavit with ECI before the polls. The affidavit contains the details of the candidate's criminal background, educational level, and personal wealth.

The first time, an election watch was conducted for Gujarat assembly elections in 2002 by ADR, whereby the information of the candidate's background was provided publically. It helped electorates to make an informed decisions during elections. The ADR in collaboration with NEW[13] , conducts election watches for all parliamentary and state elections.

The 2011 Kerala assembly elections covered a total of 140 electoral constituencies. Out of 140 constituencies, 14 are reserved for SCs, two are reserved for STs, and 124 are general. 971 candidates contested, out of which 888 were male, and 83 were female. The average number of contestants per constituency was 7, the minimum number of contestants in a constituency was four, and the maximum number of contestants was 13.

[13] National election watch (NEW) is a nationwide campaign comprising of more than 1200 NGOs and other citizen led organization working together on electoral reforms, improving democracy and governance in India.

Table 2.1 Summary of Variables

Variable	Source	Description
Election Outcome	Election commission of India	Dummy variable takes value one if the candidate wins the election, otherwise zero
Age	Election commission of India	In years We have divided the age into five categories
Gender	Election commission of India	Dummy variable takes the value one if female, otherwise zero
Education Level	Association of democratic reforms	We have categorized the education level of candidates into five categories.
Criminal cases	Association of democratic reforms	Number of criminal cases against candidates Categorized into five parts
Wealth	Association of democratic reforms	In crores Divided the wealth of candidates into five categories
Party incumbency	Various sources on the web	Dummy variable takes value one if the party is incumbent, otherwise zero.
Candidate Incumbency	Various sources on the web	Dummy variable would take value one if the candidate is incumbent, otherwise zero

2.3 Shortcomings of Data

There are a few shortcomings in the data reported by the election commission of India. First, sometimes the spellings of the name of contesting candidates are not reported correctly by the ECI. Given the huge data size, the wrong spellings of the candidate's name make it very difficult to track the candidates over time. Second, sometimes the candidate writes his last name first and the first name last while filing the nomination. Third, candidates have written their middle name in one election and omitted in another. Similar shortcomings of the data are also reported by other studies (linden, 2004; Lee, 2016; Uppal, 2009)

For example, the candidate's name is reported as "A.R KRISHNAMURTHY" in one election, and in the subsequent election, the name is reported as "KRISHNA MURTHY MS." The other case is “RATHOD ANIL (BHAIYAA) RAMKISAN” and “ANILBHAIYA RAMKISAN RATHOD”.

This shortcoming of the data made it very difficult for us to track the record of the candidates over time, and hence it was difficult for us to check the incumbency status of the candidates. To overcome this problem, first, we dropped the candidates whose vote share in the constituency was less than one. In Indian elections, the cost to enter into elections is very low, and hence a large number of candidates file the nomination. Such candidates are "non-serious" and receives a very less number of votes (Uppal, 2009). Second, we manually checked the remaining candidate's names and corrected the misreported names of the candidates.

In the 2011 Kerala assembly elections, 931 candidates have contested the polls. Out of which 70 were female, and 861 were male. The total candidates elected were 140, 7 female and 133 male. Many candidates in Indian elections are "non-serious" and get few votes. Such candidates file their nominations because of low entry costs, and they act as spoilers. Such candidates themselves cannot get tickets from the party and spoil the chances of other candidates who contested from the main party. We analyzed the candidates whose vote share was more than one percent, so, after dropping such candidates, we left with 525 candidates for our analysis.

2.4 Methodology

The analysis of the study uses descriptive analysis and is supplemented by quantitative tools. The study uses logistic regression to estimate the determinants of election outcomes. The election outcome is a binary variable[14], i.e., either winning or losing the elections. The study of vote share is estimated by using the multiple regression model.

Our study uses two techniques for the analysis.

1) Ordinary least square
2) Logit model

2.4.1 Multiple Linear Regression Analysis

In terms of statistical modeling, the most common form of analysis is termed as linear regression, which involves establishing the relationship between dependent and independent variables by estimating a unique line based on the true data available. For example, the OLS procedure minimizes the sum of squared differences between this unique line and the real data. Regression analysis often finds itself in two applications, namely for forecasting the trend of the data in content and inferring a causal relationship between the explanatory and dependent variables.

Mathematical regression modeling only establishes a relationship between dependent and independent variables. Still, the researcher should be aware of the real-world context of the relation to have a causal interpretation of the same.

Tracing the history of linear regression leads us to use the least-squares method by Legendre and Gauss in 1805 and 1809, respectively, to carry out some astronomical observations. Later in 1821, Gauss published a theory on the ordinary least squares, including a version of the commonly known "Gauss Markov Theorem." The early complexity of the regression analysis can be explained through the fact that till 1970, it sometimes took almost 24 hours for researchers to obtain the results for one regression model. In recent times, regression models have been actively researched in search of robustness and efficiency or in some special cases where the predictor or the predicted variables are sometimes curves instead of actual data values.

[14] Binary variables are variables which takes only two values. In our study either win or lose the elections.

Multiple Linear regression attempts to model the relationship between two or more explanatory variables and the dependent variable through fitting a line to the observed data of the variables, where every value of each independent variable is associated with the response variable.

Mathematically, a model for multiple linear regression with n observations can be represented as;

$$y_i = \beta_0 + \beta_{1x_{i1}} + \beta_{2x_{i2}} + \ldots \beta_{px_{ip}} + \varepsilon_i \text{ for } i = 1,2, \ldots n.$$

The method of estimation most commonly used in multiple linear regression analysis is the OLS method, where we minimize the sum of squares of vertical distance of every data point to the fitted linear equation to estimate the value of the response variable. While minimizing these sum of squares, we obtain the residuals between the observed and the fitted values of the dependent variable, with the sum of residuals equal zero.

The interpretation of coefficients obtained from a multiple linear regression model is not very complex. The coefficient value explains how many units the dependent variable would increase or decrease when the independent variable changes by one unit (depending on the sign of the coefficient), keeping other independent variables constant. The interpretation will slightly be different if there is any pre-attempted transformation of the response or the predictor variables.

2.4.2 Assumptions of Linear Regression

In order to validate and interpret the causal relationship obtained through a regression model, the statisticians rely on the following assumptions of the method of estimation used in the model:

- A linear relationship is assumed to be exhibited between the exogenous and endogenous variables in the regression model. This assumption is commonly known as the *linearity assumption.*
- The *endogeneity assumption* assumes that there is no covariance between the error term and the explanatory variables.
- The *homoscedasticity assumption* means that the error terms obtained from the regression model are normally distributed with zero mean and constant variance.
- The *autocorrelation assumption* ensures that there is no covariance between any two residual terms.
- The last assumption is that there is no multicollinearity between any of the two explanatory variables included in the model.

2.4.3 Problems in Linear Regression

1. ***Multicollinearity:*** Multicollinearity occurs when the independent variables in the model are correlated which violates one of the above-stated assumptions of the method of estimation and causes problems in the interpretation of the results. Since the main purpose of regression study is to check the impact of the variation in dependent variable via a change in any independent variable, *keeping all the other independent variables constant.* Now in the presence of multicollinearity, the changes in an independent variable are associated with the change in other predictor variables as well, hence making it harder to assess the impact of each predictor on the response variable.

   There are mainly two types of multicollinearity:

   - *Structural multicollinearity:* This type of multicollinearity occurs when transforming any model term and results in correlation. (E.g. if you use any square term for the independent variable x, both x and x^2 will tend to be auto-correlated)
   - *Data multicollinearity:* Rather than being created in the model itself through any transformation, this type of multicollinearity is present in the actual data itself being included and tested in the model.

The presence of multicollinearity causes two major types of problems:

First, the coefficients obtained from the model become quite sensitive to minor changes in the independent variables of the model. Second, it also leads to the reduced efficiency of the estimators, thus impacting negatively on the statistical power of the model. Since multicollinearity affects the efficiency of those estimators whose independent variables are correlated, we can have a regression model with severe multicollinearity with other regression coefficients unaffected and fairly efficient.

2. Autocorrelation: When the successive error terms from the model are correlated, even though with the constant variance, such a problem is termed as autocorrelation. In the case of datasets that have a sequence over time, commonly known as time-series data, the error terms are serially correlated. Although, autocorrelation is also exhibited in the cross-sectional data. Some of the possible sources of autocorrelation include the carryover effect, deletion of important independent variables, and an incorrect specification of the linear relationship

between dependent and independent variables when in fact there could be some non-linear form.

Named after James Durbin and Geoffrey Watson, the Durbin Watson statistic is used to test the presence of serial autocorrelation in the residual terms of a regression model. Mathematically, the statistic is represented as given below, where T is the number of observations and e_t refers to the disturbance terms from the analysis:

$$d = \frac{\sum_{t=2}^{T}(e_t - e_{t\ 1})^2}{\sum_{t=1}^{T} e_t^2},$$

The D.W. statistic always has a value between 0 and 4. A value between 0 and 2 means positive autocorrelation and between 2 and 4 indicates negative autocorrelation. The exact value of 2 indicates there is no autocorrelation exhibited in the residual terms of the model.

3. Heteroscedasticity: For regression analysis, the term heteroscedasticity is used in the context of residual terms resulting from the regression model. As one of the assumptions of OLS states that the error terms are normally distributed with constant variance, this issue violates that assumption as the variance of residual terms does not stay constant. The best way to identify heteroscedasticity is to examine the residual plots which tend to be cone-shaped under varying variance of the disturbance terms

Researchers have categorized heteroscedasticity into two basic categories:

- *Pure Heteroscedasticity:* If in the case of proper specification of the model as per the data available, the error terms seem to have a variable deviation then the issue termed as pure heteroscedasticity.
- *impure Heteroscedasticity:* In the case of an incorrect model specification (e.g. an important explanatory variable being omitted from the study), the effect would be absorbed by the residual in the study, hence disturbing the constant variance of the error terms. This is termed as impure heteroscedasticity.

Heteroscedasticity often occurs in datasets that generally have a large range between the maximum and minimum values of the observed metrics.

In order to test heteroscedasticity in a linear regression model, the Breusch Pagan test can be used which is a chi-square test to check any sort of dependency of the variance of the error term on the independent variables included in the model.

The major impacts of heteroscedasticity are listed as follows:

- Even though the OLS estimates from a multiple linear regression study may remain unbiased and consistent, they are no longer efficient and hence any prediction or forecast based on the study remains inefficient as well.
- Because of the inconsistencies in the variance-covariance matrix of the estimated model coefficients, various tests of hypothesis such as t-test or F-test are no longer valid.

In order to remove heteroscedasticity from the model, a commonly used approach is called *Weighted Regression* wherein an appropriate weight is assigned to each data point, based on the variance of its fitted value (small weights given to observation with high variances to minimize that and vice versa) so that heteroscedasticity can be replaced by homoscedasticity.

2.5 Logistic Regression

Having been theoretically invented in the 19th century by a French mathematician Verhulst for the application in biological sciences, the Logistic function has found its application in quantifying diverse real-world social science questions that the researchers have found themselves surrounded with. It is a special type of exponential function that can not only be used in efficiently modeling the exponential growth of an appropriate indicator but also takes into account certain anti-growth factors which prevent the case of unlimited growth, hence resulting in an S-shaped curve for the function (Cramer, 2003).

2.5.1 Basic model

The outcome variable, y takes two values 0 and 1

y=1, with probability P_i

y=0, with probability 1-P_i

Where y is a binary dependent variable which is a function of P_i. The model estimates the probability (y=1), which is a function of the independent variables.

The mathematical expression for the Logistic function is as follows:

$$P_i = \frac{1}{1+e^{-(\beta_1+\beta_2 X_i)}}$$

We can write above equation in the simplified form;

$$P_i = \frac{1}{1+e^{-Z_i}} = \frac{e^z}{1+e^z}$$

Where $Z_i=\beta_1 + \beta_2 X_i$.

The above equation shows the cumulative logistic distribution function. In the above equation the Z_i ranges from (-∞, +∞), probability P_i ranges from (0, 1) and P_i is not linearly related with X_i.

Logistic regression analysis is one of the linear models that finds its usage in predicting categorical dependent variables from the multiple independent variables. There can be two types of categorical variables:

First, the *Dichotomous categorical variable:* The dependent variable can only take two values to fall under this head. For example- The election outcome, either candidate wins the election or loses it.

Second, *Polychotomous categorical variable:* The predicted variables that can take up more than two categories are termed polychotomous categorical variables.

Logistic and Probit Regression analysis are the two most extensively used statistical methods in the case of a dichotomous dependent variable; the difference lies in the shape of the regression curve and the transformation method of the dependent variable between the two.

2.5.2 Purpose of the Logistic regression

To estimate the determinants of election outcomes (Candidates characteristics, party's characteristics, and incumbency status).

2.5.3 Assumptions in Logistic Regression Analysis:

Even though, as stated earlier, the Logit models do not follow all the assumptions as per the Ordinary Least Squares method, the following are the assumptions to carry out this statistical technique:

- In the original units of both the predicted and the predictor variables, an S-shaped relationship is present between the two. The relation will be linear when taking the transformed logit values of the dependent variable.
- There is no autocorrelation between the error terms, which is ensured by the data collection technique that uses random samples in most cases.
- There is also no correlation between the independent variable and the error term.

2.5.4 Advantages of Logistic regression

Apart from taking care of the non-linear effects of relationship, the logit regression models have the following advantages over other prominent statistical technique:

- It is one of the most robust statistical methods where the predictor variables are not needed to be normally distributed.
- It is an efficient technique when the independent variables to be used in the model are linearly separable.
- The interaction effects between two or more independent variables on the dependent variable can also be explicitly tested in the model.
- There is no requirement for independent variables to be unbounded or be an interval.
- The interpretation of logit model coefficients to odd ratios using antilog finds its advantage in explaining our model results to non-statisticians.
- During recent times, logistic regression analysis has emerged to be one of the simplest and most efficient machine learning algorithms.
- Logit models are also quite less prone to model overfitting, except in the case of high-dimensional datasets.

2.5.5 Limitations of the logistic regression

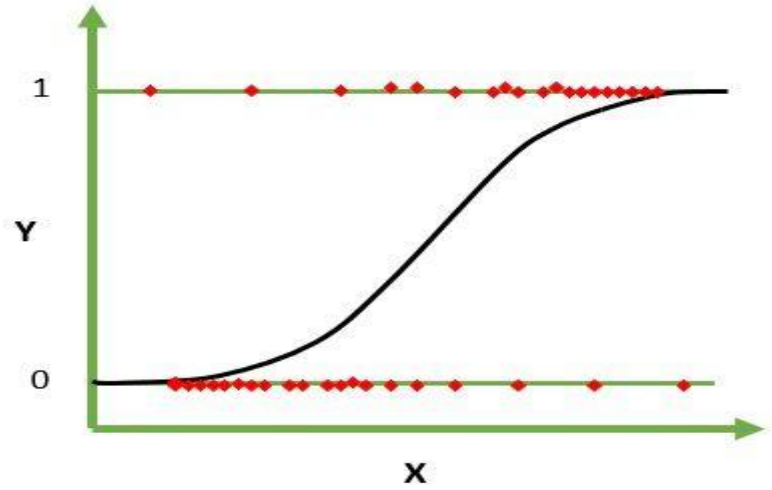
- The principle of Maximum Likelihood Estimation employed in the analysis requires a sample of sufficiently large size. This should be made sure by the users before using this method to avoid inaccurate results.
- In assuming the logistic functional form of the dependent variable, we also assume a certain monotonic treatment for dichotomous dependent variables.
- Since the outcome of this particular analysis is also discrete, the researchers must ensure the proper selection of independent variables before proceeding with the study.
- This analysis is also vulnerable to overfitting in the case of high-dimensional datasets and is only reliably efficient when the proper presentation of the data is achieved and available.

How Logistic Regression attains a non-linear form: One other major difference between the OLS regression and binary logistic regression approach is that the latter can also estimate the probability of a specific event within the feasible range of (0, 1). It uses the logistic curve to

visualize the relationship between the dependent and independent variables. It approaches 0 when the value of independent variable decreases and approaches 1 when the predictor variables' value increases, without actually touching 0 and 1 respectively, giving the curve a non-linear form.

To prevent the predicted probabilities from crossing the feasible range of (0,1) to be able to report a metric from these probabilities as a dependent variable that can take both positive and negative values, we calculate the logit value which is logarithmic of the odds of a specified event. The odds can nominally be explained as the ratio of probabilities of two potential outcomes of an event.

The logistics curve:



As explained earlier, since the logistic curve attains a non-linear form, the ordinary least squares method cannot be used for the regression analysis. Instead, the principle of *Maximum Likelihood Estimation* is used in the technique that measures the goodness of fit of the model through a likelihood value. This nonlinear structure of the curve also makes way for an explanation of the model coefficients that are not exactly straightforward because the probability for the binary dependent variable would not increase linearly with the increment in the values of the independent variables. As explained earlier, to obtain a metric that could take both positive and negative values, we convert the probabilities to logit values; the original coefficients from the model only depict the change in logit values with the variation in predictor variables, although we can correctly infer the sign of relationship through them. By taking an antilog of the original coefficient, the resulting value depicts the change in the odds ratio for the probabilities of the binary dependent variable, thus making the interpretation slightly easier for statisticians. As a thumb rule, the antilog values of the coefficient greater than 1 depict a

positive relationship, and less than 1 show a negative relation with the binary dependent variable.

How is Logistic regression different from multiple regression: - Though both of these statistical techniques originate from the same fundamental thought, the differences between these two can be listed as follows:

- Since the error term of the dichotomous dependent variable follows a binomial distribution instead of the normal distribution in multiple regression analysis, it violates one of the primary assumptions of the OLS method.
- There are higher chances of having heteroscedasticity in these models since the variable of the discrete dependent variables does not tend to be constant.
- The conversation of unstandardized regression coefficients to the standardized ones using the standard deviation of the independent and dependent variable, which is possible in the multiple linear regression analysis, is not feasible in this methodology as it is not easily possible to calculate the standard deviation/variance of the logit model.

Chapter 3

ELECTIONS IN KERALA- A FACTUAL STUDY

3.1 Introduction

The existing state of Kerala was formed on 1st Nov 1956 by the passage of the state Reorganizing act on the basis of language. It resulted from the merger of the princely states of Cochin -Travancore and the Kasaragod district of the former princely state of Mysore, and the Malabar district of Madras province. As a result of the state reorganization act, several other states were also formed, including Andhra Pradesh, Rajasthan, Bombay, and Punjab (Nair, 1994).

Kerala is one of the smallest states in India and is situated between the western ghats to the east and the Arabian sea to the west. It touches the border of the state Karnataka on the north and north east side, and on the east and south side touches the border of Tamil Nadu. It has a total geographical area of 38,855 square kilometers, which is 1.3% of the total of India's land. The state has a total coastline of almost 580 kilometers. (Chakrabarty and Tamang, 2006).

The state of Kerala has the highest literacy rate (91 percent) among Indian states (NSO survey). It has the highest scores in terms of social indicators and also has one of the best health profiles. The state also has one of the highest per-capita incomes. It is one of the most religiously diverse among other Indian states (Nayar, 1966). It is one of the most densely populated states of India. As of 1st Mar 2011, the total population of Kerala is 3,33,87,677. The population comprises 54.73% Hindus, 18.38% are Christians, 26.56% are Muslims, and 0.33% belong to other religions (Census, 2011). Malayalam is the official language of Kerala. In search of employment, the state's population is highly geographically mobile. A large number of Ezhavas and Muslims of the state have taken skilled and semi-skilled jobs in gulf countries. Crops like rice, coffee, tea, coconut, rubber, and spices like pepper, cloves, and cardamom are produced in the state. Fishing is one of the major industry in the state.

3.2 Elections in Kerala

In 1935, there was a formation of legislative assembly by the maharaja of Cochin. In 1937, the new constitution came into force, and the "Nation Building Departments' were assigned to elected ministers of the legislative assembly. In Travancore, there was a legislative assembly at the same time named 'Moolam Sabha.' Before the 1948 election, the role of elected members was advisory. The main power was vested in dewans appointed by Maharajas of the princely states. In 1948, the election based on adult franchises was held in both the states separately.

There was the formation of the first popular ministry in Travancore by the congress party in 1948, under the leadership of Mr. pattam Pillai. After the fractions within the congress party, the ministry resigned, and in October 1948, new leader T.K Narayana Pillai was asked to form the new ministry. In 1949, the Travancore and Cochin merged, and the government of Congress continued under different leadership. The strength of the political parties at that time was as follows: congress-44 seats, communists and allies- 32 seats, socialists- 12 seats, independents were 11, and 9 seats belonged to other parties.

After 1952's general elections, Congress has successfully formed the government, but it fell in September 1953 due to a vote of the no-confidence motion. After the government fell, the state came under the president's rule until 1954. In the February 1954 elections, no single party obtained the majority. The PSP party formed the minority government under Mr. Pattam Pillai. This PSP government also fell in March 1956 due to a vote of no-confidence, and the state again came under the president's rule for the second time. (Sarkar, 1960)

In 1956, the state reorganization act came into effect, and the Indian states were reorganized on a linguistic basis. The state of Kerala was formed after the merger of the princely states of Cochin -Travancore and the Kasaragod district of the former princely state of Mysore and Malabar district of Madras province. The number of seats in the legislature increased to 125.

3.2.1 Travancore-Cochin Legislative Assembly Elections, 1952

Elections in Travancore-Cochin legislative assembly were held in March 1952. In this legislative assembly election, many parties and many independent candidates were contested. The major parties which contested were the congress, RSP, TTNC (Tamil Nadu congress). The total number of constituencies in the Travancore-Cochin legislative assembly was 97; 86 were single-member, and 11 were two-membered constituencies. The total number of contestants was 441, and the number of seats was 108 seats in 97 constituencies. In 1952, there were only four districts Trivandrum, Trichur, Kottayam, and Quilon. The total number of votes polled was 3398193 in the 1952 legislative assembly elections. Congress contested for 104 seats and won 44 seats, RSP contested for 11 and won 6, socialists contested for 70 and won 11, TTNC contested for 14, and won 11and others contested for 242 seats and won 39. The highest electoral participation was 92.6% in the Bharanikavu constituency (one of the highest records). (ECI statistical report, 1952).

Mr. Anaparambil joseph john from the congress party became the chief minister for two years and four days, but the government fell in September 1952 due to a vote of no confidence. After

the government's fall, the state came under the president's rule until the next elections were held in 1954. (Rajgopalan, 1960).

Table 3.1 Performance of political parties in the 1952 Travancore-cochin legislative assembly election

Party	Seats contested	Seats won	Vote in seats contested (%)
INC	105	44	35.44
SP	70	11	14.28
TTNC	15	8	5.92
CP	12	1	1.75
RSP	11	6	3.48
KSP	10	1	2.18
IND	199	37	33.89
Grand total	422	108	

Source: Statistical report on 1952 legislative assembly of Kerala.

3.2.2 Travancore-Cochin Legislative Assembly Elections, 1954

Elections were held on 15th Feb 1954, after the new drafting of legislative constituencies. The number of constituencies increased to 106 in 1954 from 97 in 1952. Out of 106 constituencies, 11 were two membered, and 95 were single-member. Out of 106 constituencies, one single membered and one two-membered constituency were reserved for SC. In the 1954 elections, the total number of contestants was very low, 265 for 117 seats (On average, 2.2 candidates per seat, compared to 4 in the 1952 elections). The number of electorates increased by almost two lakhs compared to the 1952 elections (total electors were 4424244 in 1954), and the polling percentage was 74.07%. (ECI statistical report, 1954).

The parties contesting and independent candidates were also small in number. The main contesting parties were Congress (INC), the united front of leftists (UFL), and the Travancore Tamil Nadu Congress (TTNC). The communist party contested for the first time in its name in the 1954 elections. The seats won by the parties are the following; INC- 45, RSP- 9, socialists- 9, TTNC- 12, PSP- 19, communists- 23, and Independents -9. Congress supported PSP and formed the government. Shri Pattam thanu Pillai became the chief minister with a four-member cabinet. The ministry headed by Pillai fell after 11 months, followed by the congress ministry.

The newly formed congress ministry also fell after 13 months of its formation. After the fall of the congress ministry, the president's rule was implemented in the state (Rajgopalan, 1960).

Table 3.2 Performance of political parties in the 1954 legislative assembly election

Party	Seats contested	Seats won	Vote in seats contested (%)
National Parties			
BJS	1	0	1.82
CPI	36	23	41.79
INC	115	45	45.90
PSP	38	19	41.33
State parties			
RSP	12	9	42.70
TTNC	16	12	50.04
IND	47	9	25.04
Grand total	265	117	

Source: Statistical report on 1954 legislative assembly of Kerala

3.2.3 Reorganization of states

In the 1950s, there was a huge demand, especially by Telugu-speaking people, for the reorganization of states on a language basis. Potti sreeramulu had an infinite fast for this demand, and he died after 56 days of the fast. The death of Mr. Potti sreeramulu resulted in violence in the county, and the state reorganization commission was constituted. Andhra Pradesh was the first state created based on language in 1953. On the basis of the state reorganization commission total of 16 states and six union territories were created (Arora, 1956).

The present state of Kerala was formed by merging the four princely states, Travancore and cochin, Kasargod district, Malabar district, and the state of Mysore. After the state's formation, there was a further revision of the distribution of assembly constituencies, and as a result, the number of constituencies increased to 126.

3.2.4 Legislative Assembly Elections in Kerala, 1957

The first assembly elections in Kerala were held in 1957 after the 1957 general elections, and CPI (Communist Party of India) won the polls with 60 seats out of total contested seats 100.

The total number of constituencies was 114; out of them 12 were two membered constituencies or 24 seats, 11 were reserved for scheduled caste and one reserved schedule tribe. Fourteen independent candidates won the elections out of 126 seats. These independent candidates supported the CPI party and later joined the communist legislature party. The communists won the 46 single membered constituency seats and 14 seats of double membered constituency. In April 1957, Namboodiripad became the first chief minister of the state and the first non-congress CM in India. It was the first time in India where communists formed a democratically elected government (Rajagopalan, 1960; Chakrabarty and Tamang, 2006).

The voter turnout was around 65%. Out of 389 members contested in elections, nine contestant were women, and six of them won the elections. Total number of electors in this assembly elections were 7514626, and out of them 5837577 voted (ECI).

This communist democratically formed government did not last long because Congress-led opposition launched an agitation named liberation struggle. After that, the president of India proclaimed under article 356 of the constitution in July 1959 and implemented president rule for the first time.

Table 3.3 Performance of political parties in the 1957 election

Party	Seats contested	Seats won	Vote in setas contested (%)
National parties			
CPI	100	60	40.57
INC	124	43	38.10
PSP	62	9	17.48
State parties			
RSP	28	0	11.12
IND	75	14	22.81
Grand total	389	126	

Source: Statistical report on, 1957 legislative assembly of Kerala.

3.2.5 Legislative Assembly Elections in Kerala, 1960

After the president's rule, fresh elections were held on 1st Feb, 1960, and it was single-day polling. The Muslim League, Congress, and Praja socialist party (PSP) formed a pre-poll alliance to win the elections and counter CPI. The formed alliance fielded 125 seats and also

supported independent candidates, and they won 94 seats. At the same time, the communist party of India contested 108 seats and supported 12 independent candidates, and the CPI won only 29 seats. Finally, the pre-poll alliance won the polls in this assembly election, and Mr. Pattom Pillai became CM (Nair, 1994).

The number of constituencies remained 114, 12 two-membered ,and one reserved for SC. The number of electors were 8040998 ,and the polling percentage were 85.72%. In this election, 13 total women contested ,and 7 were winners. Pattom A. Thanu Pillai became the chief minister of state. He resigned as CM on 22nd februry 1962 ,and R. sankar from INC became the next chief minister for one year 360 days (ECI). No confidence motion was passed in assembly in 1964 ,and R. sankar had to resign. The president implemented the presidents rule in state of Kerala.

Table 3.4 Performance of political parties in 1960's elections

Party	Seats contested	Seats won	Vote in seats contested (%)
National parties			
BJS	3	0	3.28
CPI	108	29	43.79
INC	80	63	45.37
PSP	33	20	38.41
State parties			
ML	12	11	47.79
IND	76	3	13.96
Grand total	312	126	

Source: Statistical report on, 1960 legislative assembly of Kerala.

3.2.6 Legislative Assembly Elections in Kerala, 1965

The third election in Kerala was held in March 1965. The two-member constituency (Abolition) Act, 1961 given up the concept of two-member and single-member constituencies (Rao, 1961). After this act, there was a new demolition of constituencies, and the total number of constituencies increased to 133, including 11 reserved for SCs, and two for STs. The total contestants were 558, and total number of electors were 8557716. Polling percentage were 75.12%. Three women won the election, out of 10 contested.

The alliance of three parties, Congress, PSP, and MUL, ended, and Congress alone contested all the seats without any ally. Also, there was a split of the communist party of India into two parts, i.e., CPI and CPI (M). In these elections, no single party could form the government. CPI(M) was the single party that managed to win 40 seats, while the INC won 36 seats, Kerala congress 23 seats, and the remaining seats were won were by other regional parties and independent candidates. After the poll results, no single party could form the government, and once again, there was an imposition of presidents rule in the state for the fourth time.

Table 3.5 Performance of political parties in 1965 elections

Party	Seats contested	Seats won	Vote in seats contested (%)
National parties			
CON	133	36	33.55
CPI	79	3	13.87
CPI(M)	73	40	36.17
State parties			
KC	54	23	30.78
ML	16	6	31.88
SSP	29	13	38.00
IND	174	12	18.79
Grand total	558	133	

Source: Statistical report on, 1965 legislative assembly of Kerala

3.2.7 Legislative Assembly Elections in Kerala, 1967

With the 1967 Indian general elections, Kerala also went for the fourth assembly elections in February 1967. The number of constituencies remained 133, consisting 11 reserved for SCs, and 2 reserved for STs. There were total 423 number of contestants, out of them seven were women. Out of 133 seats, only one seat won by female and rest were won by males. The total number of electors were 8613658, out of them 4254257 were men and 4359401 were women. Polling percentage were 75.67% in the 1967 elections (ECI).

This time there were new alliances that had taken place in Kerala politics (Nair, 1994). There was the formation of an alliance named the Left united Front, while the Congress fought alone. This left-front alliance consisted of seven political parties: CPI, CPI (M), RSP, KSP, KTP, SSP, and Muslim League. The main aim of the formed alliance (left front) was to defeat the

Congress, which fought alone. There was a massive victory of the left-front alliance, and Congress only won 9 seats.). Namboodiripad became the chief minister of Kerala for the second time. Due to internal dissension, the alliance hardly ruled for thirty months (Rajan, 2018; Hartmann, 1968).

Table 3.6 Performance of political parties in 1967 elections

Party	Seats contested	Seats won	Vote in seats contested (%)
National parties			
BJS	24	0	4.69
CPI	22	19	50.66
CPM	59	52	53.49
INC	133	9	35.43
PSP	7	0	3.95
SSP	21	19	53.53
SWA	6	0	4.51
State parties			
KEC	61	5	15.85
MUL	15	14	59.57
IND	75	15	18.39
Grand total	423	133	

Source: Statistical report on, 1967 legislative assembly of Kerala.

3.2.8 Legislative Assembly Elections in Kerala, 1970

The next election in the state of Kerala were held in September 1970 for 133 seats. The number of constituencies remained same 133 but the constituencies reserved for SC decreased to 10 from 11 in the last assembly election. There were no women contestants in this election, only 505 men contested (ECI).

The alliance went through a slight change and consisted of IMUL, CPI, INC RSP, and PSP, won the elections, and formed the government. Shri Achutha Menon became the CM for the second time in the state. This was the first time, Kerala assembly completed its full term. The assembly tenure, which was supposed to expire in October 1975, increased by 18 months due to a national emergency imposition in 1975.

Table 3.7 Performance of political parties in 1970's elections

Party	Seats contested	Seats won	Vote in seats contested (%)
National Parties			
BJS	8	0	9.20
CPI	29	16	41.90
CPM	73	29	43.35
IND	206	16	22.78
KEC	31	12	25.80
NCO	36	0	11.80
PSP	7	3	46.15
SOP	14	6	40.11
State parties			
SWA	1	0	16.24
DMK	1	0	3.72
INC	52	30	44.41
ISP	11	3	38.48
MUL	20	11	48.95
RSP	14	6	42.91
SUC	1	0	2.26
Registered (unrecognized parties)			
KSP	1	1	44.97
Grand total	505	133	

Source: Statistical report on, 1970 legislative assembly of Kerala.

3.2.9 Legislative Assembly Elections in Kerala, 1977

There was the delimitation of assembly constituencies in 1974; the number of constituencies in Kerala increased to 140 from 133. The number of votes also increased by almost one crore as compared to 1970. According to studies, the number of female voters increased more than that of male voters.

In March 1977, the Lok-sabha elections and Kerala assembly elections were held simultaneously. The two political fronts emerged in 1977, the ruling front and the opposition

front. The ruling front consisted of political parties such as INC, PSP, CPI, PSP, ML, KC, RSP, and National Democratic Party. The opposition front consisted of the CPI(M), ML(opposition), KC (Pillai Group), and BLD(Janata) (Rajan, 2018).

The ruling front won 111 seats out of 140, consisting of INC won 38 seats, CPI- 23 seats, CPM- 17 seats, KEC- 20 seats, and other minor parties and independent candidates won the remaining seats. The opposition front led by CPI(M) won only 29 seats: CPI(M) -17, BLD(Janata)- 6, ML(O)- 3, KC(Pillai Group)- 2, and independent- one(ECI report, 1977).

The INC-led ruling alliance won the elections, and Karunakaran became the chief minister for 32 days only. In April 1977, Karunakaran resigned as CM because of controversies that arose in the famous Rajan case[15]. After Karunakaran's resignation, A.K. Antony became the chief minister on 27th April, 1977. In the subsequent political development, Antony also resigned on 2nd Oct 1978 in the issue regarding the Chikkamagalore election. P.K. Vasudenan Nair became the next CM and leader of the legislative party. Vasudenan also quit as CM because of the conflict between RSP and CPI regarding the land reform (amendment) bill. C.H Mohammed became the next CM in October 1979, but he also continued for the short term and resigned on 1st Dec 1979. After so much political instability in the state, the assembly dissolved (Nair, 1994).

[15] Rajan case- Rajan was a final year engineering student Calicut, Kerala. He was taken into police custody from the college hostel. He was not heard of since. The matter went to assembly and government said that the boy was not taken into the custody by police. The issue became political and CM karunakaran resigned on 34th april, 1977.

Table 3.8 Performance of political parties in 1977's elections

Party	Seats contested	Seats won	Vote in seats contested (%)
National parties			
BLD	27	6	41.87
CPI	27	23	52.63
CPM	68	17	44.71
INC	54	38	51.48
State parties			
ADK	2	0	1.87
KCP	15	2	43.05
KEC	22	20	52.99
MLO	16	3	39.86
MUL	16	13	59.56
RSP	11	9	53.45
Registered (unrecognized) parties			
SUC	3	0	1.01
IND	308	9	14.83
Grand total	569	140	

Source: Statistical report on, 1977 legislative assembly of Kerala.

3.2.9.1 Elections and formation of significant alliances

In the 1980 elections, the Congress got split into two parties, the INC(U) and INC(I), and at the same time, the Kerala congress also got divided into two parties, KC(J) and KC(M). ML(O) also changed its party name to AIML during the same period. There were two major pre-poll alliances LDF and UDF; these are also the current two major alliances in the Kerala assembly elections since the 1980s.

Table 3.9 Coalition wise distribution of various political parties in 1980

Coalition	Parties	No. of seats won
Left Democratic front (LDF)	Indian National Congress ((INC)(U))	21
	Communist Party of India (CPI)	17
	Communist Party of India (M)	35
	Revolutionary Socialist Party (RSP)	6
	All India Muslim League (AIML)	5
	Kerala Congress (PG) (KCP)	1
	Kerala congress (M) (KCM)	8
United Democratic Front (UDF)	Indian National Congress(I) ((INC)(I))	17
	Kerala Congress (J) (KCJ)	6
	National Democratic Party (NDP)	3
	Indian Union Muslim League (IUML)	14
	Janata Party (JNP)	5
	Praja socialist party (PSP)	1
	Independent	1

Source: Election Commission of India's statistical report of 1980

Above table 3.9 shows the coalition wise distribution of various political parties in 1980. The coalition consists of United Democratic front (UDF) ,and Left Democratic front(LDF).

Table: 3.10 Election results, Coalition wise from 1982 to 2016

Election year	UDF	LDF	Others	Winner
1982	077	063	0	UDF(14)
1987	061	078	01	LDF(40)
1991	090	048	02	UDF(20)
1996	059	080	01	LDF(20)
2001	099	040	01	UDF(59)
2006	042	098	0	LDF(56)
2011	072	068	0	UDF(4)
2016	047	091	02	LDF(44)

Source: Election Commission of India

Table 3.10 shows that since 1980 assembly election, the two major fronts comes to power alternatively.

3.2.10 Legislative Assembly Elections in Kerala, 1980

The sixth Niyamsabha was held in January 1980. The total number of constituencies were 140 in the state, 13 comprised of SC, one for ST population. In this assembly elections, number of

electors were 13273837. The polling percentage were 72.23%, comprised of 73.22% men and 71.26% women. Total 13 women contested in the 1980s election, and 5 women came into power (ECI).

The CPI-led LDF won the polls with 93 seats, and the number of votes was 4,832,481; E.K Nayanar became the chief minister in March 1980. The UDF won 46 seats, and the total votes received by INC-led UDF was 4,426,669 (Nair, 1994).

In the 1980 elections, the LDF won by the thumping majority but lost their majority in assembly when Kerala Congress, Congress (A), and Janata withdrew their support in October 1982 and became the ally of the opposition alliance INC-led UDF. The Governor of Kerala then dissolved the assembly on the suggestion of CM and imposed the president rule in the state for the eighth time.

Table 3.11 Performance of political parties in 1980's elections

Party	Seats contested	Seats won	Vote in seats contested (%)
National parties			
CPI	22	17	51.28
CPM	50	35	52.44
INC(I)	53	17	44.11
INC(U)	31	21	51.14
JNP	29	5	38.25
JNP(S)	4	0	2.95
State parties			
ADK	1	0	0.33
IML	11	5	46.08
KCJ	17	6	39.72
KCP	2	1	62.04
KEC	17	8	44.62
MUL	21	14	50.05
RSP	8	6	51.76
Registered (unrecognized) parties			
ILP	1	0	0.33
SUC	6	0	0.89
IND	329	5	14.50
Grand total	602	140	

Source: Statistical report on, 1980 legislative assembly of Kerala.

3.2.11 Legislative Assembly Elections in Kerala, 1982

On 19th Mar, 1982, voters went to the polling booth to elect their leader, and K. Karunakaran became the CM of the state. According to ECI's statistical report of 1982, the number of voters also came down from 13,266,064 in the last election to 13,117,012. The number of contestants was 699, out of which 17 were women and 682 were men. Four out of 17 women and 136 out of 682 men won the elections. The INC-led UDF secured 77 seats, and CPI-led LDF secured 66 seats of 140 seats. It was the second assembly that completed its full term in 1987.

In October 1981, there was a slight change in political alliances. The KC (M), Janata (G), and Congress withdrew their support from the ruling coalition LDF and joined the opposition alliance UDF. After the political realignment, the UDF consisted of seven parties, INC(I), KC(M), KC(J), the IUML, the NDP, the Janata(G), and RSP(S). At the same time, the LDF included the CPI, Congress(S), the CPM, the AIML, the KC(S), and RSP. The INC-led UDF won elections with 77 seats, Congress(A)- 15, Congress(I)- 20 seats, KC(J)- 8, IUML-14, KC(M)-6, Janata(G)-4, NDP-4, and remaining seats by independents. On the other hand, LDF secured 63 seats, CPI(M)- 26, CPI-13, AIML-4, Congress(S)-7 Janata-4, KC(S)-1, RSP- 4, DSP-1, and CPI(M) supported independents- 3 (ECI report, 1982).

These elections have a different historical significance because the Electronic voting machine got introduced in the country for the first time. There was the usage of EVM machines in Ernakulam district in 50 booths, but it was challenged in the high court after the election's result, but later, the plea was dismissed.

The total number of national and regional parties has increased to 25, whereas in 1957, there were only five parties. Bhartiya Janata party for the first time contested for 68 seats in the state but failed to win even a single seat. The vote share of BJP was 2.75% (Nair, 1994).

Table 3.12 Performance of political parties in 1982's elections

Party	Seats contested	Seats won	Vote in seats contested (%)
National parties			
BJP	69	0	5.58
CPI	25	13	48.16
CPM	51	26	49.67
ICS	15	5	45.68
INC	36	20	47.17
JNP	13	4	43.94
State parties			
IML	12	4	40.86
KCJ	12	8	50.24
KEC	17	6	47.73
MUL	18	14	51.42
RSP	8	4	45.98
Registered (unrecognized) parties			
NDP	5	2	47.20
IND	418	34	27.66
Grand total	699	140	

Source: Statistical report on, 1982 legislative assembly of Kerala.

3.2.12 Legislative Assembly Elections in Kerala, 1987

The state went for the subsequent polling after completing the eighth assembly successfully on 23rd Mar, 1987. Again, LDF and UDF were the major pre-poll alliance. There was also an emergence of the Hindu front in 1984 and comprised RSS, Temple Protection Samithi, Ramdass mission, Vishwa Hindu Parishad, and Ayyapa Seva Sangham. Some small regional parties also contested and were not part of any of the fronts mentioned (Pillai, 1987; Pillai, 1989). The UDF consisted of KC(M), SRP(S), IUML, NDP(P), INC(I), and RSP(S), While LDF consisted of CPI, CPI(M), IC(S), RSP, Janata party, and Lok Dal. The IUML and AIML merged, and the Kerala congress also split into two parts but remained the ally of UDF.

The total number of seats was 140, including 13 reserved for SC and one constituency for ST. There were a total of 1254 contestants. Out of that, 1220 were men, and 34 were women. The number of female contestants increased from 15 in 1982 to 34 in 1987. The total turnout was around 80%, which is seven percent higher than the last assembly elections (ECI report, 1987).

There was the demise of two contesting independent candidates in the Vamanapuram and Kottayam constituencies before polling. The elections for 138 seats were held on 23rd Mar, 1987, and the polling for the remaining two constituencies was held on 2nd Jun, 1987. The results for 138 constituencies were announced on 24th Mar, 1987, and for two constituencies, it was announced on 3rd Jun, 1987. In these elections, the LDF alliance won 78 seats, and the UDF alliance won 61 seats. The LDF victory in these elections was a surprise for many. There were predictions that LDF would debacle (Isaac, 1991). It is said that this election has proved that a political party can form a government without being supported by caste and communal aspects (Rajan, 2018).

Table 3.13 Performance of political parties in 1987's elections

Party	**Seats contested**	**Seats won**	**Vote in seats contested (%)**
National parties			
BJP	116	0	6.68
CPI	25	16	46.02
CPM	70	38	45.31
ICS(SCS)	14	6	41.72
INC	76	33	44.81
JNP	12	7	44.66
LKD	2	1	42.66
State parties			
KEC	14	5	36.80
MUL	23	15	48.50
RSP	6	5	47.90
IND	896	14	17.14
Grand total	1254	140	

Source: Statistical report on, 1987 legislative assembly of Kerala.

3.2.13 Legislative Assembly Elections in Kerala, 1991

In June 1991, the Lok-sabha elections and Kerala assembly elections were held simultaneously. The ruling LDF government decided to go for fresh polls one year before its expiry term. Again, the primary fight was between the two major alliances, the LDF and the UDF. The different feature about this election is that the BJP contested in large seats but could not win a single seat but received 5.56 % of the total votes polled. The total number of contestants was 809, out of which 783 were male, and 26 were female. The ruling LDF lost the elections and secured only 48 seats, while the UDF won the polls and secured 89 seats. The LDF received 49.16% votes in the legislative election and 46.17% in the Lok Sabha election. (Balakrishna, 1994).

Table 3.14 Performance of political parties in 1991's elections

Party	Seats contested	Seats won	Vote in seats contested (%)
National parties			
BJP	137	0	4.87
CPI	24	12	47.86
CPM	64	28	46.75
ICS(SCS)	12	2	42.67
INC	91	55	47.86
JD	13	3	44.57
JP	23	0	0.62
LKD	4	0	0.36
State parties			
BSP	40	0	0.69
KCM	13	10	49.40
KEC	11	1	43.44
MUL	22	19	50.11
RSP	6	2	39.21
IND	333	4	7.20
Registered (unrecognized) parties	16	4	
Grand total	809	140	

Source: Statistical report on, 1991 legislative assembly of Kerala.

In above table (3.14), the registered (unrecognized) parties includes CMP(K), CPI(M), CPM(K), DPI, MMK(M), NDP, SAP, and UCPI.

3.2.14 Legislative Assembly Elections in Kerala, 1996

The eleventh Kerala assembly elections were held in May 1996. The notable feature of this election was the disappearance of SRP and NDP political parties, which are most communally oriented. The third front contested for the larger number of seats but again did not manage to even win a single seat. The ruling UDF government lost the elections and secured only 59 seats, and the opposition alliance won the elections and won 80 seats (Rajan, 2018).

The voter turnout was 71.16% which was 2.5percent less than the last assembly elections. The total number of contestants was 1201, out of which 1146 were men and 55 were women. Out of total 140 seats, 13 women and 127 men won the election. The total number of electors increased to 20667409 in 1996 from 19659444 in 1991 election (ECI).

Table 3.15 performance of political parties in 1996's elections

Party	Seats contested	Seats won	Vote in seats contested (%)
National parties			
AIIC(T)	8	0	1.04
BJP	127	0	6.00
CPI	22	18	8.75
CPM	62	40	47.12
INC	94	37	44.62
JD	13	4	44.35
JP	21	0	0.38
State parties			
BSP	12	0	1.57
FBL	6	0	0.43
ICS	9	3	40.08
KEC	10	6	46.01
KEC(M)	10	5	48.23
MUL	22	13	45.87
RSP	6	5	47.53
SHS	16	0	0.29
IND	672	5	7.88
Registered (unrecognized) parties	91	4	
Grand total	1201	140	

Source: Statistical report on, 1996 legislative assembly of Kerala.

Note: In above table registered (unrecognized) parties are BLP, CMPKSC, ILC, INL, JPSS, KEC(B), KEC(J), PDP, SAP, SLAP, and SWJP.

3.2.15 Legislative Assembly Elections in Kerala, 2001

The voters of Kerala marched to the polling booth in May 2001 to elect their representatives. The primary fight was between the CPI-led LDF and INC-led UDF. The ruling LDF lost the election and secured only 40 seats against UDF, which secured 99 seats. Shri. A.K. Antony

became the chief minister of the state. One exceptional difference in these election was that the winning margin between the LDF and the UDF was so high of 59 seats (Kumar, 2001).

The total number of contestants were 676, less than the number of contestants in previous few assemblies. Out of total 676 contestants, 622 were men and 54 were women. The number of women contestants has increased gradually. The polling percentage were 72.47%, comprised of 74.39% men and 70.67% women (ECI report).

Table 3.16 Performance of political parties in 2001's elections

Party	**Seats contested**	**Seats won**	**Vote in seats contested (%)**
National parties			
BJP	123	0	5.69
CPI	22	7	46.02
CPM	65	23	44.72
INC	88	62	49.04
NCP	9	2	41.98
State parties			
CPI(ML)(L)	4	0	1.19
JD(S)	10	3	41.77
JD(U)	3	0	0.72
KEC	10	2	44.31
KEC(M)	11	9	50.69
MUL	21	16	50.57
RJD	1	0	0.48
RSP	6	2	42.47
SHS	1	0	0.22
IND	277	11	9.67
Registered (unrecognized) parties	25	3	
Grand total	676	140	

Source: Statistical report on, 2001 legislative assembly of Kerala.

3.2.16 Kerala Assembly Elections of 2006 and 2011

Thirteen Kerala legislative assembly elections were held in three phases: April 22, 29, and 3rd May, 2006. Out of total 140 assembly constituencies, polling for 59 seats held on 22nd Apr, polling for 66 constituencies held on 29th Apr, and polling for the remaining 15 constituencies held on 3rd May, 2006. The CPI-led LDF won the elections with a thumping majority and Mr. V.S Achuthanandan was sworn as Chief Minister of the state.

In this election, the LDF gained large number of votes from Ezhava community. Ezhava and nairs both communities jointly supported LDF. Whereas Christians and muslims supported the UDF and BJP got lesser vote share from upper hindus of the state (Liby, 2018).

The single-day poll was held on 13th Apr, 2011, for 140 constituencies in Kerala and announced the results on 13th May, 2011, after an exact one-month period. Oommen Chandy became the chief minister for the second time. The 2011 assembly elections in the state witnessed almost 75% of the voter turnout, higher than average participation. The highest voter turnout was 85% in the 2nd Kerala assembly election in 1960. The number of contestants in the election also increased to 971, almost 4% higher than the number in the last elections. The number of electors has also increased by more than 8% from 2006.

Table 3.17 Electoral participation Summary- Electors, voter turnout, and contestants compared with 2006 elections

	2011 Elections			**2006 Elections**			**Total change from 2006 (%)**
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	
No of Electors	11135021	12073117	23208138	10343927	11140010	21483937	+8.2
Total turnout	75.08 %	74.78 %	74.92 %	73.17%	71.08%	72.38%	+3.6
No of contestants	888	83	971	861	70	931	+4.29

Source: Election Commission of India website (https://eci.gov.in)

In Kerala, the main competition has been between LDF and UDF for the last four decades (since the 1980s). The composition of these two fronts keeps changing sometimes. The SJD party (socialist Janta democratic) was part of LDF in the 2006 elections but has shifted to UDF in 2011, and the Kerala Congress (J), and earlier a part of LDF, merged with Kerala Congress (M), a part of UDF.

The thirteen Kerala assembly elections are the closest in the history of the Kerala assembly elections, with the margin of victory of four seats. The UDF won 72 seats, and LDF won 68 seats; there was a four-seat difference. Oommen Chandy became the chief minister for the

second time after the result of these elections. According to the data available on the ECI website, the vote-shares difference between the two frons was less than one percent (0.9%), UDF received 45.8 %, and LDF received 44.9%. The state has never witnessed such a small margin of vote share between the winner alliance and the runner-up alliance. The vote share of these two fronts has shifted from LDF to UDF. Comparing the 2011 elections vote share with the 2006 elections, the LDF has lost 3.7%, and UDF has gained 3.2%. The BJP also increased its vote share by 1.2% but failed to open its account as part of the Kerala assembly. (EPW study, 2011).

The LDF failed to return back to power in 2011 because of some significant reasons- one of the reason is the traditional attitude of Christians and muslims to vote for UDF. The UDF got 65% of their votes from muslim community and 67% of votes from Christian community (Rajan, 2018).

Table 3.18 Detailed results of 2006 and 2011 Kerala assembly election.

	No. of seats contested	Seats won (2011)	Vote share (%) (2011)	Votes % in seats contested	Seats Difference W.r.t 2006
BJP	138	0	6.03	6.15	**0**
LDF	140	68	44.94	44.94	-30
CPI	27	13	8.72	44.90	-4
CPM	84	45	28.18	46.73	-15
RSP	4	2	1.31	46.69	-1
INL	2	0	0.24	19.13	-1
NCP	4	2	1.24	44.03	+1
KC(AM)	2	0	0.51	39.26	0
JD(S)	5	4	1.52	43.40	-1
LDF supported independents	12	2	3.22	38.94	-2
UDF	140	72	45.84	45.84	+30
INC	81	38	26.40	45.60	+14
SJD	6	2	1.65	38.44	+2
MUL	23	20	7.92	50.98	+13
KRSP(BJ)	1	1	0.37	51.57	+1
KEC(J)	3	1	0.91	42.48	+1
JPSS	4	0	1.31	41.67	-1
KEC(M)	15	9	4.94	47.25	+2
CMPKSC	2	0	0.65	42.79	0
KEC(B)	2	1	0.72	47.28	0
UDF supported independents	3	0	0.97	40.63	+1
Independents	294	0	1.73	na	0
Others	259	0	1.73	na	0

Source: Election Commission of India website (https://eci.gov.in)

We have not constituted the changed composition of the major fronts LDF and the UDF in the above table. The alliance of LDF and UDF changed in 2011. In 2006, the LDF comprised the following parties; CPM, CPI, RSP, Cong(S), JD(S), INL, NCP, and the LDF supported independent candidates. The UDF comprised of INC, KEC(M), KEC(B), MUL, JSS, CMP(K), RSPK(B), DICK, and the independent candidates supported by UDF. Others in 2006 included CPIML(L), LJNSP, RJD, BSP, AIADMK, and other smaller parties. In 2011, others included BSP, CPIML(L), AIADMK, JDU, SDPI, PDP, SUCI(C), LJNSP, and other smaller parties.

Independent candidates (259) in the above table do not include the independent candidates who contested with support of the major fronts, the LDF and the UDF.

3.3 Conclusion

Since the first assembly election in 1957, Kerala has been witnessing the growth of vibrant democracy. After looking at the state polling pattern, the number of voters, contestants, and seats has increased. Voter's number rose to 2.6 crores in 2016 from 88 lakh in 1957. The voter's turnout has increased from 66.6% in 1957 to 77.35% in the 2016election. Similarly, the number of contestants also increased from 389 in 1957 to 1245 in the 2016 election. The state has witnessed 14 assemblies, 22 governments under 12 CM's. Mr. Namboodiripad became the first CM, and Pinarayi is the present CM.

The united democratic front (UDF) and Left democratic front (LDF) have been mainly in the race since the 1980s. The LDF currently consists of CPI, CPI(M), KC(M), and other smaller parties. The UDF consists of INC, IMUL, Kerala congress, revolutionary socialist parties, and other smaller parties. The members from the National democratic alliance (NDA) also contests in the elections but cannot win a single seat since the first election in 1957.

Chapter 4

FACTORS DETERMINING VOTER SHARE AND ELECTION OUTCOMES

4.1 Introduction

According to the existing literature, various factors determine the election outcomes in India. Media, think tanks, researchers, political analysts, and people have given multiple aspects as determinants of election outcomes such as caste, religion, class, good governance, alliance partner, corruption, anti-incumbency, the stability of the government, money power, muscle power, economic factors like inflation, economic growth, developmental policies, the overall performance of the economy, etc. (Duraisamy, 2014).

We examine factors like candidates' characteristics, party's characteristics, and incumbency status at the party and candidate level. This chapter quantitatively analyzes the factors affecting election outcomes in the 2011 Kerala legislative assembly elections

The attributes of contestants and winners show some specific patterns and exciting features of these characteristics with the election outcomes.

4.2 Contestants and winners difference on key characteristics: a descriptive analysis

The data analysis of the contestants and winners explains certain fascinating features about the 2011 Kerala legislative assembly elections.

First, we look at the age distribution of the contestants in figure 1. From figure 1, we can say that the mean age of the contestants is 50 years. 60% of the candidates fall in the age group of between 41 to 70 years. The share of the older candidate is significantly less. There are only 4% of contestants older than 71 years of age.

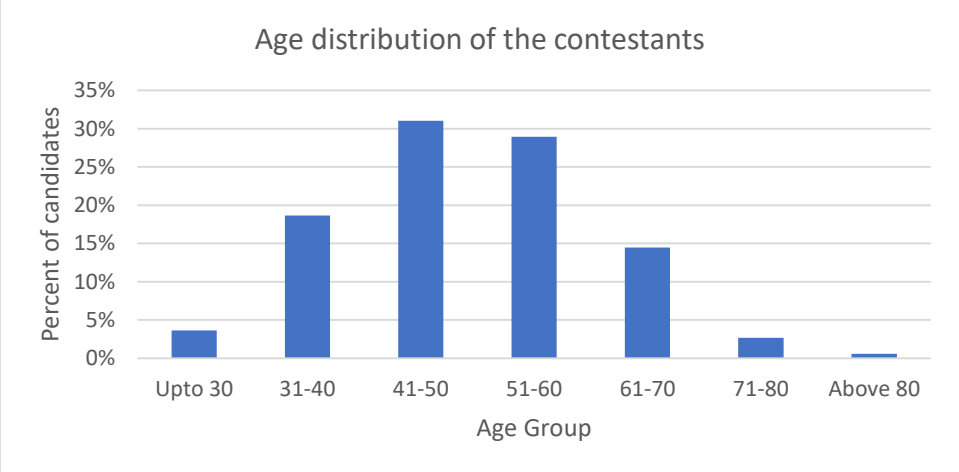


Table 4.1 Coalition wise distribution of contestants and winners according to criminal charges

Crime Category	No of Criminal Cases	Contesting candidates			Winning Candidates		
		LDF	UDF	Others	LDF	UDF	Others
0	0	64	54	103	32	30	1
1	1-3	40	52	47	19	27	2
2	4-6	3	5	4	1	-	-
3	7-10	1	3	2	1	2	-
4	Above 10	-	4	0	-	3	-
5	Not Available	16	20	107	11	10	1
Grand Total		**124**	**138**	**263**	**64**	**72**	**4**

Source: Author's own calculation based on ECI and ADR data.

Table 4.1 shows the distribution of coalition-wise pending criminal cases against contestants and winners of the 2011 Kerala assembly elections. From the above analysis, we can say that both criminals and non-criminal candidates get tickets from both coalition and other parties (which are not a part of any coalition). We have divided the criminal cases into five categories. The first category includes the non-criminal candidates, who have zero criminal cases. Second category includes the candidates who are having one to three criminal cases against them. Third category includes candidates who are having four to six criminal cases against them. In next category, we have included the candidates who are having seven to ten criminal cases against them. Last category includes the candidates who are having more than ten pending criminal cases.

The above table shows that non-criminal contestants are more in the LDF than UDF. There are 64 candidates from the LDF and 54 from the UDF who are not having any criminal cases. Four contestants in the united democratic front have more than ten criminal cases against them, and surprisingly three won the election.

Table 4.2 Distribution of contestants and winners according to criminal charges.

Crime category	No. of criminal cases	No. of candidates contesting	No. of candidates winning	Within group proportion of winning
0	0	221	63	0.29
1	1 to 3	139	48	0.35
2	4 to 6	12	1	0.08
3	7 to 10	6	3	0.5
4	Above 10	4	3	0.75
5	Not available	143	22	0.15
Grand total		**525**	**140**	

Source: Author's own calculation based on ECI and ADR data.

Table 4.2 presents the distribution of criminal cases pending against the contestants and winner candidates. Out of 140 MLA's (winners), we have 77 MLA's (55%) who have self-declared pending criminal cases against them. There are 221 contestants against whom there are no pending criminal cases against them, and out of those 221 contestants, 63 are winners. The within-group proportion of winning for non-criminal candidates is 0.29. It is clear from the above table that the within-group proportion of winning candidates is higher, the higher the number of criminal cases against the candidates.

Table 4.3 Coalition wise distribution of contestants and winners according to education level

Education Category	Education level	No of Candidates Contesting			No of Candidates Winning		
		LDF	UDF	Others	LDF	UDF	Others
0	Up to 8th class	9	5	11	2	3	-
1	10th class	30	15	35	17	7	-
2	12th class	19	17	27	10	11	-
3	Graduation	36	62	59	18	29	2
4	PG and above	14	18	22	6	12	-
5	Not Available	16	21	109	11	10	2
Grand Total		**124**	**138**	**263**	**64**	**72**	**4**

Source: Author's own calculation based on ECI and ADR data.

Table 4.3 shows the coalition-wise distribution of the education level of contestants and winners of the 2011 Kerala assembly elections. We have categorized the education level also

into five categories. The first category consists of the contestants and winners who went to school up to the 8th standard. Fourteen candidates from both the alliance are educated up to 8th class. Only two candidates from the LDF and three candidates from the UDF won the elections from this category. The second category consists of the contestants and winners who have education up to the 10th standard. Thirty contestants from the LDF, 15 from the UDF, and 35 from the other parties (including independent candidates) fall in this category. From this category, 17 from the LDF and seven from the UDF are winners. The third category includes the contestants and winners who went to school up to the 12th standard. The next category includes the candidates who are graduates. The above analysis shows that, there are 160 graduate candidates who contested the election and out of them 59 were winners. The last category includes the candidates who hold post-graduate degrees or above.

Table 4.4 Distribution of contestants and winners according to education level.

Education category	Education level	No of candidates contesting	No of candidates winning	Within group proportion of winning
0	Not available	146	23	0.16
1	Upto 8th class	25	5	0.20
2	10th class	80	24	0.30
3	12th class	63	21	0.33
4	Graduation	157	49	0.31
5	PG and above	54	18	0.33
Grand total		**525**	**140**	

Source: Author's own calculation based on ECI and ADR data.

Above table 4.4 presents the distribution of contesting and winning candidates according to their level of education. The data for 146 candidates is not available. Total 157 out of 525 contesting candidates are graduates, and their within-group proportion of winning is 0.31. Some candidates also have an educational degree of post-graduation and above; the number of such candidates is 54, and their within-group proportion of winning is 0.33.

Two main features of the above analysis are; first, almost all the candidates who contested and won the elections have some formal education. Around 30 percent of the candidates are graduated. Second, the within-group proportion of winning the elections is higher for more educated candidates.

Table4.5 Coalition wise distribution of contestants and winners according to wealth status

Wealth Category	Wealth (In crores)	No of Candidates Contesting			No of Candidates Winning		
		LDF	UDF	Others	LDF	UDF	Others
0	>0	3	2	5	1	1	-
1	0.0.5	86	50	124	41	16	
2	0.50-1.00	11	34	13	7	22	1
3	1.00-5.00	5	27	12	3	19	1
4	above 5	3	5	2	1	4	1
5	Not available	16	20	107	11	10	1
Grand Total		**124**	**138**	**263**	**64**	**72**	**4**

Source: Author's own calculation based on ECI and ADR data.

Table 4.5 shows the distribution of wealth of the contestants and winners of the 2011 Kerala assembly election. Descriptive analysis of the data shows that candidates from all financial backgrounds contests in the elections. We have again divided the wealth into five categories. The first category of wealth is a liability, the candidates whose wealth is less than zero. There are ten contesting candidates whose wealth is less than zero. Two candidates from this category have also won the elections. The second category includes the candidates whose wealth is between 0 to 50lakhs rupees. The analysis shows that almost half of the candidates fall in this category whose wealth is less than 50 lakhs rupees. The third category includes the candidates whose wealth lies between 50 lakh to one crore rupees. Next category includes the candidates whose wealth lies between one crore to five crores. Last category includes the super-rich candidates, whose wealth is above five crores.

The analysis shows that the contestants from the UDF front are wealthier than the contestants from the LDF front. There are three candidates from the LDF and two from the UDF whose wealth is less than zero. Most of the candidates fall in the second category, whose wealth lies between zero to 50 lakh rupees.

Table 4.6 Distribution of contestants and winners according to wealth status

Wealth categories	Wealth (in crores)	No of candidates contesting	No of candidates winning	Within group proportion of winning
0	Less than 0	10	2	0.20
1	0-0.50	260	57	0.22
2	0.50-1.00	58	30	0.52
3	1.00-5.00	44	23	0.52
4	Above 5.00	10	6	0.60
5	Not available	143	22	0.15
Grand total		**525**	**140**	

Source: Author's own calculation based on ECI and ADR data.

Above table 4.6 presents the distribution and within-group proportion of the wealth status of contestants and winners, and it shows an interesting pattern. We can see that the within-group proportion of winning the elections is higher for the wealthier candidates. Some candidates get tickets with a wealth less than zero. Almost 50% of the candidates have wealth between zero to 50 lakh, and their within-group proportion of winning is 0.22. The analysis shows that the probability of winning increases with the wealth. If we compare the winning probability of the lowest wealth category to the highest wealth category: the later is three times more than the former.

Table 4.7 Gender wise composition of contestants and winners (Coalition wise)

Gender	No of Candidates Contesting			No of Candidates Winning		
	LDF	UDF	Others	LDF	UDF	Others
F	13	8	18	6	1	-
M	111	130	245	58	71	4
Grand Total	**124**	**138**	**263**	**64**	**72**	**4**

Source: Author's own calculation based on ECI data.

Table 4.7 shows the gender composition of both fronts. There are 13 female contestants and 111 male contestants from the LDF, out of which six females and 58 males won the elections. The other alliance, i.e., UDF, consists of 8 female and 130 male contestants, out of which one female and 71 male won the polls. We can see that there is a significantly less number of women who participate in elections. The female representation is substantially less in Indian politics.

Table 4.8 Gender composition of contestants and winners

Gender	No of candidates contesting	No of candidates winning	Composition of candidates	Composition of winning candidates	Within group proportion of winning
Women	39	7	7.43%	5.00%	0.18
Men	486	133	92.57%	95.00%	0.27
Grand total	525	140			

Source: Author's own calculation based on ECI data.

Above table 4.8 shows the gender composition of both winners and contesting candidates. From the analysis, we can see that there are only 39 women who contested in elections, and only 7 of them won the elections. The within-group proportion of winning the elections for females is 0.18. While the total number of males who contested in elections is 486, a considerable number compared with the number of female contestants. Out of 486 males, 133 males won the polls. The within-group proportion of winning the elections for males is 0.27.

Table 4.9 Incumbents from the coalition and other parties

	All candidates	Candidates from two coalitions	Elected 2011	Within group proportion of winning
Incumbents	74	72	57	0.77
Non-incumbents	451	190	83	0.18
total	525	262	140	0.27

Source: Author's own calculation based on ECI data.

Lastly, we compare the incumbents and non-incumbent candidates. Table 9 shows that incumbent candidates are significantly less than non-incumbent candidates. There are 74 total incumbent candidates and 451 total incumbent candidates. The within-group proportion of winning for incumbents is 0.77, whereas, for the non-incumbents, it is 0.18 only. If we compare both, we find that the incumbent's within-group proportion is more than four times that of non-incumbents.

4.3 Econometric model and empirical results

The descriptive analysis of the study in the previous section shows the positive (negative) relationship between criminal cases, education level, wealth status, and incumbency status on the chances of winning the elections. Now we need to test the association of every Variable of

candidate-specific characteristics, party-specific characteristics, and incumbency status on vote share and chances of winning the elections by controlling the effect of other factors.

The election outcome, represented as vote share and chances of winning the election, may be determined by several factors and can be specified as:

4.3.1: Determinants of the vote share

The determinants of vote share, another variable for the election outcome, are estimated in the four specifications used in the model. The results of the estimation are reported in table 4.10.

Table 4.10 Regression estimates of the determinants of the vote share (%) in the assembly elections in 2011.

	Variables	Model 1	Model 2	Model 3	Model 4
		Regression coefficient	**Regression coefficient**	**Regression coefficient**	**Regression coefficient**
Candidate Specific characteristics	age_log	0.464***	0.136***	0.109**	0.0976**
		(0.0978)	(0.0474)	(0.0462)	(0.0462)
	Gender (F=1)	-1.969	2.538	1.453	1.090
		(3.624)	(1.733)	(1.691)	(1.689)
	Years of schooling	0.395	0.313**	0.339**	0.300**
		(0.304)	(0.146)	(0.141)	(0.140)
	Criminal Cases	2.017***	0.347	0.458*	0.423*
		(0.514)	(0.251)	(0.244)	(0.242)
	log_net_assets	3.515***	0.843***	0.756**	0.866***
		(0.650)	(0.322)	(0.312)	(0.310)
Party Specific characteristics	C1		35.14***	33.12***	31.86***
			(1.152)	(1.184)	(1.262)
	C2		35.59***	34.46***	34.02***
			(1.196)	(1.179)	(1.187)
Incumbency status	Candidate Incumbency			6.566***	
				(1.301)	
	Party Incumbency				6.689***
					(1.230)
Constant		-50.40***	-16.73***	-13.70***	-13.77***
		(10.06)	(5.004)	(4.880)	(4.848)
Observations		369	369	369	369
R-squared		0.2000	0.8203	0.8322	0.8339
Adj R2		0.1890	0.8168	0.8285	0.8302

Source: Author's own calculation based on ECI and ADR data.

Note: Dependent Variable: percentage of votes secured by the candidate.

P-value: ***<0.001, **<0.05 & *<0.1

Values in bracket represents standard error.

The above table shows the quantitative analysis of determinants of election outcomes, and it is estimated using four specifications of the model. In column 1, we have only considered the candidate's specific characteristics as explanatory variables for the analysis. The results show that the age of the candidates has a positive impact on the candidates' vote share and one additional year of age of the candidate increases the candidate's vote share by 0.46 %. If the candidate is a female, the vote share decreases by almost 2%, which means females are getting fewer votes than men. The candidate's education level does not play a significant role in the candidate's vote share because the coefficients are not significant even at a 10 % level of significance.

The reported results show that the criminal cases against the candidates are positively related to the vote share received by the candidates, and coefficients are highly significant. It shows that an additional pending criminal case against the candidate increases their vote share by almost 2%. The effect of the wealth status of the candidates on vote share is positive and statistically significant. An additional one crore of the candidate's wealth increases the candidates' vote share by 3.5 %, or in other terms, wealthier candidates get higher votes.

In column 2, we re-estimated the model with the two new coalition variables (C1- LDF & C2- UDF). The estimated results show a positive relationship between the candidates who belong to any coalition and vote shares. C1 and C2 are dummy variables, i.e., C1 takes the value one if a candidate belongs to LDF and 0 otherwise, and C2 takes the value one if a candidate belongs to UDF and 0 otherwise. The results of both the coalition variables are significant at a 1 percent level of significance. This shows that if the candidate belongs to the LDF coalition, then the candidate's vote share will increase by 35%, and if the candidate belongs to the UDF coalition, then the candidate's vote share will increase by almost 36%.

We further estimated the model with a new variable, i.e., incumbency at the candidate level, showing the calculated results in column 3. We found that the incumbency at the candidate level is positive and significant at a 1 % significance level. If the candidate is an incumbent candidate, then the candidate's vote share increases by 6 %.

In the last specification of the above model, we added a new variable, i.e., party incumbency. We find that the results are almost similar to that of candidate incumbency. Party incumbency is also positive and statistically significant at a 1 percent level of significance.

Table 4.11 Regression estimates of the determinants of the vote share (%) in the assembly elections in 2011.

	Variables	Model 1	Model 2	Model 3	Model 4
		Regression coefficient	**Regression coefficient**	**Regression coefficient**	**Regression coefficient**
	Rel_age	27.87***	9.771***	8.248***	7.353***
Candidate Specific characteristics		(5.514)	(2.738)	(2.670)	(2.688)
	GENDER	0.615	3.101*	2.008	1.717
		(3.444)	(1.686)	(1.648)	(1.652)
	Rel_edu	1.048***	0.552***	0.573***	0.553***
		(0.370)	(0.183)	(0.178)	(0.177)
	Rel_Criminalcases	2.353***	0.408	0.541*	0.512*
		(0.620)	(0.313)	(0.304)	(0.303)
	Rel_assets	5.585***	1.451***	1.346***	1.373***
		(0.792)	(0.414)	(0.401)	(0.400)
Party Specific characteristics	C1		34.62***	32.69***	31.63***
			(1.138)	(1.169)	(1.245)
	C2		34.48***	33.39***	33.12***
			(1.232)	(1.214)	(1.220)
Incumbency status	Candidate Incumbency			6.342***	
				(1.280)	
	Party Incumbency				6.308***
					(1.229)
Constant		29.32***	6.905***	7.776***	8.069***
		(3.299)	(1.737)	(1.692)	(1.694)
Observations		369	369	369	369
R-squared		0.2638	0.8263	0.8374	0.8381
Adj R2		0.2537	0.8229	0.8338	0.8345

Source: Author's own calculation based on ECI and ADR data.

Note: Dependent Variable: percentage of votes secured by the candidate.

P-value: ***<0.001, **<0.05 & *<0.1

Values in bracket represents standard error.

In the above model, we have taken relative measures. We calculated the relative wealth as the ratio of a candidate's wealth to the average wealth of all the candidates in that constituency. Similarly, we have calculated the other relative variables. Relative variables tell us a clearer picture of a constituency and help to compare the candidates within the constituency.

Again we have four specifications of the model. Column1 in the above table shows the analysis of candidates' relative characteristics only as explanatory variables. The reported results show that if the candidate is relatively aged in a constituency, the candidate gets almost 27% more vote share in that particular constituency. Being a female reduces the candidate's vote share by nearly 1%. The candidate's relative education status positively affects the vote share. The result suggests that if the candidate is relatively more educated in a constituency, he will be getting almost 1 percent more vote share.

The relative criminal cases also have a positive effect on the candidates' vote share. The estimated results show that if the candidate has an additional criminal case in the constituency, he will have a 2% more vote share than the candidate with no criminal cases or fewer criminal cases. Thus, we can say that tainted candidates in elections have electoral advantages because they get a higher vote share than other candidates.

The relatively wealthier candidates also positively and significantly affect the vote share. The results show that if the candidate is relatively more affluent (wealthier) in a constituency, he will have a 6% more vote share.

The second specification of the model is presented in column 2 of the above table. In this specification, we have included the coalition variables, i.e., C1 & C2 (LDF & UDF), and we found that if the candidate belongs to any of the coalition, then they receive a higher vote share than the candidates who are independent or not a part of any of the mentioned coalition.

The estimated results show that the incumbent candidates and incumbent parties get a higher vote share than non-incumbent and non-incumbent parties.

4.3.2 Determinants of election outcomes

Table 4.12 Logit estimates of the probability of winning in the Kerala assembly elections in 2011.

	Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**
		Logit coefficient	logit coefficient	Logit coefficient	logit coefficient
Candidate Specific characteristics	age_log	0.0308**	0.00845	-0.000861	-0.00346
		(0.0126)	(0.0134)	(0.0141)	(0.0142)
	Gender (F=1)	0.224	0.715	0.357	0.233
		(0.559)	(0.568)	(0.570)	(0.578)
	Years of schooling	0.00499	0.0205	0.0335	0.0215
		(0.0393)	(0.0451)	(0.0508)	(0.0531)
	Criminal Cases	0.154***	0.0629	0.0945	0.0899
		(0.0566)	(0.0595)	(0.0586)	(0.0627)
	log_net_assets	0.484***	0.396***	0.382***	0.422***
		(0.109)	(0.133)	(0.131)	(0.127)
Party Specific characteristics	C1		4.242***	3.773***	3.457***
			(0.738)	(0.737)	(0.764)
	C2		3.993***	3.780***	3.677***
			(0.752)	(0.732)	(0.738)
Incumbency status	Candidate Incumbency			1.690***	
				(0.399)	
	Party Incumbency				1.607***
					(0.360)
Constant		-10.06***	-11.50***	-10.77***	-10.92***
		(3.015)	(3.218)	(3.297)	(3.382)
Observations		369	369	369	369
Log likelihood		-204.3833	-154.60902	-143.19088	-142.68218
PseudoR-sq		0.1072	0.3247	0.3745	0.3768

Source: Author's own calculation based on ECI and ADR data.

Note: Dependent Variable: Election Outcome (Won=1, lost=0)

P-value: ***<0.001, **<0.05 & *<0.1

Values in bracket represents standard error.

Table 4.12 presents the results of the first set of logit regressions. In model 1, we have taken only the candidate-specific characteristics as explanatory variables, such as age, gender, education level, pending criminal cases, wealth status. The age of the candidates, pending criminal cases, and their wealth status are statistically significant, and these results are also consistent with the within-group proportion of winning analysis. The results show that candidates are more likely to win the elections if the candidate is older (having more age), having more criminal, and wealthier.

In column 2, we have introduced the new dummy variables for coalition LDF (C1) and UDF (C2). C1 takes the value one if the candidate belongs to the LDF coalition and takes value zero otherwise. Similarly, the C2 takes the value one if the candidate belongs to the UDF coalition and zero otherwise. Our results show that the candidates who belong to any coalition (LDF & UDF) are more likely to win the elections than other candidates. The other candidates here include independent candidates and candidates from other parties like NDA etc.

In column 3, we have introduced a dummy variable for candidate incumbency status; it takes the value one if the candidate is an incumbent candidate; otherwise, it takes the value zero. Our analysis shows that the incumbent candidates are more likely to win the elections than non-incumbents.

Further, in column 4, we have added the dummy variable for Party incumbency. It takes the value one if the candidate belongs to the incumbent party and zero otherwise. The above tables show that candidates from an incumbent party are more likely to win elections than candidates from non-incumbent parties.

Table 4.13 Logit estimates of the probability of winning in the Kerala assembly elections in 2011.

	Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**
		Logit coefficient	logit coefficient	Logit coefficient	logit coefficient
Candidate Specific characteristics	Rel_age	2.395***	1.627*	1.017	0.749
		(0.737)	(0.861)	(0.847)	(0.853)
	GENDER	0.379	0.698	0.319	0.231
		(0.576)	(0.577)	(0.571)	(0.563)
	Rel_edu	0.0822	0.0881	0.107	0.0976
		(0.0533)	(0.0603)	(0.0664)	(0.0665)
	Rel_crime	0.247***	0.141	0.191**	0.176
		(0.0899)	(0.0931)	(0.0970)	(0.0950)
	Rel_assets	0.721***	0.563***	0.574***	0.572***
	Rel_age	(0.127)	(0.143)	(0.149)	(0.148)
Party Specific characteristics	C1		4.128***	3.629***	3.373***
			(0.732)	(0.730)	(0.761)
	C2		3.690***	3.429***	3.358***
			(0.760)	(0.740)	(0.754)
Incumbency status	Candidate Incumbency			1.743***	
				(0.413)	
	Party Incumbency				1.539***
					(0.367)
Constant		-1.401**	-4.821***	-4.507***	-4.391***
		(0.569)	(0.877)	(0.843)	(0.847)
Observations		369	369	369	369
Log likelihood		-192.09	-149.25	-137.92	-138.97
PseudoR-sq		0.1609	0.3480	0.3975	0.3929

Source: Author's own calculation based on ECI and ADR data.

Note: Dependent Variable: Election outcomes (takes value1, if won the election, otherwise 0)

P-value: ***<0.001, **<0.05 & *<0.1

Values in bracket represents standard error.

Table 4.13 shows the second set of logistic regression in which we have considered the relative variables. In model 1, results show that candidate's characteristics such as relative age, relative criminal cases, and relative wealth status significantly affect election outcomes. If the candidate in a constituency is relatively older than other candidates, the more senior candidate is more likely to win the elections. Also, if the candidate has relatively more criminal cases in a constituency, then such criminal candidates are more likely to win elections than others. The wealthier candidates in a constituency with respect to other candidates in the same constituency are also more likely to win elections. Again, candidate incumbency and party incumbency are statistically significant. The candidates who belong to the incumbent party are more likely to win the elections over other candidates. Incumbent candidates are also highly more likely to win elections than non-incumbents.

Table 4.14 Logit estimates of the probability of winning the Kerala assembly elections in 2011.

Explanatory variables	∂y/∂x	"t" Value	∂y/∂x	"t" Value	∂y/∂x	"t" Value	∂y/∂x	"t" Value
Age	0.00622**	2.46	0.00104	0.62	-0.000107	-0.06	-0.000424	-0.24
	(0.00252)		(0.00167)		(0.00174)		(0.00173)	
Gender (female=1)	0.0453	0.40	0.0876	1.23	0.0442	0.62	0.0285	0.40
	(0.113)		(0.0713)		(0.0708)		(0.0706)	
Education (yrs schooling)	0.00101	0.13	0.00251	0.45	0.00414	0.65	0.00263	0.40
	(0.00795)		(0.00558)		(0.00642)		(0.00655)	
No. of Criminal cases	0.0312***	2.75	0.00771	1.04	0.0117	1.54	0.0110	1.38
	(0.0114)		(0.00744)		(0.00759)		(0.00797)	
Net Assets (crores)	0.0977***	4.55	0.0485**	2.53	0.0473**	2.53	0.0516***	2.80
	(0.0215)		(0.0192)		(0.0187)		(0.0184)	
Coalition1 (LDF=1)			0.520***	9.19	0.467***	8.41	0.423***	7.40
			(0.0566)		(0.0555)		(0.0571)	
Coalition 2 (UDF=1)			0.490***	8.84	0.468***	8.55	0.450***	8.19
			(0.0554)		(0.0547)		(0.0549)	
Candidate Incumbency (Incumbent=1)					0.209***	2.97		
					(0.0703)			
Party Incumbency (Incumbent==1)							0.197***	3.10
							(0.0635)	
No of observations	369		369		369		369	

Source: Author's own calculation based on ECI and ADR data.

Note: Dependent variable: Election Outcomes (Won=1, Lost=0)

dy/dx: Marginal effects, Values in bracket represents standard error.

P-value: ***<0.001, **<0.05 & *<0.1

We have also computed the marginal effects for easy interpretation of our analysis. We have considered the candidate-specific characteristics in the first specification of the model. The results of column 1 suggest that an additional year of age of the candidate increases the winning chances of the candidates by 0.6 percent. This implies that the candidates' political experience plays a positive role in winning the elections. The above-reported results show that education does not play a significant role in winning the elections; the results are not significant. An additional one crore of wealth increases the candidate's chances of winning the polls by 3.12 %, and the results are highly significant at a 1% level of significance. Lastly, when we see the impact of the criminal case, an additional criminal case against the contestants increases the chances of winning the polls by almost 3 percent.

In model 2, we have included the coalition variable for the major fronts, LDF and UDF. Again, the results are highly significant and show that candidates who belong to any coalition, either LDF or UDF are more likely to be elected than any other independent candidate or candidates for any other party. The reported results in column 2 suggest that being the candidate of the UDF front increases the chances of winning the elections by 52% while being the candidate of the LDF front increases the chances of winning the polls by almost 49%.

In Specifications 3&4, we have included the candidate incumbency status and party incumbency status. The results are again highly significant at a 1 % level of significance. Being an incumbent candidate increases the chances of winning the elections by 20%, while being the incumbent party candidate in the constituency increases the chances of winning the polls by 19%.

Table 4.15. Logit estimates (Relative variables) of the probability of winning in the Kerala assembly elections in 2011.

Explanatory variables	∂y/∂x	"t" Value	∂y/∂x	"t" Value	∂y/∂x	"t" Value	∂y/∂x	"t" Value
Age	0.473***	3.28	0.196*	1.74	0.124	1.15	0.0912	0.86
	(0.144)		(0.113)		(0.108)		(0.106)	
Gender (female=1)	0.0747	0.66	0.0842	1.18	0.0390	0.55	0.0282	0.41
	(0.113)		(0.0715)		(0.0702)		(0.0688)	
Education (yrs schooling)	0.0162	1.54	0.0106	1.35	0.0131	1.46	0.0119	1.35
	(0.0105)		(0.00789)		(0.00893)		(0.00878)	
Criminal cases	0.0487***	2.75	0.0171	1.42	0.0234*	1.81	0.0211*	1.69
	(0.0177)		(0.0120)		(0.0129)		(0.0125)	
Net Assets	0.142***	5.84	0.0680***	3.03	0.0701***	3.03	0.0697***	3.03
	(0.0244)		(0.0224)		(0.0232)		(0.0230)	
Coalition1 (LDF=1)			0.499***	8.83	0.444***	7.89	0.411***	7.20
			(0.0564)		(0.0562)		(0.0570)	
Coalition 2 (UDF=1)			0.446***	8.23	0.419***	7.63	0.409***	7.45
			(0.0542)		(0.0550)		(0.0549)	
Candidate Incumbency					0.213***	2.95		
					(0.0721)			
Party Incumbency							0.187***	2.96
							(0.0633)	
No. of observations	369		369		369		369	

Source: Author's own calculation based on ECI and ADR data.

Note: Dependent variable: Election Outcomes (Won=1, Lost=0)

dy/dx: Marginal effects, Values in bracket represents standard error.

P-value: ***<0.001, **<0.05 & *<0.1

Table 4.15, shows the results of the analysis of the relative variables. Again, the results are almost similar to absolute variables, but the magnitude of coefficients is getting somewhat more robust. The reported results of model 1shows that an additional year of the relative age of the candidate increases the chances of winning the elections by 43%. If the candidate is more aged relative to the other candidates in the same constituency, the candidate will have more chance of winning the polls. The gender and Education status of the candidates are not significant in our analysis. However, criminal cases and wealth status are significant, and results suggest that an additional criminal case against the candidate in the constituency increases the chances of winning the elections by almost 5% and an extra one crore of the wealth of a candidate in a constituency increases the chances of winning the polls by 14%.

In model 2, we have included the two dummy variables for a coalition. Results show that the candidate from any alliance is more likely to win the elections than the other candidates. And model 3 and 4 includes the incumbency status of candidate and parties. Again, the result shows that incumbency at both levels (candidate and party) plays a significant role in winning the elections.

4.4: Discussion and conclusion

This chapter's primary objective is to empirically test the factors affecting election outcome in Kerala assembly elections. The first part of the chapter shows a descriptive analysis of the key characteristics of the candidates. We have also calculated the within-group proportion of winning of the candidates.

The regression analysis shows that the candidates' specific characteristics, party-specific characteristics, and incumbency status at party and candidate levels affect the candidates' vote shares. The age of the candidates, pending criminal cases, and wealth status play a significant role in determining the vote share received by the candidates. Incumbency status at the party and candidate level plays a positive role in determining the vote share. Candidates who belong to any coalition (LDF & the UDF) receive higher votes than the independents and other minor party candidates. Many existing studies support the finding of our data. This is similar to the results of an analysis of the 2009 Lok-sabha election by Duraisamy(2011).

Panagariya and Gupta (2011) argued that incumbency plays a positive role in elections because incumbent candidates have more resources and have the better name recognition or they happen to be good candidates. Dutta and Gupta (2012) finds that the wealthier candidates are more

likely to win the elections because they have more money to spend on election campaigns and attract voters. The study's data also suggests that criminal candidates are wealthier than non-criminal candidates. Hence, they demand fewer resources from the party, and the party can use the resources in another constituency.

Aidt et al. (2011) and Chemin(2008) observed that the criminal candidates possess an extraordinary electoral advantage. Criminal candidates use violent tactics before polls and intimidate opposition voters from voting, decreasing voter turnout. This strategy of criminal candidates also helps in driving out the incumbent candidates from the competition. Sastry (2014) argued that criminal candidates win elections either because they are unaware of their criminal record or because their votes are influenced by caste and religion.

Lee (2016) contends that incumbents have an advantage because, being already in power, they influence public policy and financial distribution favoring their constituencies and taking advantage over the challenger. Incumbents can take positions on issues more visibly than the unknown challengers.

Chapter 5

SUMMARY AND CONCLUSION

This chapter of the study summarizes and concludes our research findings based on the 2011 Kerala assembly election.

In our study, we are examining the determinants of election outcomes in Kerala assembly elections. Elections in Kerala have a unique pattern; political power in the state changes hands regularly. Kerala's voters have rotated between Congress-led UDF and CPI-led LDF since 1982. In the 2011 assembly elections also, Kerala followed the pattern. The ruling LDF lost power, and UDF came into power; the margin of victory was the smallest in the history of the state's elections (EPW, 2011).

Media, think tanks, researchers, political analysts, and people have given multiple aspects as determinants of election outcomes such as caste, religion, class, good governance, alliance partner, corruption, anti-incumbency, the stability of the government, money power, muscle power, etc. (Duraisamy, 2014). Research studies in India show that candidate-specific characteristics, party-specific characteristics, and incumbency status affect election outcomes (Gupta and Panagariya, 2011; Jerome, 2014). The existing literature says that candidates' characteristics, such as criminal cases, age, and wealth status, are positively correlated with the election outcomes. Incumbency plays both a positive and negative role.

To fulfill the purpose, this study reviewed earlier literature based on the determinants of elections, criminals in politics, and incumbency status in developed countries, developing countries, and India to select the variables to be studied and identify the determinants of Kerala legislative assembly elections. The broad objective of this study is to understand the determinants of the election outcomes in the 2011 Kerala legislative assembly election. The specific objectives of the study were: The factors determining the candidate's vote share in elections and the chances of winning the elections. We have categorized the factors into three parts: one, candidates-specific factors, two, Party specific factors, and last, the incumbency status.

The candidates- specific factors consist of the candidates' characteristics like their age, wealth status, education level, Criminal record, and gender. Party-specific features consist of whether the candidate belongs to any of the major alliances (LDF & UDF in the case of Kerala) or an independent candidate contesting elections. Lastly, the Incumbency status comprises two types: one, party Incumbency, second, the candidate Incumbency.

The study derives its data from two sources. The data candidates' characteristics are taken from the website http://myneta.info maintained by the association of democratic reforms (ADR). The ADR is a non-governmental organization that mainly works for political and electoral reforms. The data of the remaining variables is taken from the statistical handbook of the 2006 and 2011 Kerala legislative assembly elections from the election commission of India website.

For our analysis of the determinants of election outcomes, we have used two techniques in our study: the multiple regression model and the logistic model. Chapter two of the study explains these techniques in detail and also describes about data sources and shortcomings of data. Chapter three of the study explains the factual study of elections in Kerala since 1957. In chapter four, we have empirically analyzed the data of the legislative election.

The descriptive analysis of the variables shows some interesting patterns. We have made the different-different categories of the variables and calculated the within-group proportion of winning. The analysis shows that as the education level of the candidate increases, the within-group proportion of winning also increases. Similarly, as the wealth status of the candidates is higher, the within-group proportion of winning the elections is also higher.

The data shows that the number of women who contest the elections is significantly less than the number of men. The within-group proportion is also higher for men than women. When we see the incumbent's status, the number of incumbents contesting in the elections is significantly less than that of non-incumbents. But, the within-group proportion of winning for Incumbents is considerably higher than non-incumbents.

We have applied a simple multiple regression model to see the impact of various factors on the candidates' vote share. The first model includes only candidate-specific factors. The results show that the candidate's characteristics, such as age, criminal cases, and wealth status, significantly affect the candidate's vote share. In the second model, we have included party-specific factors such as the coalition. The reported results show that candidates from any alliances (LDF & UDF) significantly affect the candidate's vote share. The third and fourth models added the party and candidate incumbency, respectively, with all other covariates. It showed that after adjusting for all other potential confounders, the effect of candidate-specific variables has increased and yet become significant.

In other words, wealth status, coalition, and Incumbency at both party and candidate levels remained the critical factors determining the candidates' vote share. The age of the members retained its significance of deciding the vote share, but the significance has reduced. But for

education status, it is turning to be significant after adding to other variables like coalition variable and incumbency status.

We have calculated the relative age, relative education status, relative criminal cases, and relative assets of the candidates for the comparison within the constituency and how these relative factors determine the candidates' vote share. We noticed that the coefficients become more robust, and the significance level also increases. Relative age, relative education, and relative wealth among the candidate-specific are highly significant, and these are the critical factors in determining the candidate's vote share. After adding the other independent variables like coalition and incumbency factor in different models, the significance of these candidates' characteristics remains high. On the other hand, the coalition and incumbency at both candidate and part level remains highly significant and remains an essential factor in determining the candidates' vote share.

Next, we employed logistic regressions to check factors determining the election outcomes. Our election outcome is a binary variable; it takes value one if the candidate wins the 2011 Kerala legislative assembly elections, otherwise zero. The logistic regression results revealed that age, criminal cases, wealth status, coalition, and Incumbency status are the significant factors in determining the election outcomes. The first model studied only the candidate-specific characteristics, i.e., the age of the candidate, education level, wealth status, criminal cases, and gender. It exhibited that the candidates' age, criminal cases, and wealth status significantly determine the election outcomes. In the second model, party-specific characteristics significantly affect the election outcomes; the wealthier candidates and the candidates who belong to the political party that is a part of the coalition (LDF & UDF) are more likely to win the elections than other candidates. The third and fourth models added the candidate and party incumbency variables along with all other covariates. It shows that after adjusting for all other potential confounders, the effect of candidates' characteristics has increased. The wealth status, coalition, and incumbency status variables are critical factors in determining the election outcomes. They have remained significantly high.

Next, we again employed logistic regression to examine the factors determining the election outcomes. We have considered the candidate's characteristics variables in terms of relative measures to compare the candidates at the constituency level. The four specifications of the analysis show the following findings; first, the relatively wealthier candidates have more chances of winning the elections. Second, the candidates who belong to any major alliances (LDF & UDF) have more chances of winning the elections than candidates from small regional

parties and independent candidates. Third, Incumbency plays a positive role at both party and candidate level, i.e., incumbent party and incumbent candidates have higher chances of winning the elections over non-incumbent parties and candidates.

The study of the affidavits shows that money power and criminality in elections are widely prevalent in Kerala. A positive finding is that more than half of the candidates are graduates and post-graduates. Education level does not play a significant role in election outcomes. Incumbent candidates and incumbent parties have much advantage in winning the elections over non-incumbent candidates and parties. In Kerala elections, independent candidates and candidates from other smaller regional parties, which are not a part of any of the alliances (the LDF and the UDF), rarely win the elections. Such candidates also get significantly less vote share than other candidates and parties.

5.1 Policy implications

We know that the affidavits of the contestants are not easily accessible to all the voters who have the right to know about their candidate. The Supreme Court's main concern of the 2004 landmark judgment was to inform all the voters about the candidate. But this purpose is not getting fulfilled. So, the government, ECI, and civil society groups should take more action to achieve this objective. The copies of the contestant's affidavits should be displayed in the post office, election office, village's offices, etc. Concerned authorities should summarize the information of affidavits of the contestants and should display them in villages and towns. The media should also publicize more about how the voters can access the information.

As our analysis shows that the criminals are contesting and winning the elections. The formal rules do exist to discourage the entry of criminal candidates, but how well they are enforced and whether the action is taken or not is not clear. To banish criminality from politics, the government should develop strict legislation and better implementation. There should be harsh penalties on the parties who give tickets to the criminal candidates.

References

Adamany, D., 1977. Money, Politics, and Democracy: a review essay. *American Political Science Review*, *71*(1), pp.289-304.

Aidt, T. & Golden, M. A. & Tiwari, D., 2011. Incumbents and criminals in the Indian national legislature. Cambridge Working papers in Economics 1157, Faculty of Economics, University of Cambridge.

Karnik, A., Lalvani, M. and Phatak, M., 2019. Determinants of electoral outcomes: an analysis of general elections in India. *Economic & Political Weekly*, *54*(13), pp.83-89.

Alexander, H.E., 1972. *Money in politics*. Public Affairs Press. New York City.

Gelman, A. and King, G., 1990. Estimating incumbency advantage without bias. *American journal of political science*, 34(4), pp.1142-1164.

Ansolabehere, S. and Snyder Jr, J.M., 2002. The incumbency advantage in US elections: An analysis of state and federal offices, 1942–2000. *Election law journal*, *1*(3), pp.315-338.

Banerjee, A., Kumar, S., Pande, R. and Su, F., 2011. Do informed voters make better choices? Experimental evidence from urban India. Harvard Kennedy School, Evidence for Policy Design, *Unpublished paper*.

Borooah, V. K., 2006. Incumbency and Parliamentary Elections in India: An Analysis of the Congress Party's Electoral Performance, 1962-1999. *Economic and Political Weekly*, 41(8), pp. 739-746.

Born, R., 1979. Generational replacement and the growth of incumbent reelection margins in the US House. *American Political Science Review*, *73*(3), pp.811-817.

Bobonis, G.J., Fuertes, L.R.C. and Schwabe, R., 2010. Does Exposing Corrupt Politicians Reduce Corruption? University of Toronto, Department of Political science, *Unpublished paper*.

Brambor, T. and Ceneviva, R., 2011. Incumbency advantage in Brazilian mayoral elections. In American Political Science Association 2011 Annual Meeting*2011*, Department of political science, *Annual Meeting Paper*.

Brollo, F., 2008. *Who is punishing corrupt politicians: Voters or the central government? Evidence from the Brazilian anti-corruption program*. Innocenzo Gasparini Institute for Economic Research working paper, Bocconi University, Italy, Working papers 336.

Breaux, D., 1990. Specifying the Impact of Incumbency on State Legislative Elections: A District-Level Analysis. *American Politics Quarterly*, *18*(3), pp.270-286.

Cain, B.E., Ferejohn, J.A. and Fiorina, M.P., 1984. The constituency service basis of the personal vote for US representatives and British members of parliament. *American Political Science Review*, *78*(1), pp.110-125

Cameron, A.C., and Trivedi, P.K., 2010. *Microeconometrics using stata*. New York: Cambridge university press.

Chang, E.C., Golden, M.A. and Hill, S.J., 2010. Legislative malfeasance and political accountability. *World Politics*, *62*(2), pp.177-220.

Chakrabarty, M. and Tamang, R.V., 2006. Kerala- A study of electoral dynamics and voting behavior, 1957-2004. *The Indian Journal of Political Science*, 68(1) pp.133-142.

Chemin, M., 2008. Do criminal politicians reduce corruption? Evidence from India. Centre Interuniversitaire sur le Risque, les Politiques Économiques et l'Emploi (CIRPEE), working paper, pp. 08-15.

Cox, G.W. and Katz, J.N., 1996. Why did the incumbency advantage in US House elections grow?. *American journal of political science*, 40(2), pp.478-497.

Cox, G.W. and Morgenstern, S., 1993. The increasing advantage of incumbency in the US states. *Legislative Studies Quarterly*, 18(4), pp.495-514.

Cover, A.D., 1977. One good term deserves another: The advantage of incumbency in congressional elections. *American Journal of Political Science*, 21(3), pp.523-541.

Cramer, J.S., 2003. The origins and development of the logit model. *Logit models from economics and other fields*, *2003*, pp.1-19.

Damodar N, G., 2004. Basic econometrics. 5th ed. McGraw-Hill

Duflo, E., 2005. Why political reservations?. *Journal of the European Economic Association*, *3*(2-3), pp.668-678.

Duraisamy, P. and Jérôme, B., 2017. Who wins in the Indian parliament election: Criminals, wealthy and incumbents? *Journal of Social and Economic Development*, *19*(2), pp.245-262.

De Magalhaes, L., 2015. Incumbency effects in a comparative perspective: Evidence from Brazilian mayoral elections. *Political Analysis*, 23(1), pp.113-126.

Dutta, B. and Gupta, P., 2014. How Indian Voters Respond to Candidates with Criminal Charges: Evidence from the 2009 Lok Sabha Elections. *Economic and Political Weekly*, 49(4), pp.43-51.

Erikson, R.S., 1971. The advantage of incumbency in congressional elections. *Polity*, *3*(3), pp.395-405.

Erikson, R.S., 1972. Malapportionment, gerrymandering, and party fortunes in congressional elections. *American Political Science Review*, *66*(4), pp.1234-1245.

Ferraz, C. and Finan, F., 2008. Exposing corrupt politicians: the effects of Brazil's publicly released audits on electoral outcomes. *The Quarterly journal of economics*, *123*(2), pp.703-745.

Freier, R., 2011. Incumbency as the major advantage: The electoral advantage for parties of incumbent mayors. DIW Berlin discussion paper, German Institue for Economic Research no. 1147.

Gough, K., 1967. Kerala politics and the 1965 elections. *International Journal of Comparative Sociology*, *8*, p.55-88.

Gupta, P. and Panagariya, A., 2014. Growth and election outcomes in a developing country. *Economics & Politics*, *26*(2), pp.332-354.

Hainmueller, J. and Kern, H.L., 2005. Incumbency effects in German and British elections: a quasi-experimental approach. Public economics, *505009*, University library of Munich, Germany.

Hartmann, H., 1968. Changing Political Behavior in Kerala. *Economic and Political Weekly*, 3(1/2), pp.163-178.

Hazarak, B., 2015. Voting behaviour in India and its determinants. *IOSR Journal of Humanities and Social Sciences*, *20*(10), pp.22-25.

Heard, A., 1960. *The costs of democracy*. Chapel Hill: University of North Carolina Press.

Isaac, T.T. and Kumar, S.M., 1991. Kerala elections, 1991: lessons and non-lessons. *Economic and Political Weekly*, 26(47), pp.2691-2704.

Jacobson, G. C., 2015. It's Nothing Personal: The Decline of the Incumbency Advantage in US House Elections. *The Journal of Politics,* 77(3), pp. 861-873.

Jaffrelot, C., 2002. Indian democracy: The rule of law on trial. *India Review*, *1*(1), pp.77-121.

Jagdish bhagwati and Arvind panagariya, 2004. The great expections. *Wall street journal* , 24 May.

Kapur, D. and Vaishnav, M. 2018. *Costs of Democracy: Political Finance in India*. Oxford University Press.

Katju, M., 2006. Election Commission and functioning of democracy. *Economic and Political weekly*, 41(17), pp.1635-1640.

Kendall, C. and Rekkas, M., 2012. Incumbency advantages in the Canadian Parliament. *Canadian Journal of Economics/Revue canadienne d'économique*, *45*(4), pp.1560-1585.

King, G., 1991. Constituency service and incumbency advantage. *British Journal of Political Science*, *21*(1), pp.119-128.

Klašnja, M., 2015. Corruption and the incumbency disadvantage: Theory and evidence. *The Journal of Politics*, *77*(4), pp.928-942.

Klašnja, M. and Titiunik, R., 2017. The incumbency curse: Weak parties, term limits, and unfulfilled accountability. *American Political Science Review*, *111*(1), pp.129-148.

Kondo, N., 2007. Election studies in India. *Institute of Developing Economies.* Research institute in Chiba, Japan. *Discussion Paper No*, *98*.

Krashinsky, M. and Milne, W.J., 1983. Some Evidence on the Effect of Incumbency in Ontario Provincial Elections. *Canadian Journal of Political Science/Revue canadienne de science politique*, *16*(3), pp.489-500.

Krashinsky, M. and Milne, W.J., 1985. Additional evidence on the effect of incumbency in Canadian elections. *Canadian Journal of Political Science/Revue canadienne de science politique*, *18*(1), pp.155-165.

Krashinsky, M. and Milne, W.J., 1986. The effect of incumbency in the 1984 federal and 1985 Ontario elections. *Canadian Journal of Political Science/Revue canadienne de science politique*, *19*(2), pp.337-343.

Kumar, R.S., 2001. Ideological Chimera, People's Mandate and the Left Debacle: Kerala Assembly Elections 2001. *The Indian Journal of Political Science*, 62(2), pp.189-199.

Lee, A., 2016. Anti-incumbency, parties, and legislatures: Theory and evidence from India. *Working paper.* Department of political science, University of Rochester.

Lee, D.S., 2001. The Electoral Advantage to Incumbency and Voters' Valuation of Politicians' Experience: A Regression Discontinuity Analysis of Elections to the US. *Working paper*, National bureau of economic research, Massachusetts Avenue, Cambridge.

Levitt, S.D. and Wolfram, C.D., 1997. Decomposing the sources of incumbency advantage in the US House. *Legislative Studies Quarterly*, 22(1), pp.45-60.

Linden, L.L., 2004. Are incumbents really advantaged? The preference for non-incumbents in Indian national elections. *Unpublished paper*, University of Texas, Department of Political Science.

Manor, J., 2002. Changing state, changing society in India. *South Asia: Journal of South Asian Studies*, *25*(2), pp.231-256.

Mayhew, D. R., 1974. Congressional Elections: The Case of the Vanishing Marginals. *Polity*, 6(4), pp. 295-317.

Miguel, E. and Zahidi, F., 2004. *Do politicians reward their supporters? Public spending and incumbency advantage*. *Working Paper*, Department of Political science, University of Texas at Austin.

Molina, J., 2001. The electoral effect of underdevelopment: government turnover and its causes in Latin–American, Caribbean and industrialized countries. *Electoral Studies*, *20*(3), pp.427-446.

Nair, A.B., 1994. The dynamics of Kerala Politics. *The Indian Journal of Political Science*, *55*(3), pp.251-260.

Nayar, V.S., 1966. GOVERNMENTAL INSTABILITY IN KERALA, 1947—1965. *The Indian Journal of Political Science*, *27*(1), pp.43-54.

Nelson, C.J., 1978. The effect of incumbency on voting in congressional elections, 1964-1974. *Political Science Quarterly*, *93*(4), pp.665-678.

Parker, G.R., 1980. The advantage of incumbency in House elections. *American Politics Quarterly*, *8*(4), pp.449-464.

Paul, S. and Vivekananda, M., 2004. Holding a mirror to the new Lok Sabha. *Economic and Political Weekly*, 39(45), pp.4927-4934.

PILLAI, K.R., 1987. Politics of Kerala. *The Indian Journal of Political Science*, *48*(4), pp.597-606.

Pillai, K.R., 1989. The Significance of the 1987 Elections. *The Indian Journal of Political Science*, *50*(3), pp.293-306.

Powell Jr, G.B., 2001. Democracy and Social Change in India: A Cross-Sectional Analysis of the National Electorate. *Pacific Affairs*, *74*(1), p.122.

Prior, M., 2006. The incumbent in the living room: The rise of television and the incumbency advantage in US House elections. *The journal of Politics*, *68*(3), pp.657-673.

Rajan, L., 2018. Communal Influence in Kerala politics-A study. IJRAR- International Journal of Research and Analytical Reviews, 5(3), pp.668-671.

Rao, J.C., 1961. Representation of the people (Amendment) bill, 1961: Report of the Select Committee. Lok-Sabha secretariat, New-Delhi.

Rajgopalan, K.R., 1960. Elections in Kerala—A Factual Study. *The Indian Journal of Political Science*, *21*(2), pp.165-183.

Reinikka, R. and Svensson, J., 2005. Fighting corruption to improve schooling: Evidence from a newspaper campaign in Uganda. *Journal of the European economic association*, *3*(2-3), pp.259-267.

Report, 1957. *Statistical report on the Legislative Assembly of Kerala,* New Delhi: Election Commission of India.

Report, 1960. *Statistical report on the Legislative Assembly of Kerala,* New Delhi: Election Commission of India.

Report, 1965. *Statistical report on the Legislative Assembly of Kerala,* New Delhi: Election Commission of India.

Report, 1967. *Statistical report on the Legislative Assembly of Kerala,* New Delhi: Election Commission of India.

Report, 1970. *Statistical report on the Legislative Assembly of Kerala,* New Delhi: Election Commission of India.

Report, 1977. *Statistical report on the Legislative Assembly of Kerala,* New Delhi: Election Commission of India.

Report, 1980. *Statistical report on the Legislative Assembly of Kerala,* New Delhi: Election Commission of India.

Report, 1982. *Statistical report on the Legislative Assembly of Kerala,* New Delhi: Election Commission of India.

Report, 1987. *Statistical report on the Legislative Assembly of Kerala,* New Delhi: Election Commission of India.

Report, 1991. *Statistical report on the Legislative Assembly of Kerala,* New Delhi: Election Commission of India.

Report, 1996. *Statistical report on the Legislative Assembly of Kerala,* New Delhi: Election Commission of India.

Report, 2001. *Statistical report on the Legislative Assembly of Kerala,* New Delhi: Election Commission of India.

Report, 2006. *Statistical report on the Legislative Assembly of Kerala,* New Delhi: Election Commission of India.

Report, 2011. *Statistical report on the Legislative Assembly of Kerala,* New Delhi: Election Commission of India.

Sastry, T., 2014. Towards decriminalization of elections and politics. *Economic and Political Weekly*, 49(1), pp.34-41.

Singh, U.K., 2004. *Institutions and democratic governance: A study of the Election Commission and electoral governance in India* (Vol. 9). New Delhi: Nehru Memorial Museum and Library.

Singhal, A., 2016. *Strength of Partisan and Candidate Ties in India* .working paper 266, Centre for development economics, Delhi school of economics.

Silberman, J. and Yochum, G., 1978. The role of money in determining election outcomes. *Social Science Quarterly*, *58*(4), pp.671-682.

Sarkar, S.C., 1960. The Elections in Kerala. *The World Today*, *16*(5), pp.212-225.

Timmons, H. and Kumar, H., 2009. India's National Election Spread Millions Around. *The New York Times. May*, *15*.

Skog, Ole-Jørgen. 2004. *Å forklare sosiale fenomener: en regresjonsbasert tilnærming*. Oslo: Gyldendal akademisk

Tufte, E.R., 1973. The relationship between seats and votes in two-party systems. *The American Political Science Review*, *67*(2), pp.540-554.

Uppal, Y., 2010. Estimating Incumbency Effects in US State Legislatures: A Quasi-Experimental Study. *Economics & Politics*, *22*(2), pp.180-199.

Uppal, Y., 2009. The disadvantaged incumbents: estimating incumbency effects in Indian state legislatures. *Public choice*, *138*(1-2), pp.9-27.

Vaishnav, M., 2010. The market for criminality: Money, muscle and elections in India. *Unpublished paper*, Columbia University, Department of Political Science.

Appendix

Candidate's characteristics (MLA'S) – 2011 Assembly elections

A1. All candidates (criminal cases)

Party	Total no of candidates analyzed	Candidates with pending criminal cases	Candidates with pending criminal cases (%)	Candidates with serious pending criminal cases	Candidates with serious pending criminal cases (%)
BJP	138	50	36	11	8
CPI(M)	84	37	44	6	7
INC	81	45	56	12	15
CPI	27	12	44%	1	4
ML	23	10	44%	0	0%
IND	16	3	19%	1	6%
KC(M)	15	8	53%	1	7%
SJD	6	3	50%	0	0%
JD(S)	5	1	20%	0	0%
JSS	4	2	50%	0	0%
NCP	4	1	25%	0	0%
KC(J)	3	3	100%	0	0%
CMP	3	2	67%	0	0%
SDPI	3	1	33%	0	0%
KCB	2	1	50%	0	0%
RSPB	1	1	100%	1	100%
Others	12	0	0%	0	0%
Total	427	180	42%	33	8%

Source: ADR Report

A2. Criminal cases of winners 0f 2011 Kerala assembly election

Party	Total number of MLAs analyzed	MLAs with Pending Criminal Cases	MLAs with pending criminal cases (%)	MLAs with serious pending criminal cases	MLAs with serious pending criminal cases (%)
CPI(M)	45	21	47%	5	11%
INC	38	23	61%	5	13%
ML	20	8	40%	0	0%
CPI	13	5	39%	1	8%
KC(M)	9	5	56%	0	0%
JD(S)	4	1	25%	0	0%
SJD	2	1	50%	0	0%
KCB	1	1	100%	0	0%
KC(J)	1	1	100%	0	0%
RSPB	1	1	100%	1	100%
Others	6	0	0%	0	0%
Total	140	67	48%	12	9%

Source: ADR Report

A3. Total candidates with criminal cases of 2011 Kerala assembly elections (front wise)

Front	Total number of candidates analyzed	Candidates with pending criminal cases	Candidates with pending criminal cases (%)	Candidates with serious criminal cases	Candidates with serious criminal cases (%)
UDF	138	75	54%	14	10%
LDF	133	51	38%	7	5%
OTHERS	156	54	35%	12	8%
Total	427	180	42%	33	8%

Source: ADR Report

A4. Winners and Coalition wise break up of MLAs with pending criminal cases

Front	Total number of Candidates analysed	Candidates with Pending Criminal Cases	Candidates with pending criminal cases (%)	Candidates with serious pending criminal cases (%)	Candidates with serious pending criminal cases (%)
UDF	72	40	56	6	8
LDF	68	27	40	6	9
Total	140	67	48	12	9

Source: ADR Report

A5. Analysis based on assets (All candidates)

Party	Total candidates	crorepati	percent
KC(M)	15	6	40%
CPI(M)	84	6	7%
IND	16	5	31%
SJD	6	5	83%
KCB	2	2	100%
NCP	4	2	50%
RSPB	1	1	100%
INL	4	1	25%
KC(anti merger group)	2	1	50%
KC(J)	3	1	33%
JSS	4	1	25%
CMP	3	1	33%
CPI	27	1	4%
OTHERS	14	0	0%
Total	427	71	17%

Source: ADR Report

A6. Front wise- crorepati (All candidates)

Front	Total candidates analyzed	No. of crorepati analyzed	% of crorepati analyzed
UDF	138	46	33%
LDF	133	11	8%
OTHER	156	14	9%
TOTAL	427	71	17%

Source: ADR Report

A7. Assets analysis (winners)

Party	Total candidates analyzed	Crorepatis	percent
ML	20	12	60%
INC	38	9	24%
KC(M)	9	5	56%
CPI(M)	45	4	9%
KC(J)	1	1	100%
NCP	2	1	50%
SJD	2	1	50%
RSPB	1	1	100%
KCB	1	1	100%
OTHER	21	0	0%
TOTAL	140	35	25%

Source: ADR Report

A8. Average assets of candidates, party wise (All candidates)

Party	Average Assets	Candidate Count
NCP	Rs 15,35,84,363 ~ 15 Crore+	4
RSPB	Rs 8,76,27,820 ~ 8 Crore+	1
SJD	Rs 2,78,80,229 ~ 2 Crore+	6
ML	Rs 1,91,51,231 ~ 1 Crore+	23
KC[M]	Rs 1,62,44,249 ~ 1 Crore+	15
JSS	Rs 1,42,64,595 ~ 1 Crore+	4
KC(J)	Rs 1,40,33,710~ 1 Crore+	
KCB	Rs 1,24,32,283 ~ 1 Crore+ Rs 1,23,00,811 ~ 1 Crore+	2
IND	16	
INC	Rs 1,15,43,590 ~ 1 Crore+	81
CMP	Rs 93,74,052 ~ 93 Lacs+	3
INL	Rs 75,93,157 ~ 75 Lacs+	4
KC(ANTI MERGER GROUP)	Rs 75,71,112 ~ 75 Lacs+	2
JD(U)	Rs 66,13,713 ~ 66 Lacs+	1
CPI	Rs 55,66,802 ~ 55 Lacs+	27
JD[S]	Rs 50,53,757 ~ 50 Lacs+	5
BJP	Rs 40,84,170 ~ 40 Lacs+	138
RSP	Rs 40,70,243 ~ 40 Lacs+	4
CPI[M]	Rs 40,20,371 ~ 40 Lacs+	84
SDPI	Rs 18,24,475 ~ 18 Lacs+	3
CS	Rs 17,09,777 ~ 17 Lacs+	1
All Parties	Rs 93,43,959	427

Source: ADR Report

A9. Front wise average assets (All candidates)

Front	**Average Assets**	**No. of Candidate Analyzed**
UDF	Rs 1,46,82,814 ~ 1 Crore+	138
LDF	Rs 90,27,944 ~ 90 Lacs+	133
Other	Rs 48,90,549 ~ 48 Lacs+	156

Source: ADR Report

A 10. Coalition wise analysis of crorepati winners

Front	Total candidates analyzed	No. of crorepati candidates analyzed	Crorepati candidates analyzed (%)
UDF	72	30	42
LDF	68	5	7
Total	140	35	25

Source: ADR Report

A 11. Analysis based on educational back ground (all candidates)

Education group	Candidates analyzed
Literate	4
5th pass	13
8th pass	11
10th pass	93
12th pass	68
Graduate	87
Graduate professional	93
Post graduate	47
Doctorate	4
Others	3
Not given	4
Total	427

Source: ADR Report

A 12. Winner's educational background

Education group	No. of MLAs analyzed
Literate	2
5th pass	2
8th pass	3
10th pass	29
12th pass	22
Graduate	31
Graduate professional	32
Post graduate	13
Doctorate	3
Others	2
Not given	1
Total	140

Source: ADR Report

A 13. Education party wise of winners

Party	Illiterate	5th pass	8th pass	10th pass	12th pass	Graduate	Graduate professional	Post graduate	Doctorate	Others	Not given	Total
INC	0	0	0	5	5	14	9	5	0	0	0	38
CPI(M)	1	2	1	13	7	7	9	3	1	1	0	45
ML	1	0	2	3	5	2	4	3	0	0	0	20
CPI	0	0	0	4	3	4	2	0	0	0	0	13
KC(M)	0	0	0	0	0	2	4	1	1	1	0	9
NCP	0	0	0	2	0	0	0	0	0	0	0	2
JD(S)	0	0	0	1	0	0	2	1	0	0	0	4
KCB	0	0	0	1	0	0	0	0	0	0	0	1
SJD	0	0	0	0	1	1	0	0	0	0	0	2
RSP	0	0	0	0	1	1	0	0	0	0	0	2
IND	0	0	0	0	0	0	1	0	1	0	0	2
RSPB	0	0	0	0	0	0	0	0	0	0	1	1
KC(J)	0	0	0	0	0	0	1	0	0	0	0	1
Total	2	2	3	29	22	31	32	13	3	2	1	140

Source: ADR Report

A 14. Party analysis based on gender of winners

CPI(M)	Total MLAs	No. of male MLAs	% of male MLAs	No. of female MLAs	% of female MLAs	Total MLAs
CPI(M)	45	42	93%	3	55	61
INC	38	37	97%	1	24	24
CPI	13	11	85%	2	17	17
JD(S)	4	3	75%	1	5	5
Other	40	40	100%	0	33	33
Total	140	133	95%	7	133	140

Source: ADR Report

A 15. Analysis based on age (all candidates)

Age group	No. of candidates
Unknown	2
1-24	0
25-30	9
31-40	65
41-50	132
51-60	134
61-70	69
71-80	13
81-110	3
Total	427

Source: ADR Report

A 16. Analysis based on age of all candidates

Party/age	Unknown	25-35	35-45	46-55	56-65	66-75	>76	Total
BJP	2	14	43	52	21	5	1	138
CPI(M)	0	2	15	26	34	6	1	84
INC	0	10	14	20	29	7	1	81
ML	0	0	2	11	8	2	0	23
CPI	0	3	9	4	10	1	0	27
IND	0	1	3	1	8	0	0	16
KC(M)	0	0	3	5	3	3	1	15
SDPI	0	0	0		0	0	0	3
NCP	0	0	2	1	3	0	0	4
SJD	0	0	1	1	3	0	0	6
JD(S)	0	0	1	2	1	1	0	5
RSP	0	0	0	1	0	2	0	4
CMP	0	0	0	2	0	0	1	3
KC(J)	0	1	0	0	2	0	0	3
KC(anti merger group)	0	0	0	2	0	0	0	2
JSS	0	0	0	2	1	0	1	4
INL	0	0	2	1	1	0	0	4
KCB	0	0	1		1	0	0	2
RSPB	0	0	0	1	0	0	0	1
CS	0	0	0		0	1	0	1
JD(S)	0	0	0	1	0	0	0	1
Total	2	31	102	133	125	28	6	427

Source: ADR Report

A 17. Winners age analysis (Party wise)

Party/Age	25-35	36-45	46-55	56-65	66-75	>76	Total
CPI(M)	1	4	16	20	3	1	45
INC	5	4	9	16	3	1	38
ML	0	2	9	7	2	0	20
CPI	0	6	1	5	1	0	13
KC(M)	0	1	3	1	3	1	9
JD(S)	0	0	2	1	1	0	4
NCP	0	0	0	2	0	0	2
RSP	0	1	0	0	1	0	2
SJD	0	1	0	1	0	0	2
KCB	0	1	0	0	0	0	1
IND	0	1	0	1	0	0	2
RSPB	0	0	1	0	0	0	1
KC(J)	0	0	0	1	0	0	1
Total	6	21	41	55	14	3	140

Source: ADR Report

A 18. Winners age analysis

Age	No. of candidates
1-24	0
25-30	4
31-40	10
41-50	33
51-60	51
61-70	33
71-80	8
81-110	1
Total	140

Source: ADR Report