ECONOMIC DEVELOPMENT AND VOTING BEHAVIOUR OF INDIAN STATES, WITH REFERENCE TO PARLIAMENTARY ELECTIONS SINCE 1980

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CANDIDATE'S DECLARATION

I hereby certify that the work which is being presented in the thesis, entitled "Economic Development and Voting Behaviour of Indian states, with Reference to Parliamentary Elections Since 1980" in fulfillment of the requirements for the award of the degree of Doctor of Philosophy in Political Science and submitted in Galgotias University, Greater Noida is an authentic record of my own work carried out during a period from January, 2013 to October, 2015 under the supervision of Dr. Manasi Sinha and Dr. Shalini Sharma.

The matter embodied in this thesis has not been submitted by me for the award of any other degree of this or any other University/Institute.

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This is to certify that the above statement made by the candidate is correct to the best of our knowledge.

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The Ph.D. Viva-Voice examination of Anand Kumar Research Scholar has been held on_____.

Sign. of Supervisor(s)   Sign. of Co-Supervisor(s)   Sign. of External Examiner

DEDICATION

I dedicate this work to my elder sister for being my constant source of support and
encouragement.

CHAPTER ONE

VOTING BEHAVIOUR AND ECONOMIC DEVELOPMENT/GROWTH IN INDIA

Preview of the Chapter

The chapter offers an explanation of the nature and scope of the present research study selected for PhD thesis and also the rationale for the selection of this topic.The chapter also explains the objectives, hypotheses, sources of data and methods and models of data analysis used in the thesis. The chapter highlights that unlike the empirical studies of Barrow, Rodrk, Tavers et al. and others, this study, like Gupta-Prakash's (1981) model of relation between democracy and growth, also believes that the voting behavior of people is dependent on and also consequence of the economic performance of the party in power at the time of general election in Parliament. Economic growth, measured by real per capita SDP of states, is conceived to operate both as positive and negative incumbency factors for the ruling party. Lastly, it briefly explains the chapter scheme of the thesis. Brief outline of each chapter is provided.

1.0 Introduction

The proposed topic of research investigation is inter-disciplinary in nature. It is, therefore, imperative to explore both the theories and empirical applications of growth economics and the theory and practice of electoral politics. Theory of Economic Growth originated from extensive research relating to the investigation of causes and consequences of periodically occurring trade/business cycles (Prakash, Shri, 1992). Initially, growth economists focused on the behavior of macro aggregates like GDP/Per Capita GDP, Consumption and investment as propellors and indicators of economic development and growth.

However, the concept of growth as consistent rise in per capita GDP came to be criticized as too narrow to cover concomitant or sequential changes in social, political and economic variables like standards of living, health, education, transport, communication and financial infrastructure like banking and insurance (Adleman, Irma and Morris, Cynthia, 1967, Atal, Yogesh, 1969, Pye, 1972). Besides, economic development also encompasses several social and psychological changes both at macro and micro levels. For more details, see Prakash, Shri, (1977).

Economics, in fact, was known as political economy in its original incarnation which implicitly recognized the mutual inter-dependence of economics and politics or political science. As the economic policies are formulated and implemented by the political parties

or rulers in power, political agenda of the rulers underlies the economic policy. Current economic agenda of practically all national governments, irrespective of the nature and type of political regimes, focuses on economics in general and economics of growth in particular which shapes and guides the political agenda (For a detailed discussion of Origin of State and roles of its government, see, Prakash, Shri, Kiangi, Richard Fue and Sharma, Sudhi, 2017).

However, both economic development/growth and electoral politics transgress the confines of both economics and political science in so far as several factors and parameters of sociology and psychology also affect and reinforce their influence on the pattern of voting behavior of the people at micro and macro levels. Macro level voting behavior involves strategic voting by caste/religion/ community for a particular party/candidates contesting election.

1.1 Rationale of Choice of Topic

The choice of the topic for Ph.D. degree dissertation has been guided by the well-established paradigm of Epistemology, the science of generation of new knowledge. The existing stock of knowledge about a phenomenon does not fall in the domain of research for the generation of new knowledge. It requires dissemination which is the part of procedures of communication and pedagogy. For generating new knowledge, one has to explore and examine the existing knowledge for discovering and identifying the gaps in knowledge and research. Therefore, one has to select a topic for research which has not been investigated at all or even if the topic has been researched earlier, some research or knowledge gaps have been left.

These gaps in existing knowledge/research further require generation of new knowledge by research. The gap in existing knowledge may relate to facts used in past researches so far. This gap may be filled up either by the discovery of new facts, or use of common facts which had been overlooked by earlier researchers as unimportant, or one may choose facts for research which are similar to the facts used in earlier researches, but these facts relate to such spatial units or time or both which were not covered in earlier researches (Prakash, Shri and Sharma, Amit, 2016).

Alternatively, the researcher may attempt to fill up research gap(s) that may relate either to theory, methodology or inappropriate and/or inadequate nature of interpretations of the results/outcomes of past researches. This dissertation uses Indian data base which pertains

to the time period not covered by earlier studies. Besides, data analysis has been placed in theoretical context which was not used in Indian studies so far on this topic. Hence, the approach, the variables and parameters used in this dissertation also differ from those used in earlier Indian studies.

1.2 Procedure and Source of Discovery of Knowledge Gap

The question is how does one discover knowledge and research gaps that require more research and information? In other words, is there a method/procedure or source of discovery of research and knowledge gaps that exist in the area of research that one is interested in exploring? Answer to this question is of paramount importance. The answer to the question is furnished by 'Review of Literature'.

The researcher should undertake 'Review of Literature' relating to the domain/area of his interest and research. Naturally, the present research scholar also treaded this trodden path. Detailed information about literature pertaining to a particular area of study generally starts with the perusal of books, periodicals, journals, project reports, past dissertations and inter-net. This involves visits to libraries and search for relevant reading material. A detailed and indepth study of any research paper based on the current topic of research helps to broaden the vision and also provides a number of references, details of books and articles for relevant areas of study.

Some academic institutions where I visited libraries and accessed the available literature include ICSSR, UGC and AIU, situated in Delhi, Noida and Greater Noida. These are the places which I could afford to visit due to constraints of time and money. Surprisingly, I did not find one single book or Ph.D. thesis in the libraries of these academic instutuions on the topic of economic development and voting behavior. However, during my search for study material, I read the papers of S. K. Gupta-Shri Prakash and Arvind Virmani which helped me a lot in fixing my focus on the topic. I found both these papers to be innovative, pioneering and almost path breaking for my research. A careful perusal of works cited in these papers induced me to access the literature on U-tube.

I found eight more papers as the source of knowledge related to the chosen research topic though several other studies cited in these papers could not be found on internet. However, a careful study of these papers turned out to be a comprehensive source of views, theories, thoughts, methods and interpretations of the empirical results. A thorough and careful review of these studies revealed that there exists a researchable gap in

knowledge relating to voting behavior in the light of development of Indian economy that has taken place since 1980s and early 2000. The period is covered in the studies of Gupta-Prakash and Virmani. The data base used by Pavithra Surya Narayan in her two studies relates to 1930s, but these data are obsolete now. Besides, the extensive studies of Barrow, Lumongi and Rodrik have thrown up contradictory and confusing results which are inconclusive either due to highly heterogenous data base, or large number of explanatory variables in regress models which have not been subjected to tests of auto-correlation, heterogeneity and multi-collinearity. As these studies have used panel data, they should also have tested stationarity of time series of each country's data. However, this has not been done. Empirical results of such studies are, thus, afflicted by methodological gaps. These factors furnished the rationale of the choice of the topic of this research.

1.3 Nature and Scope of Research

The research investigation is largely empirical in nature and thrust. The index of democracy based on political and economic freedoms comprises numerous parameters and variables. In previous research studies, various authors have emphasized right to ownership of property to individuals and private institutions as the core economic freedom while choice of consumption, right to participate in direct and open or election by secret voting of leaders of local or central governments etc. have been among other freedoms. Size of government, public expenditure, per capita GDP and consumption are used as explanatory variables in regression models of these studies. Gupta-Prakash used per capita GDP, radio sets and news papers as means of communications, and considered industrialization/urbanization as measures of development and outcomes of modernization and socio-economic transformation. This study uses changes in GDP/per capita GDP as an indicator of economic growth and development, and election by secret voting as an indicator of political freedoms and exercise of choice through the use of this political freedom.

If all these variables such as consumption/investment, public expenditure and other determinants of growth along with GDP/per capita GDP are included in regression model, the model results shall be spurious due to multi-collinearity. Therefore, we have avoided the use of all such variables together in one single regression equation. Since the study has focused on India, the pattern of exercise of political rights and structure of democratic institutions in the country are treated as exogenously given and fixed. Independence of

judiciary system, Election Commission, Information Commission, Commission for Competitiveness etc. are considered to be an inalienable part of the democratic set of India. Besides, freedom to elect political leaders through periodically held fair and free elections, which are conducted by the independent Election Commission of India, is assumed to represent the measurement of political aspects of democracy. Incidentally, numerous representatives of foreign institutions and media visit India during the elections as observers to assess the independent and fair nature of the electoral exercise. We have used voting percentage and number of seats contested/won by various parties as the measurement and proxy of democracy. The study is confined to 2014 election of Parliament. Since state wise cross section data are used, the study takes diversity of political behavior of the people and level of development of constituent states and Union territories into account.

1.4 Objectives of the Study

The main objective of the study is to determine the degree and direction of relation between democracy and economic growth. This basic/core objective has been devided into three parts to capture and analyse the influence of performance of Indian economy during the rule of UPA-1 and UPA-2 from 2004 to 2013 on the electoral success or failure of Indian National Congress and its allies in the election of 2014. This study reflects the positive influence of anti-incumbency factor on the election results in favor of BJP and its alliesa and the negative influence of incumbency factor that affected the fortunes of INC and its allies in 2014.

1.   Determination of Electoral Performance of Bhartiya Janta Party (BJP)

BJP had been the main opposition party in Indian parliament since it lost the General Election in 2004 when Indian National Congress and its allies came into power under the nomenclature of UPA-1 in 2004 and UPA-2 in 2008.

It has been argued that the incumbency factor operates as double edged weapon in favor or against the ruling party. If the economic performance, reflected by economic development or growth of GDP, has been good and people's perception is that the ruling party has been responsive to the public concerns, the ruling party is likely to be voted back to power. The common men are mainly concerned with employment, earnings they receive from productive work, inflation, availability of goods and services they demand at reasonable and affordable prices, efficient means of transportation and communication,

electricity gas, and water etc. The popular image of the government as the provider of good governance, maintenance of law and order create a positive base for the ruling party. Similarly, negative perception about the above factors antagonizes the people who, as a result, tend to vote against the ruling party.

The postulation of incumbency as positive factor has been empirically validated by the victory of Indian National Congress three times in Delhi, its two successive victories in elections of Parliament, victory of Telgu Desham in two successive elections in Andhra Pradesh and successive victories of Biju Janta Dal in Odissa and Trinamol Congress in West Bengal. As against this, incumbency also turns a negative factor, which may lead to a defeat in election, if the growth performance falls below par and people perceive that ruling party is insensitive to their problems. The constituent political parties of UPA-2 government lost the election in 2014 due to several factors such as policy paralysis, high inflation, low growth, wide-spread corruption in high places and the government being headed by a Prime Minister who was claimed to be indecisive and the puppet of Congress president.

2. Determination of Electoral Performance of Indian National Congress Party (Inc)

INC has been the ruling party not only at the center but also in most of the states for quite a long time since independence. It has formed the government at the center as a single largest political party or jointly with its allies in coalition for more than six decades. INC formed its government in most of the states in pre-independence period during the thirties under the British rule. INC began to face defeats in General Election or Elections of state assemblies from late sixties onwards.The trend continued till late 90s and is still persisting.

This was the period when regional parties like Akali Dal, AIDMK, DMK, Samajwadi Party, RJD, BJD, BSP, TMC, CPI (M) and national party BJP found the strong political ground and emerged as successful rivals of INC. This is also the period during which coalition governments of various shades and hues came in to power. These political parties can be classified into three groups: (i) INC, (ii) BJP), and (iii) Other Political Parties or Third Front which comprise all the local, regional and national parties other than BJP or INC. As INC has been the ruling party along with its allies when the general elections of 2014 were held, and hence, determination of its electoral performance has been specified as the second objective.

3. Determination of Electoral Performance of Other National/Regional Parties

Influence of local and regional parties is confined to certain pockets in states or at the most in one or two states while the political influence of national parties spreads over more than two states. For example, influence of TMC, DMK, AIDMK, Akali Dal, SP, BSP, RJD, JD(U) and AAP is confined to West Bengal, Tamil Nadu, Pudichery, Panjab, U.P., Bihar and Delhi whereas the influence of parties like Apna Dal is confined only to few pockets of a state. Consequently, such parties gain electoral success or influence in their respective areas only. However jointly, these parties may account for a substantial proportion in assembly and/or parliament seats. Such parties often enter into alliances with each other or with larger perties like BJP and INC. Therefore, the determination of the number of seats won by these parties is specified as the third objective of the study.

1.5 Hypotheses

The traditional approach to the formulation of twin hypotheses-Null and Alternative hypotheses- is followed hereunder. The following hypotheses are listed for empirical testing:

> **H01:** *The electoral success of BJP in general election of 2014 is the result of promised agenda of development by BJP and the poor performance and lack of development by UPA-2 both at the center and states.*

The high growth performance under the UPA government during UPA-1 made the people expect that Indian economy would continue to grow at the rates of 8-9% per annum which the economy attained before the emergence of World-wide economic recession due to sub-prime crisis in US economy.

> **H02:** *In the system of first past the post of electoral success, it is the proportion of total votes polled out of the total votes cast, and the percentage of votes polled that determines the success or failure of the contestants.*

> **H03:** *The success or failure of BJP/INC/Other Parties is determined by the number of parties in electoral fray in different constituencies of the states if the independent candidates are excluded (few such candidates win in isolated constituencies and their number is generally limited).*

As the total votes cast in the constituencies are shared among the political parties/candidates which/who contest the election, the percentage of votes received by the candidates of different political parties depends on the number of parties in political fray.

Larger the number of parties in electoral contest, smaller is the percentage of votes received per candidate; and smaller the number of parties contesting election, greater is the percentage of votes received per candidate. Besides, the larger number of parties/candidates in election contest reduces the percentage of votes required by the party/candidate for winning the election. Outcomes of all electoral contests are decided randomly, and hence, non-systematic factors and unforeseen forces are also found in operation.

1.6 Sources of Data

The general principle for the selection of data suggests that the data should suffice to fulfill the objectives of the study. As the study relates to the voting behavior of Indian electorates, data required for the empirical conduct of the study are those which pertain to elections held in India. However, there is plethora of elections at local, state and national levels and these elections are held at different times. For comparison of results, it is required that the chosen data should relate to one single spatial unit like village/city, district or state or India for the election of local self -government, or the government of a state, or the government of India over the years.

In this case, time has been taken as a variable while spatial unit is exogenously fixed. Alternatively, time is kept constant but spatial units are allowed to vary. Therefore, the general election of Parliament held in 2014 was chosen for keeping time constant, but the cross section of all Indian states and Union Territories permitted spatial variation. However, the basic objective of the study is the determination of relation between democracy, reflected by the voters' choices of successful candidates in election, and growth of economy, measured by SDP/GDP. This warranted the data relating SDP. Therefore, the study has used two sets of data for empirical analysis:

(i) Data relating to the general election of Parliament of India held in 2014: Data relating to state-wise and party-wise number of seats contested and seats won, total number of voters and percentage of votes cast, percentage of votes received by the candidates of political parties belonging to three groups and seats won by them have been taken from the web-site of Election Commission of India; and

(ii) Data relating to GDP and its Growth: Data relating to state-wise State Domestic Product (SDP) and Per Capita State Domestic Product (PCSDP) and GDP/PCGDP

have been taken from the web site of RBI and Economic Survey, Ministry of Finance. Both these data sets relate to the year 2014.

1.7 Methods and Models of Data Analysis

The general preception about the choice of methods and models of data analysis suggests that the method(s) and model(s) chosen for analyzing data for empirical analysis should be adequate and appropriate for the realization of the specified objectives of the study. These methods and models should also conform to the requirement of testing of hypotheses. In view of the above, the following statistical, econometric and logical methods and models have been selected for data analysis:

(i) Ratios/proportions are subjected to logical interpretations;

(ii) The following tools of descriptive statistics are used wherever needed: Mean, Median, Error of Estimate of Mean, Standard Deviation, Range and Variance, Coefficients of Kurtosis and Skewness. Results of these tools briefly portray the important features of inter-spatial behavior of data.

(iii) For testing of the significance of difference of mean and median, t-test is done. Interestingly, the results presented by t-test are significant as they produce difference of mean and median and conform to the result of more powerful Jack-Bera test of normality (See, Sharma, Sudhi, 2016, Khalid, Ramdhani, 2017). As most of the statistical methods and econometric models assume that the data are normally distributed, violation of this assumption makes the use of such models and methods inappropriate. The results of summary statistics pave the way for the use of statistical and econometric methods of data analysis.

(iv) Two-Factors ANOVA is used to supplement the results derived from the application of tools of descriptive statistics. It so often happens that one obtains spurious and/or otiose type empirical results which are generally encompassed within the model or method used for data analysis. Each method and model has assumptions on which it is based and specific strengths and weaknesses are associated with each method/model. Power of each statistical method, especially test statistics, differs between the methods/models (Gujarati, et. al. 2006). Therefore, use of more than one method or model in empirical analysis ensures against the acceptance of inconclusive results.

(v)   Bi-Variate and Multiple Regression models of econometrics are used to determine the degree and direction of relation between electorates' choices and economic development. Results of application of these models enable the scholar to assess whether the objective of the study has been realized and which hypotheses are empirically validated.

1.8 Chapter Scheme

The thesis has been divided into chapters for the systematic organization of the content and well-ordered pattern of presentation of the results of the thesis. The thesis comprises the following chapters each of which deals with a unified theme and has its sub-themes:

Chapter 1 (Voting Behaviour and Economic Development/Growth in India) deals with the background of the topic of research, rationale of choice of topic for in-depth research investigation, nature and scope of study, objectives, and hypotheses, sources of data and method and models of data analysis which have been selected for empirical analysis.

Chapter 2 (Review of Literature: Democracy and Development) deals with an extensive review of studies which have been undertaken earlier on the topic of research.

Chapter 3 (Determination of Performance of ''Other Parties'' in General Parliamentary Election of 2014) briefly portrays the performance of Indian National Congress in general election of 2014.

Chapter 4 (Performance of Bhartiya Janta Party in 2014 General Election) critically examines the performance of Bhartiya Janta Party in General Election of Parliament held in 2014. The analysis of election results of cross section of Indian states and Union Territories provides the content of this chapter.

Chapter 5 (Determination of Seats Won by Indian National Congress Party in Parliamentary Election, 2013-14) deals with empirical results of the electoral performance of Indian National Congress in the general election of parliament in 2014.

Chapter 6 (Conclusion, Findings and Future Research Possibilities) briefly presents the findings and conclusions, policy implications and possibility of future research.

CHAPTER TWO

REVIEW OF LITERATURE: DEMOCRACY AND DEVELOPMENT

Preview of the Chapter

The chapter contains the review of four Indian and seven empirical studies based on the panel data of 90/100 countries. Gupta-Prakash model specifies outcomes of voting for electing leaders of Parliament and the function of per capita real SDP of states, industrialization which is also a proxy of urbanization, literacy, a proxy of human capital as the measures of economic development; roads, radio-sets and news-papers per lakh population are also used as measures of transportation and communication in regression models. Virmani, however, used a stochastic model, and considered factors such as economic growth, agricultural development, expectations, governance and incumbency as the base of success of political parties in elections. Pavithra emphasizes caste, community and ethnic identities as basic factors of voting behavior of Indians. This differs from the studies of Barrow, Rodrik, Tavers, Przewoski and Limongi etc. who specify economic growth as the dependent variable of regression models. Economic freedoms are assumed to be embodied in secure rights to property, economic stability, public expenditure and consumption while political freedoms, and hence level of democracy, are supposed to be represented by the prevalence of rule of law, the size of the government, efficiency of governance, etc. The chosen studies contain the review of a large number of previous studies.

2.0 Background

Since incorporation of one chapter on review of literature is mandatory in a Ph.D. thesis, therefore, this chapter is designed to fulfill this requirement. Furthermore, a review of literature confers the following concrete benefits on a research scholar: (i) It familiarizes the scholar with what has been done in the previous studies; (ii) How the studies have been conducted, that is, what methods and models have been applied to the data in empirical analysis; (iii) What objectives have been pursued and which of these have been realized'; (iv) What hypotheses have been evaluated and what type of hypotheses have been empirically validated; and (v) What is the contribution that has been made to the stock of knowledge by earlier scholars. This knowledge endows the scholar to select an appropriate topic and an aspect which is in real need of further research. The scholar also learns which data base has been used and not used in empirical research. The strengths and limitations of earlier research studies also become known to the reviewer. However, an individual

investigator faces constraints of (i) Money, (ii) Time, (iii) Other material and non-material resources, (iv) Limitation of access to the existing stock of knowledge due to spatial location of the researcher, and (v) Intellectual capital possessed by him/her, though the review enhances the intellectual capital stock of the reviewer. Therefore, one cannot be exhaustive in one's endeavor to review all the studies that have been conducted in the past. Time and place of location of the scholar also impinge upon this effort. The present researcher has also been constrained by these limitations. Consequently, the review of literature incorporated in this chapter is based on selectivity approach which has also been dictated by the multi-disciplinary nature of the topic of investigation. The review includes study of relationship between democracy and development of national economies. Therefore, one part of the review has to focus on theories of economic growth which is part of growth economics while the other part focuses on political theory related to government and governance. However, the review has focused on studies which have directly dealt with the theme of relationship of democracy with economic growth. Needless to say that multitude of indicators of economic growth had been used in growth economics; however, consistent increase in per capita nominal or real GDP has been most commonly used as indicator of economic development/growth. This indicator has also been used in practically all the studies reviewed in this chapter. According to James Bovard, an American author, Democracy must be something more than two wolves and a sheep voting on what to have for dinner. Speaking pragmatically, democracy should provide such a set up where all three should be having dinner of the same quality without any fear. It is only autocracy which breeds and nurtures inequality in the socio-economic status of people. But in reality, democracy has also varied hues and shades. Consequently, different authors have used different indicators of democracy, and all have been a part of democratic polity. Traditionally, democracy has been perceived to the political system in which the government is of the people, by the people, and for the people. It implies that the government is formed by the choice of the majority of the people and it works to fulfill the expectations of the people and attend to their concerns and problems. All the above mentioned variables and parameters are the part of democratic polity. However, the authors of the reviewed studies have chosen the indicators of democracy differently according to the objectives of their studies.

First, the selectivity approach to choose studies for extensive review focuses on inclusion of studies of developed economies of the West and Under-developed economies of the third world. All these should be taken together in a cross section data base. These studies comprise analysis of development under democratic as well as autocratic rules. This part relates to the election of central governments of the countries in the cross section data base.

Secondly, our focus is also on the studies that deal with the election of leaders at the level of states/provinces.

Thirdly, the review has also focused on studies that deal with the election of local self-governments. A comparison of growth of local economies under nominated and democratically elected local leaders is made. Incidentally, democratic elections may also take place at local level in different formats and procedures: (a) election is direct and voting is done by the raising of hands in the presence of contestants and other influential persons. In such cases, free and fair voting is generally not possible. The Panchayat elections in India used to be conducted in this manner before the passing of legislation of local self- government rule, and (b) direct election by this process was subsequently replaced by Panchayati Raj legislation. The practice of direct election in the presence of influential persons and elites of the society prevailed in some Scandinavian countries also for some time, and there also it came to be replaced by secret voting. Thus, local leaders are elected by secret voting or the raising of hands in open meetings held for electing leaders.

However, the review mainly focuses on the relationship between democracy and development, irrespective of the levels of governments for which the elections are held.

In the modern techno-centric age of knowledge where explosive growth of both knowledge and technology occurs, it is practically impossible to undertake a comprehensive review of all studies even in a new field of research like inter-relation between democracy and economic growth. Therefore, the author has been constrained to opt for the selectivity approach which focuses on reviewing only those representative studies which have made important contribution to this emerging field of study. However, the studies which have been extensively and

comprehensively reviewed in the chapter are the studies which contain massive amount of knowledge on the topic selected for the present research study.

The scholar has reviewed ten research/working papers though he has also been the beneficiary of thoughts and ideas of other than those whose works have been reviewed and cited in these ten papers. This has, in fact, mitigated the limitation of selectivity approach of review to a great extent.

The review comprises four studies of India and the remaining studies under review relate to the rest of the world, including one study of Indonesia. The detailed review of selected studies is contained in ensuing pages.

2.1 Review of Indian Studies

To the best of knowledge of the author, the first ever study of inter-relation between democracy and economic development has been conducted by Surendra Kumar Gupta and Shri Prakash which is reviewed hereunder.

2.2 Surendra Kumar Gupta and Shri Prakash

Economic Development and Voting Behaviour in India, *Guru Nanak Journal of Sociology,* Vol. II, No. 2, 1981. The preliminary version of the paper was presented at the Eighth World Congress of Ethnological and Anthropoligical Sciences, 1980, Vigyan Bhavan, New Delhi.

This paper is probably the first ever study of casual relation between economic development and voting behavior in a democracy based on universal adult franchise. The authors opine that India's freedom struggle comprised not only of political independence, but it also focused on economic development and social restructuring in a democratic polity. In fact, India had exercised democratic choices in elections of provincial assemblies even during the British rule in 1930s. National leaders attributed economic under-development and social ills to alien rule and emphasized political independence as the panacea for solving all problems of Indian society and economy. This generated revolution of rising expectations among the masses who demanded creation of roads, educational, health, energy, transport facilities and other projects of economic development from their elected representatives. The clamor and pressure of the masses upon political leadership resulted in a direct relation between development and electoral success. Therefore, development came to be treated as the indicator of performance of the ruling party and their representatives.

Thus, the authors implicitly consider unsatisfactory delivery of development resulting in rising (i) unemployment, especially among the educated, (ii) inflation, (iii) high incidence of taxation, and (iv) inequalities of personal income distribution and regional inequalities of development as anti-incumbency factor against the ruling party(ies) in the electoral battles. In such cases, incumbency became the negative factor against the ruling party.

Various researchers have highlighted competing theories of relation between political regime and economic development. However, the newly independent countries of the third world have offered varied evidence to support or refute the above thesis. One strain of thought perceives economic development as the necessary condition for democracy to survive and grow.

However, several scholars, like Yogesh Atal, refute this though refutation may not be fully supported by emerging evidence. Prakash-Gupta argue that there is some evidence to support Atal's thesis that in a traditional society, such factors as kinship, caste, religion, language and region exercise decisive influence on voters' choices who remain largely clung to traditional mode of socio-political and economic behavior. Gupta-Prakash also go a step ahead and argue that the influence of such activities of contestants as distribution of cash, or payment in kind like bottles of liquor, blankets and other gifts to voters would have not come into vogue if voters' choices were strictly conformed to factors cited by Atal. Gupta- Prakash further assert that as a traditional society is enveloped in the process of social transformation into a modern one and consequently its economy also undergoes structural transformation with successive movement from lower to higher stages of development and economic growth, the voting behavior is largely conditioned and guided by economic factors in general and economic development in particular. This is also supported by the BJP's slogan of 'rapid development with sabka saath and sab ka Vikas'; which refers to inclusive growth of the economy of the country. The recent bye-election of Delhi Assembly, held on 23rd August, 2017, strongly amplifies this. It is evident from the fact that the voters opined that notwithstanding which party or candidate wins the election, they want their MLA to work for the growth of the constituency: ''Bawana Polls Low, But Demands growth'' the heading of the news item in The Times of India, 24 August, 2017) amplifies this. The voters in their interaction with the correspondent of TOI highlighted the following

problems of development: (i) Poor condition of roads, (ii) Absence of facilities of education and health care in the villages of the constituency, (iii) Poor street lighting, (iv) No major development project in the recent past. This micro level picture of one of the 70 constituencies of Delhi Capital Region reflects the wishes and aspirations of electorates at macro level across the country. This suggests that Gupta-Prakash hypothesis about direct link between economic development and voting behavior in local, state and national elections is based on grass-root reality.They proposed a more comprehensive back-drop and empirical analysis than Campbell (1954) and Atal (1971) by postulating that the voters' behavior, as reflected by percentage of voting, is related to their political awareness and ideological commitments which, in turn, depends on such demographic factors like age and gender composition of electorate and socio-economic factors like education, occupation, income and exposure to mass media. All these factors, taken together, are envisaged to influence the degree and nature of political participation. Inter-state differentials of these factors are postulated to lie at the base of inter-state and inter-temporal variations in percentage of voting in different elections. It is interesting that Gupta-Prakash hypothesis has anticipated quite a bit of development of research in this emerging area of investigation.

2.2.1 Major Findings of the Study

 Researchers have prepared a state-wise index of percentage of valid votes in election on the basis of 1952 voting percentage in 15 major states of Indian Union. They examined inter-temporal and inter-regional variation in voting percentage and found that (i) on the whole, voting percentage tended to increase through time though 4 states in 1957 and 2 each in subsequent elections showed a decline in voting percentage. Thus, the percentage of votes cast in an election has varied widely between regions and it has varied from election to election. Voting percentage has declined in a few states, but the number of such states has also decreased with time so much so that the number became zero in 1972. Votes polled in most states have increased; (ii) The coefficient of variation in the states ranges from 56 to 85% which highlights the high degree of variation in voting percentage among the states and elections; (iii) Relatively, more economically and/or educationally developed states like Kerala, Tamil Nadu and Panjab recorded successively highest voting percentage in elections from 1952 to 1972 while

educationally backward and economically under-developed states like Orissa recorded the lowest percentage of votes across elections. From this, authors infer that education, which is directly related to occupation and income, and economic development are directly related to political awareness, and hence, they affect the behavior of the electorates. They attribute it to rise in the proportion of educated and younger electorates, political environment created by frequent defection of legislators, split in Indian National Congress party, abolition of privy purses and nationalization of private banks. These findings are also supported by high values of coefficient of variation. It has a minimum value of 57% in 1967 and a maximum value of 86% in 1962. Coefficients of variation also establish that percentage of voting has varied widely among regions in every election held since 1952. However, inter-state variations have tended to decrease substantially during the period of observation. Decline in inter-regional variations might have also been due to the narrowing down of socio-economic distances between states. It is interesting to find that several of these indicators of democracy and development have come to be used by such scholars as Dani Rodrik, Tavers, Barro and others. The coefficient of variation has also been used by Tavers et al.

Various Researchers opine that economic and political factors are not only intertwined but these also reinforce the effect of each other on the voting behavior of electorates. Poverty, un-employment and inflation are the basic problems of all countries, and the solution of these problems affects the political and economic stability of developing and developed countries though these problems are more acute in developing than developed countries. Developing countries have relatively weak institutional base, no tradition of political democracy, and need to start development from the scratch which accentuate the progress of development. Therefore, it is believed that evolution of political democracy and economic development moves together. Thus, Gupta-Prakash differ from Pye (1972). They highlight the fact that failure of political rulers in several Latin American countries to control inflation and reduce poverty and unemployment resulted in the loss of political power.

Gupta-Prakash used bi-variate regression model to examine the nature, direction and magnitude of relationship between economic development and voting behavior. They analysed economic development by the following six indices: per capita

income, proportion of industrial workers in total workforce, urbanization, education, circulation of newspapers and number of radio-sets per 100,000 population. It is obvious that the authors of this paper have taken a broader view of economic development by including the most important variables that change together in process of development. Thus, their approach to development diverges from the traditional concept of development as a process resulting in the growth of income or per capita income. The approach comprises the views of many scholars, (Clark 1954, Prakash 1976, 1977, 1978, Brown 1977, Schultz 1968, Atal.Yogesh, 1971, Gupta, S.K., 1975). Thus, the above listed factors of economic development are hypothesized to be the determinants of voting behavior of the electorates. As the elections are the core elements of democracy, Political Researchers treat elections in India as the proxy of democratic polity. Freedom to choose rulers of the country is assumed to reflect the right to property, right to pursue faith and occupation of one's choice, freedom expression and right to settle down anywhere in the country. Percentage of votes cast is treated as an indicator of voting behavior. Since the percentage of votes cast in five elections of Indian parliament differs from 1952 to 1972, the aggregate time series is quite short. Consequently, the extent of temporal variation of percentage of voting may also be inadequate. Therefore, the authors used cross section data of states' election in 1962. The 1962 election is the mid-point of five elections. Besides, cross section data base of regression model is assumed to reflect the long term relationship of voting behavior with development. Thus, the authors of this paper also seem to have paved the way of regression modeling and CV as important methodological tools of empirical analysis in the subsequent research studies on this topic.

From the least square estimates of six regression models of percentage of voting on indicators of economic development, the researchers find that industrialization is the most decisive determinant of votes polled in elections. The non-significance of the regression coefficients like (i) per capita income, (ii) urbanization, (iii) education, (iv) radios, (v) news-papers, and (vi) composite index of all six factors of development are not statistically significant at 0.05 probability level. The researchers do not ignore the posited relation between voting behavior and economic development due to the non-significance of regression coefficients of indicators of development. Rather, they attribute the non-significance of the regression

coefficients of above factors to insufficient degree of inter-state differentials of these development indicators as non-consequential. This may be imputed to the fact that the scarcity of investable resources and concentration of natural resources like big and perennial river systems of water resources and minerals led to the approach of selectivity in the location of big industrial public enterprises as mega-steel plants and multi-purpose dams like Bhakra-Nangal in few states, while such less capital intensive projects as radio-stations, schools, hospitals, urban expansion etc. were designed to spread development momentum widely over space (Prakash, Shri and Mohapatra, A., 1981).

After this, they move forward to examine the performance of political parties which participated in these elections. The political parties were grouped into three categories: (i) Indian National Congress, which ruled over most of the states and at the Center; (ii) National Opposition parties like Communist party of India, which ruled in Kerala where power changed hands between INC and CPI and their coalition partners, Socialist party of India and Praja Socialist party, etc. were other parties in this group; and (iii) Regional parties like DMK (Tamil Nadu), Akali Dal (Panjab) and National Conference (J & K). Non-Congress parties also have had opportunities of forming coalition governments for short period in states like Bihar, Haryana, Orissa, MP, UP and West-Bengal.

The performance of parties is measured by percentage of total seats won and percentage of total votes polled by a political party in assembly elections. Indices of proportion of seats won and proportion of votes polled by each of the 3 categories of parties is based on their respective   performance in 1952 election. The analysis of these data shows that in all elections of assemblies of the states, the party/parties coming to power secured greater proportion of all seats than its share in total votes polled; that is, elections were won on the basis of minority votes.The inference holds true for Indian National Congress party. The percentage   of seats won by Indian National Congress had invariably been far greater than the percentage of votes polled by it in different elections in the states included in the study, except the states of Kerala, in 1957, Punjab, West Bengal in 1969, and Tamil Nadu in 1967 and 1972. As against this, proportion of votes polled by the winning Non-Congress parties had exceeded the proportion of seats won by them. But like the Indian National Congress party, opposition parties like CPI and CPl(M} in Kerala in 1957

and 1967, in West Bengal in 1972, Akali-Dal in 1969 in Panjab, DMK in Tamil Nadu in 1967 and 1972 and National Conference in J & K came to power on minority vote.

However, the percentage of seats won by Congress party decreased in nine states in 1957 whereas it won more seats in 1957 than 1952 in the remaining states. Maharashtra recorded the maximum decrease in seats won by the Congress party while West Bengal showed the minimum decline in seats won by it. Andhra Pradesh records the maximum increase in seats won where Congress party secured 82 percent more seats than before. The minimum increase of 25 per cent in seats won by Congress party is registered in Gujarat. However, Congress won less seats in six states in 1962. Thus, the authors point out the overall declining trend in the political hold of Indian National Congress in India over the years.

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declining trend in the political hold of congress in India over the years. Researchers use these data for estimating 9 log-linear regression equations for three categories of political parties; (i) log of seats won as a proportion of total seats, (ii) log of seats won as a proportion of total seats contested by the party/coalition parties, and (iii) log of votes polled as a proportion of total votes cast are treated as a function of composite index of economic development for each of the three categories of parties separately. The OLS estimates of these functions reveal that (i) The coefficient of log development index is significant at 0.05 probability level. Thus, development significantly affects the proportionate share of votes polled by Congress. Therefore, development performance of Congress as a ruling party is inferred to be the significant determinant of its electoral success in so far as the proportion of total votes polled by it is concerned. However, the development index does not explain the seats won by Congress as a proportion of either total assembly seats or total seats contested by it. As Congress party has been contesting almost all assembly seats in all states, it does not make much difference in its case whether total seats or seats contested are taken into consideration as the dependent variable. Thus, there is some evidence to support the thesis that the success of ruling Congress party in democratic elections depends basically on its delivery of economic development.

As against the Congress, composite index of economic development emerges as the significant determinant of seats won as a percentage of seats contested by other national political parties. But in the case of Non-Congress parties, composite index of development does not significantly affect either the seats won as a percentage of total assembly seats, or percentage of votes polled by these parties.

In case of regional parties also, composite index is not significantly related either to the percentage of votes polled or seats won as a proportion of total seats or seats contested by the regional parties.

Regional and other national parties have been much smaller both in size and influence than the Congress party. Substitution of total seats for seats contested in their case makes a good deal of difference to the empirical results. Therefore, seats won as a percentage of seats contested can be taken as a better indicator of performance than seats won as a percentage of total assembly seats in their case. All non-Congress parties have been in opposition most of the time and their influence is confined to one or two states or even a region of one state. Therefore, in this case,

seats won rather than votes polled as the dependent variables may better reflect their standing. These dependent variables change with composite index of development significantly. Therefore, these results can be taken to validate the hypothesis that economic development affects the behavior pattern of voters in democratic political regimes. As against the Congress, composite index of economic development emerges as the significant determinant of seats won as a percentage of seats contested by other national parties. In their case, composite index of development does not significantly affect either the seats won as a percentage of total seats, or percentage of votes polled.

The importance of the study lies in its pioneering nature which might have paved the way for subsequent studies on inter-relation between democracy and economic development in India and abroad. Besides, the study might have also influenced the choice of regression model and coefficient of variation as a methodological tool used in subsequent studies for the analysis of data. However, there are only limited number of studies which focus on the effect of democracy on development or impact of development on outcomes of democratic elections. This study has focused exclusively on second facet of relation of development with democracy.

2.3 Pavithra Suryanarayan (2016), Inter-Group Inequality and Voting Behavior, Politics, Society and Culture, August, 15.

This is an interesting study dealing with the inter-relation between political regime, voting behavior and inequalities of development among different social groups in India. Thus, the study focuses on an aspect which had not been covered by Gupta-Prakash's study. The author, like Yogesh Atal, seems to focus on social stratification of demographic factor. The author takes political democracy as the framework of study to examine the effect of inequalities on voting behavior of the people. The author, like Dr Ram Manohar Lohia, seems to implicitly assume that social stratification into multiplicity of ethnic identities like language, religion and politicized umbrella caste categories (such as upper castes, backward castes, and scheduled castes) as well as highly localized sub-caste/kinship groups of "biradari" or "jati'' coincide with economic inequalities in general and developmental inequalities in particular.

The research question addressed by the author is '*If individuals hold multiple identities, then which of these identities matter to voters at election time and why?*'

As an answer to the query posed above, she quotes from the paper of John Huber and Pavithra Suryanarayan (2016), titled "Ethnic Inequality and the Ethnification of Party Systems: Evidence from India," published in *World Politics, that the extent to which ethnicity matters to voting behavior depends on the differences in the economic well-being of ethnic groups in the given political system. When some ethnic groups are wealthy and others are poor, then the salience of ethnicity in politics increases as this creates two reinforcing political cleavages of class and ethnicity'.* Thus, the author considers the combined effect of both negative and positive socio-economic factors on political system via voting in elections. It implies that the privileged ethnic groups support such political party/parties and politicians who confer economic benefits upon them while the under privileged groups opt for changing the currently ruling party/parties by voting for those who are perceived to belong to the ethnic group of voters. Thus, current economic inequalities among different groups are hypothesized to endow groups with different preference ordering for different public policies, especially the economic/financial policies in India. In our opinion, the author seems to overlook the fact that even in a developed country like U.K., people exercise choice among Conservative, Liberal and Labor parties in elections according to the policy preferences. The only difference is that class differentials coincide with ethnic and caste differentials in India. However, economic factors dominate social stratification in both the cases.

The author empirically tested her hypothesis. She examined the ethnic basis of party support in the Indian states. She used data from the National Election Studies of 1999 and 2004 conducted by Lokniti-CSDS. She finds that the *jati/caste exercised greatest influence on* people's voting behavior whereas religion exercised the least influence on voting behavior. She avers that *jati* influenced most in such states which had greater economic inequality among jatis. In such states, voters picked the same parties which have members of their co-jati. However, the author has drawn an erroneous inference about the influence of religion on voting behavior of electorates because religious minorities have been voting for such parties as Indian National Congress, Samjbadi party, Trimul Congress, BSP and CPI/CPI (M) which profess secularism even though their commitment to secularism is skin deep as it is confined to the winning of Muslim votes. Besides, these parties sponsor candidates belonging to minorities because the minorities constitute a substantial proportion of electorates which nullifies the influence of religion. She concludes that ethnic politics in India has a stronger economic component than

previously recognized. She seems to be oblivious of Dr Ram Manohar Lohia, the founder of Socialist Party in India, who was the first to recognise that poverty of the people and their caste coincided in Indian social structuring. Interestingly, Shri Prakash (1992) found that most of the dropout school children were girls and those who belonged to Scheduled Castes and Scheduled Tribes because of their parents' poverty. Deprivation from education led to the denial of high income occupations and jobs.

However, an interesting finding of the paper is that the greater inequality *among the* jati groups resulted in higher ethnic voting, but increased intra-group/jati economic inequality did not adversely affect ethnic voting. From this, she concludes that this is the tentative evidence to support the thesis that factors other than economic wealth can create solidarities in voting behavior among members of the same ethnic group. She examines it in another paper titled, "Social Inequality and Right Wing 2.3.1 VOTING – EVIDENCE FROM THE INDIAN STATES,"

2.3.2 PAVITHRA SURYANARAYAN (2016), "*Social Inequality and Right Wing Voting – Evidence from the Indian States*", *World Politics.*

Above is another paper authored by Pavithra Suryanarayan in which she investigated the factors that induce poor upper caste voters to support the Bharatiya Janata Party (BJP). She designates BJP to be the "right-wing party which advocates less statist intervention in the economy, fewer government handouts, anti-affirmative action based policies and a greater role for the private sector".The terminology used by the author in the above statement contains some misleading adjectives as fewer interventions, fewer government handouts and anti-affirmative action policies. This runs counter to the pro-poor policies followed by Modi government so far since 2014. The fact is that all political parties in India may be classified into two categories :(i) Left of the center parties such as Indian National Congress, Samajwadi party, CPI, CPI (M), RJD, JD (U) and TMC; and (ii) Right of the center parties such as Swatantra Party (Now extinct) and BJP (erstwhile Jan Sangh). Ever since the adoption of establishment of Socialistic Pattern of Society and secularism as a political strategy to garner minority votes, these two have become the part of the rhetoric in Indian polity. The fact is that Prime Minister Narsimha Rao (INC) replaced Planning and Socialistic Pattern of Society by New Economic Policy for providing space to private sector and drastically reduced state interventions. Indira Gandhi (INC) during seventies and Rajiv Gandhi (INC) in eighties attempted to move the Indian economy towards market economy (Prakash, Shri and Ghosh, Shankar, 1977).

BJP had, however, accelerated the pace of economic reforms during its rule from 1998-99 to 2003-04 and after winning the election in 2014. But it has doled out much more to the poor than any earlier government. How does the author call BJP as the party associated with "fewer government handouts, anti-affirmative action based policies"?

Her observation that "The poor's support for right-wing parties is puzzling because it suggests that they are choosing parties that work against their economic interests. Yet, we see this phenomenon occurring in a range of developed and developing countries from the United States to India". So far as India is concerned, poverty is not uniform in its incidence since there are poor who hugely suffer from malnutrition as they live just above starvation line; then, there are poor who live just below the poverty line and those who live at the poverty line (See, Prakash, Shri and Sharma, Amit, 2017, Sharma, B.D., 1992, Prakash, Sharma, Shalini, 2005). However, her view overlooks the fact that the so-called right wing BJP had also been offering 'Sabka Saath and Sabka Vikas' as a part of its agenda; the slogan solicits cooperation from all for inclusive growth.

BJP has just now initiated the policy to raise the income cap for distinguishing creamy layer among the poor to enable larger number of poor to get the benefits of numerous welfare programs of the government. It seems that author's location in U.S. has made her oblivious of certain facts of public policies under regimes of different political parties in India.

She argues that the right-wing parties are particularly appealing to poor voters in the context of high *social inequality* and not simply economic inequality. She conceives social inequality in terms of distributional differentials of status defined by birth in a specific jati/caste which she attributes to typical legacies of hierarchical social orders. She emphasizes persistent existence of social inequality in several societies with a history of slavery, aristocracy and colonialism. But the caste-system is the relic of the past in the Indian case. She opines that right-wing parties may successfully woo the poor voters born into "high-status" social groups with appeals to group status.

According to her, the rank in the social hierarchy is most important for "high-status" voters which they perceive to preserve and perpetuate through the control over segregated social institutions. She further states that due to competition offered by "low-status" groups for access to institutions considered to be instrument of maintaining group's social rank, poor voters from high-status groups become susceptible to appeals from right-wing

parties. She avers that the poor voters gain both *psychological and material* benefit by aligning with upper-status group from access to specific resources that the group controls which demarcate inter-group boundaries. Ms. Pavitra overlooks the fact that many Brahmin and other upper caste persons serve as peons under the IAS/IPS officers of lower castes who get the benefit of reservations in educational institutions and jobs. No party, including BJP, has ever challenged reservations. So, what type of gains from particular pattern of voting that she is talking about remains hazy?

She examines the effects of announcement on electorates by former Indian Prime Minister, V. P. Singh on August 7, 1990, to implement quotas in central government jobs and higher education for backward castes, based on the recommendations of the Mandal Commission. She used taluka (sub-district) level caste and education data from the 1931 census for the Madras Presidency, the Bombay Presidency and the United Provinces. These provinces account for constituencies in seven present-day states. She formulates the concept of the new variable which she calls *Brahman Dominance* to measure over representation of Brahmans in the literate population of a taluka over their actual population in such places where Brahmans dominated education. She presumes that Brahmins wielded more caste-based power than others. She, however, overlooks the fact that a certain proportion of total constituencies in a state are reserved for SC/ST candidates and these constituencies are dominated by SC/ST and OBCs.

The author infers from the 1931 Census data she used that the electoral constituencies of the states, having greater *Brahman Dominance* in education in 1931, reported large increase in voting for the BJP in elections held after 1990. However, no such correlation between *Brahman Dominance* and right-wing voting existed before the affirmative announcement of action.

Both inferences, drawn by the author, beg the questions about their empirical validity. First, 1931 population data are too old and obsolete to be used for elections held more than three decades after the census. Partition of India resulted in large scale migration of Muslims from India to Pakistan and immigration of Hindus of all castes from Pakistan and Bangladesh to India. This altered not only the size but also the caste and religious composition of population of modern day India. Moreover, the adoption of family planning practices by educated and prosperous high caste Hindus limited their population growth whereas SC/ST/OBCs remained largely out of the circle of family planning practices during fifties, sixties, seventies and eighties and it still remains limited to fewer

families of SC/ST/OBCs till date. Besides, educational development and distribution of schools and colleges among all states brought about huge increase not only in numbers but also in gender, caste and religious composition of students. Such radical demographic, educational and structural changes made her premise untenable empirically. Her inferences also run counter to substantial proportions of total votes polled by BJP in 2014 parliamentary election and assembly elections thereafter. She claims to have further used individual-level survey data from the 2004 National Election Studies to examine the BJP's vote amongst Brahmans versus other caste groups. Her paper, accessible to the author from internet, does not provide any information about the election related studies based on survey data. Hence, one does not know the authenticity of her data base.

She claims that data analysis shows that Brahman voters were more likely to vote for the BJP if they lived in a constituency with greater *Brahman Dominance* in 1931 compared with Brahmans who lived in low dominance constituencies and other castes. She thinks that more critical to the argument of the paper is that *poor* Brahmans were more likely to vote for the BJP in constituencies with higher levels of *Brahman Dominance* in 1931. These results provide evidence for the claim that supports the fact that the right-wing party emerges from the poor upper-status voters in places with high social inequality. She again overlooks the fact that political parties are prone to nominate candidates belonging to the dominant caste group living in the constituency which practically neutralises the caste appeal.

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2.4 Virmani, Arvind (2004), Economic Growth, Governance and Voting Behavior- An Application to Indian Elections, Working Paper No. 138, Indian Council for International Economic Relations, New Delhi

This is the fourth Indian research paper dealing with inter-relation between economic growth and voters' behavior. Voters' behavior is reflected by the choices exercised by them in favor or against the political parties and their candidates in electoral battles. Governance, especially economic administration and policy formulation, and its

implementation may be envisaged to be the critical factors of economic growth. However, these variables may differ in different segments of a democratic polity under the rule of different political parties. Besides, economic growth even with the same party being the ruling party at the center and states may differ among different regions/states. This highlights the complex nature of the process of economic growth and the multitude of factors that govern, guide and/or determine economic growth. Similarly, democracy is also a multi-dimensional political phenomenon, and periodic elections and resultant rule of the same or different and the differential quality of governance are some of the important aspects of the democratic polity. Virmani, in the above titled working paper, focuses on the impact of governance on economic growth under the rule of different parties in India. Thus, democracy is taken as the exogenously given framework of analysis which allows different parties to come into power through periodic elections. This treatment is similar to that of Gupta-Prakash, Pavithra, Dani, Tavers and several others.

Virmani opines that human behavior, especially voting behavior, is a complex phenomenon which is influenced greatly by social and economic factors such as growth, caste, feudalism, coercion/fear and political alliances. But he focuses mainly on economic factors that underlie voters' electoral choices. He uses a simple model of economic theory of welfare based on conditional probabilities and governance which guide, govern and influence voters' behavior in democratic developing and emerging economies like the Indian one. Economic factors affect democratic choices in two ways: (i) Improvement in economic conditions preceding the election; and (ii) Choices exercised by un-attached and floating voters whose voting decision is not influenced by their caste/religious and political affiliations. Thus, Virmani perceives unattached voters to behave differently from the voting behavior perceived by Pavithra.

Virmani used secondary data relating to general election of 2004 and the elections of state assemblies during two preceding years before the general election of 2004.

2.4.1 MODEL

The following simple model is outlined by the author

$$U=U(Q,X) \tag{1}$$

$$Y'=PQ+(1-T)Y' \tag{2}$$

$$Y=(1-T)Y' \tag{3}$$

and

$$T=TX-TR \tag{4}$$

Y' is earned income, TX is tax rate and TR is transfer income per unit of Y' in the form of quality adjusted public goods and services provided by the government to public, Q is the quantity of private goods purchased by people and P is quality adjusted price of private goods. An underlying assumption is that the welfare of the people depends on the number, quantity and quality of goods consumed by them and the public goods supplied by the government to the people. But this depends on their disposable income and transfer income. The author assumes that the improved/deteriorated economic conditions during the regime of ruling party will lead to increase/decrease in the probability of votes cast by voters for/against the ruling political party. It implies that incumbency factor is dual edged instrument of affecting the electoral fate of the ruling party. The assumption is similar to that used by Gupta-Prakash.

The voters'decision to support or oppose the ruling party in election depends on the change in welfare of an average voter which, in turn, depends on the growth (positive/negative) in income. This differs from Dani Rodrik and others who use the assumption of median rather than mean voter. The disposable income depends not only on the rate of economic growth but also on taxation while welfare, measured by consumption, including durable consumer goods, depends on income available for spending which includes transfer income also. This is depicted by the following relation:

$$dU=U1dQ+ U2dX \tag{5}$$

Besides, change in general price level, that is dP, and change in tax rate, dTX and increase or decrease in transfer payments, dTR, affect the level of consumption, and hence, welfare of the people.

Virmani formulates the following two postulates on the basis of the above:

(I). Probability of voting for the incumbent ruling party increases/decreases with an increase/decrease in rate of growth of per capita GDP; and

(II). Probability of voting for the incumbent ruling party increases/decreases with an increase/decrease in tax rate and transfer payments received by the average voters from the government.

These postulates distinguish Virmani's approach from rest of the researchers who treat outcomes of elections as part of the deterministic models while Virmani uses stochastic approach to capture the uncertain vicissitudes of electoral politics which, in our opinion, transforms economic growth also into the realm of uncertainty. But Virmani has not imported probabilistic calculus to determine GDP.

Virmani distinguishes state elections from general elections if two or more different parties (coalition) are in power at the center and the states. Therefore, he analyses state wise results for the two distinct periods from 1994-95 to 1998-199 and from 2000 to 2003-04. His discussion of electoral results is summarized hereunder.

2.4.2 Madhya Pradesh, Rajasthan and Bihar

State elections in M.P. had taken place 6 months before the general election. Both in M.P. and Rajasthan, the rates of growth of GDP and per capita GDP have declined substantially from 1994-1999 to 2000-2003-04. Consequently, the ruling Indian National Congress party lost the elections in both these states. But Bihar emerged among the high growth performance states during the same period. Hence, RJD of Lalu Yadava retained its power in Bihar. These results conform to Virmani's first postulate that increase/decrease in economic growth, measured by the change in the rate of growth of GDP/per capita GDP, improves/depresses the probability of the ruling party being voted back into power.

2.4.3 Rationalization of Case of Delhi

Following that, Virmani considers the case of Delhi where the ruling party was returned to power by the electorates despite a decline in the rate of growth of GDP/PCGDP. He rationalizes this contradiction between his postulate and the electoral success of ruling party despite the observed negative change in growth rate. He postulates that despite the deceleration of the process of economic growth in the state of Delhi, it remains among the high profile growth states in India. Besides, the factor of governance, as evidenced by the introduction of economic reforms, also helped the ruling party in retaining its grip over political power in Delhi.

2.4.4 Expectations and Bench Mark-Case of Andhra Pradesh and Odisha

Virmani considers expectations aroused by the creation of bench mark by the ruling party and actual growth performance for explaining the election results of these two states. Chandra Babu Naido and Navin Patnaik were in power in these two states. Chandra Babu

Naido had earned accolades nationally for the high growth performance of AP under his rule whereas Patnaik had emerged as a low profile leader. Consequently, even though the rate of growth of SDP/PCSDP of AP was marginally higher than the preceding period, yet he lost the election of state assembly due to expectation of much higher growth than the realized rate of growth, which was perceived to be lower than the bench mark created by Naidu himself. As against this, Patnaik won the election despite the fact that the rate of growth of SDP/PCSDP had been lower than before simply because his low profile had not triggered the average voters' expectations high.

2.4.5 Agricultural Growth and Rural Voters

There are no data relating to the voting behavior of the poor or rich, and effect of rural-urban divide on voting behavior. Therefore, Virmani has used the data of agricultural growth during the two sub periods of study. These data reinforce the inference drawn by Virmani earlier about the election results of AP and Bihar. Growth rate of SDP/PCSDP of AP was adversely affected by shortfall in rains which adversely affected the growth of agricultural output greatly. This resulted in the substantial decline in the rate of growth of agricultural output which is the main source of livelihood of farmers and farm workers. This also acted as anti-incumbency factor in case of AP. However, Bihar registered increase in the rate of growth of agriculture output during the same period which worked as a positive incumbency factor to enable the ruling RJD party to win the election in Bihar.

2.4.6 Governance and Public Services

Virmani states that improvement/increase in income and private goods purchased with it are also important factors which influence voting behavior. But it is not the sufficient or sole factor of determining voting behavior. Provision of public services is the second factor on which people's welfare and hence, their voting behavior depends. This is similar to the approach used by Tavers et al. Private goods include food, clothing and durable consumer goods. Public services include police protection, roads, drinking water supply, sanitation and sewerage, public health services, primary education services, trade, agriculture, extension services and quality and quantity of electricity and transport services which are under state monopoly. Virmani notes that the quality of public institutions and their ability to render services efficiently has consistently deteriorated. This has adversely affected the efficacy of governance.

Incumbency refers to the condition of a political party singly or jointly in alliance with other parties for a specified period of time on the eve of election. Incumbency is a dual edged instrument which operates against or in favor of the ruling party. Incumbency as a positive factor depends on the performance of the party concerned during its stay in power. If the economy has been growing consistently and the government is perceived to have been attending to the people's concerns with the use of its ability to keep the public institutions operating to deliver public services efficiently, incumbency will act favorably for the ruling party. Re-election of Sheila Dixit in Delhi, Dig Vijay Singh in M.P., Naveen Patnaik in Odissa, Lalu Yadava in Bihar and Chandra Babu Naidu in A.P. are the testimony to the thesis. However, the same incumbency factor may turn into negative anti-incumbency factor. The same political leaders, Ms Sheila Dixit in Delhi, Dig Vijay Singh in M.P., Lalu Yadava in Bihar and Chandra Babu Naidu in A.P., lost power when incumbency turned negative due to poor performance, especially in the supply of public services and public perception about their integrity in Chara ghotala, Commonwealth Games corruption, Tat- Patti kand in M.P.. High inflation is another anti-incumbency factor.

2.4.7 Anti-Incumbency in Panjab

The Akali Dal lost the election of the state assembly of Indian National Congress, the opposition party before 2004 general election. The reason was that the growth rate declined from sub period one to the second sub-period, and supply of public services also degenerated during this period. However, within a period of about one year, Congress lost the election of Akali Dal since there was neither any improvement in supply of public and quasi-public goods nor was any improvement in the rate of growth of SDP during Congress rule. Besides, Congress was seen by the people to launch a vendetta against former C.M., Prakash Singh Badal.

2.4.8 Non-Economic Factors-Gujarat

The Gujarat election in 2003 offers a little different scenario than the one offered by the other states discussed so far. Though the growth rate declined from first to second period of study, non-economic factors, especially the communal riots, played an important role in the re-election of Modi government. The people perceived that investment declined due to uncertainty arising from no punishment for large scale murders. But the quick restoration of law and order and shifting focus on investment and growth resulted in the

defeat of Congress. Similarly, clearance of Narendra Modi by SIT also played an important role in infusing confidence among the average people of Gujarat.

2.4.9 Political Alliance as Determinant of Voting Behavior-Tamil Nadu

Tamil Nadu offers a case where increased rate of growth as positive incumbency factor may have caused 8% swing of votes in favor of ruling party while alliance of political parties neutralized the negative effect of dismissal of government employees and their subsequent reinstatement facilitated consolidation of votes in favor of the alliance to enable to win the election.

2.4.10 Main Findings of the Paper

The study provides both empirical and logical evidence to support the thesis that the change in the rate of growth, measured by GDP/SDP/PCSDP, directly affects voting in favor or against the ruling party (alliance parties) over a short span of five years gap between two elections. This supports the main contention of Virmani. However, the complexity of regional diversity of Indian polity comes into play in Indian elections where economic and non-economic factors may affect election results differently. Rhetoric about high growth performance of the incumbent raises probability of win of the ruling party since governance and incumbency factors come into play if the rate of economic growth remains muted. Supply of pure public and quasi-public goods is associated with the quality of governance. Public expectation and bench mark emerge as the second decisive factor of electoral success. Alliance arithmetic of political parties has also been found to play some important role in determining the political fortunes of the contestants.

2.5 Sara Moricsz and Fredrik Sjoholm (2014) *Effect of Elections on Economic Growth: Results of a Natural Experiment in Indonesia, IFN Working Paper* No. 2003

This study differs from other studies in so far as it focuses on local rather than national economies under democratically elected and nominated leaders of local self-government while most of the other studies examine economic growth under authoritarian and democratic regimes in a cross section of countries. This study has not taken up results of any contrived experimentation as it focuses on results that emerged from naturally occurred experiment after the over throw of authoritarian rule of General Suharto in Indonesia. It was followed by staggered holding of elections of local leaders at district level. The researchers have referred to the findings of some important studies pertaining

to relationship between democracy and economic growth with a view to provide empirical and theoretical background of the study.

The researchers first observe that the effect of democracy on income and its growth is uncertain because (i) elections may lead to the creation and strengthening of institutions that contribute to improvement in governance; both these factors promote economic growth; (ii) local elites tend to capture power which they use for deriving undue benefits by exploitation of democratic institutions at the cost of community (Bardhan, Pranab, 2002, Acemoglu and Robins, 2008). The authors state that earlier empirical cross country studies found positive correlation between democracy and economic growth but these studies fail to establish causal relation between democracy and economic development. Researchers, therefore, try to establish causal relationship between democracy and economic growth. The researhers focus only on elections of leaders of local-self governments in the districts of Indonesia after the authoritarian regime of President Suharto was overthrown.

However, the elections were staggered due to the fact that the term of office of nominated leaders ended at different times. Therefore, elections were held in a staggered manner in different districts. Elections are taken to be exogenously given, but these elections offered an opportunity of natural experiment which the authors treat as their methodological contribution to existing literature. The claim to methodological innovation is misplaced since there are several empirical studies which examined impact of the new policy of Liberalization, privatization and globalization on economic growth. Change in policy may also be taken to be the outcome of a naturally occurring experiment (Among others, See, Prakash, Shri, 1995, Kiangi, Richard Fue, 2016). The authors use what they call difference of difference approach to data analysis. One difference is the fact of elected and nominated leaders and other difference relates to the growth of these two sets of districts. It may be noted that the authors are probably oblivious of J.S. Mill's twin comparative methods of Agreement and difference. The authors of this paper have used comparative method by focusing on the growth of districts with and without elected leaders. In our opinion, they could have also used the data of districts having elected leaders for comparison of inter-district growth after elections. This would have had election as the common factor and differential growth would have been attributed to factors other than election. A second comparison could have been between the growth of the same district(s) before and after election of local leaders.

The authors also highlight some earlier studies which are based on so called Agent Model (Xu, 2011:1106). They aver that democratic elections make leaders accountable to their electorate. Electorate in such models is presumed to be the principal through election of leaders while government is treated as the agent of realization of electorates' wishes and aspirations. Voters entrust their leaders with the performance of certain tasks (Bardhan, 2002: 190-191, Przeworski &Limongi, 1993:58). They further point out that institutional changes in democratic regimes reduce the ability and proclivity of government functionaries to enact such laws that promote corruption and rent seeking deals. Such changes promote economic growth (Barrow, 1990:2). Researchers then quote Bardhan (2002) and Bardhan and Mukerjee (2006) who opine that the corruption need not decline in new democracies. We may point out that benefits of development may be usurped by bureaucrats, politicians and businessmen's nexus. Mr Rajiv Gandhi, the then Prime Minister of India, stated that the benefit of only 60% of development expenditure reaches the intended beneficiaries. Mundhra Case in late fifties/early sixties, Bofors, Commonwealth games corrupt deals, Coal Gate, Chara Ghotala etc. are all examples of corruption in high places in democratic India.

The authors of the paper under review also cite Keefer (2009, 902, 904) who opines that political power may be captured by political leaders/elites through pre-democratic patron–client relationship. It may be added that both money and muscle power may be used by powerful local leaders to coerce or persuade voters to vote for them in democratic polity of developing economies. Poverty, illiteracy and blind loyalty may promote such electoral practices that jeopardize democratic institutions, accountability and transparency. In our opinion, ideology, economic and social problems may be pushed into background by the unchallenged influence of leaders in nascent democracies though their convergence towards maturity may bring about sea change in the behavior of voters.

As against the agent-model, median voter behavior based models have found that democracy results in substantial redistribution of income among different segments of population by taxation and transfer of income/subsidies which reduces capital accumulation which, in its turn, lowers growth (Alesina & Rodrik, 1994, Persson & Tabellini, 1994). The authors of the study under review also refer to studies based on panel data of a cross section of countries which comprise countries with authoritarian and democratic polity and they compare and contrast their economic growth. Such studies use Fixed variable Effects model of panel data by means of which they control time invariant

country specific features that may affect economic growth (Barrow, 1996, Shleifer & Vishny, 1993, Alesina, Rodrik & Waczing, 2005). The authors point out that such studies are based on data relating to two sets of countries (i) The countries where political regime does not change; and (ii) Countries which move from authoritarian or dictatorial regime to democratic regime or vice versa. But change in polity may not be random. It may be the consequence of economic crisis which prompts replacement of authoritarian regime by democratic regime. Indonesia is cited as an example to support this. Secondly, economic growth and consequent high levels of living may prompt the adoption of democratic polity as happened in the cases of countries like Taiwan and South Korea. Besides, increase in such variables as literacy and education not only promotes demand for democracy but also accelerates growth (Persson & Tabellini, 2006,). Acemoglu et al.(2014) tackle the problem of endogeneity by specifying lagged GDP as the determinant and also use instrument variable (IV). They assume that the spread of democracy within the regions has no inter-regional growth effect. They find democracy to be the positive factor of economic growth.

Researchers of the paper under review claim that their approach differs from earlier studies in three respects: (i) Their study focuses on local polity and economy rather than national economy and its relation with democracy; (ii) They focus on democratic election and essential feature of democracy which captures institutional change; (iii) They distinguish their method from econometric models by comparison of growth of district economies having elected leaders with those district economies which have nominated leaders. They further claim that their method is free from the problem of endogeneity which affects cross- country general econometric modeling. But their claim does not hold true since they focus only on one instrument of change embodied in democratic election. The fact is that when a country moves from authoritarian/dictatorial regime to democratic regime, numerous institutions existing before the emergence of democracy continue to operate as before and some new democractic-institutions may be changed and/or new institutions may be created. Hence, both sets of institutional set-up have also some growth promoting features. Thus, the claim of absence of endogeneity is invalid.

The researchers aver that the existing literature suggests a direct relation between democracy and economic growth though there are problems of endogenity that affect the results of research. The authors opine that the process of democratization is never random as it results from conscious political decision.

Besides several factors other than elections directly affect economic growth. Therefore, they garner data from those districts where direct elections of local self-government were held after the overthrow of the regime of Suharto and also from districts which continued to have leaders nominated during the regime of President Suharto. This dichotomy existed because elections of local self-governments were stagered rather than simultaneous. In such districts where the term of office of nominated members was not over, it was not possible to hold the election to elect new team of members for governance. The authors claim to have used an approach to data analysis which they define as difference of difference approach. The authors do not find empirical evidence to support the thesis that democracy and economic growth are directly and positively related.

2.5.1 Major Findings

The authors observe that it is difficult for people to perceive the effect of national policies like trade policy, but the performance of local government and its leaders is directly perceivable by the people. Therefore, the authors focus on the effect of local elections and elected leaders on the growth of district economies of Indonesia. They observe that the growth rates of Indonesian district economies differ sharply among the districts. The average rate of growth of all district economies of Indonesia is 5.3% with standard deviation of 1.7% during the period from 2003 to 2007. However, the minimum rate of growth of Kutni Kartenemara is 0.6% and and the maximum growth rate of Kutai Taimur is 18.8% both of which are located in East Kalimanlai province.

This neutralizes the effect of geographical features of two districts and governance. We wish to point out that both mean and standard deviation are directly affected by extreme values. Therefore, it is the coefficient of variation which is generally used for comparison rather than standard deviation in percentage terms. Besides, the assumption of geographical homogeneity and governance even within a district may not be true. It is much less tenable for the comparison of districts variation if their agro-climatic conditions, level of industrialisation, education and health attainments of the people are not uniform. However, such differentials of factor endowment of different districts are not considered by the authors.

The authors show that the change in economic growth rates of districts with elected or nominated leaders does not differ. They claim their results to be robust and stable since they find that (i) election or its absence does not make any difference to the governance

though they have examined various indicators of governance, including business environment, license, security and infrastructure; (ii) Alternative specifications of econometric model also leave the basic result unaltered; and (iii) Results are not sensitive to changes in definition and measurement of economic growth.

The inference drawn by the authors, however, runs counter to the findings of several extensive studies on this subject. It may be added that mere holding of the elections may not suffice to promote growth. There are instances where elections have been held in controlled democracies like Pakistan, and civilian government has nominal control over armed forces which dictates policy to the civil government. Similar is the case of elections held under monarchy in Nepal. Besides, even after the overthrow of the king, elected leaders of Nepal have not succeeded even in drafting the constitution. Consequently, post of prime minister has become the game of musical chairs. Above all, callously immobile bureaucracy rules the roost.

Bureaucrats control administration. Therefore, election is the necessary but not the sufficient condition for democracy to promote growth. Democratic elections should be associated or followed by requisite changes in institutional set-up, prevalence of rule of law, transparency and accountability and political stability. The above mentioned conditions are needed for democracy to succeed in promoting growth substantially. A proxy of democracy prevails without the above mentioned conditions. At the same time, the study under review may be taken to have deepened our understanding of the nature and dimension of relation between democracy and development.

2.6   DANI   RODRIK   (1998'),   "Democracy   and   Economic   Performance'', Proceedings   of   International   Conference   on   Democratization   and   Economic Reform in South Africa, Cape Town, January 16-19

The paper focuses mainly on reviewing earlier studies on this topic, but he suggests some testable hypotheses in the concluding part of the study. Fani Rodrik also formulates four propositions which he believes to be the basic features of democratic polity.

The author opines that political economy of democracy has been examined to assess its positive or negative impact on economic performance since the times of Plato. Plato considered aristocracy to be better than democracy for society and its economy. This has been the focus of political philosophy ever since then. Rodrik avers that the results of several applications of econometric modeling, the inter-temporal data of a cross section of

more than 100 countries pertaining to relationship between political liberties and economic growth, do not support the thesis of disabling effect of democracy on economic growth.

The author observes that relation between policy and observed economic growth in some East and South East Asian countries, known as Asian tigers under authoritarian regimes, has been found to be positive. These countries registered the world's highest growth rates during recent times. This has resulted in the formulation of the postulate that economic reforms required for rapid growth cannot be effectively implemented in democratic regimes due to pulls and pressures of different economic interest groups. On the other hand, the authoritarian rulers overcome such pulls and pressures.Chile under the regime of Pinochet is also cited to support the argument.

However, a careful look at the available evidence leads Dani Rodrik to conclude that the evidence is less conclusive to support this thesis. Countries such as Zaire, Uganda and Haiti of Africa and several other countries of other parts of the world experienced sharp decline in their economic growth under authoritarian regimes.Besides, he further asserts that economic reforms are not typically associated with authoritarian regimes (Williamson 1994). Reforms for stabilization of the economies of countries like Bolivia (1985), Argentina (1991), and Brazil (1994) were successfully implemented under newly-elected democratic governments during 1980s and 1990s. Poland transited from socialism to capitalism during the same period. He argues that civil liberties and political rights have intrinsic value, which is independent of their economic consequences. Therefore, the fact that the fledgling democracies have not preferred rapid growth of democracy weakens the case against Democracy in the debate Democracy versus Authoritarianism.

2.6.1 Rapid Growth and Democracy Inter-Relation

Rodrik emphasizes the following four features of inter-relation between democracy and economy which he infers from the past studies:

(i) Democracies attain more predictable long-run growth rates;

(ii) Economic performance under democracies is relatively more stable;

(iii) Democracies cope with adverse shocks much better than autocracies;

(iv) Democracies pay higher wages to workers and employees.

However, Rodrik avers that economic life under democracy does not fluctuate randomly.

Consequently, there is less economic instability irrespective of the level of long-run growth. Therefore, he concludes that there is less instability in economic outcomes under a democratic economy than autocracy. He overlooks the facts that (i) generally, capitalism and democracy go hand in hand; and (ii) capitalist economies are regularly subjected to cyclical fluctuation while the averge life of three phases of cycles is 9-10 years. So, what type of stability in democracies is he talking about? In our view, predictability and stability are closely associated attributes which together enable democracies to overcome shocks and disasters efficiently and much quicker than autocracies. Besides, Rodrik overlooks the role of bureaucracy irrespective of political dispensation on the one hand, and coexistence of so-called socialism and democracy with excessive controls over decision making, which makes the system grow considerably low and slow.

According to Rodrik, civil liberties and political rights improve an economy's capacity to adjust to changes in the external environment. Besides, the pattern of distribution of income and wealth under democracy is superior to that in autocracy. This inference stands in dire contrast to the periodically published global lists of billionaires and their dis-proportionate shares in national wealth and incomes in democratic countries.

2.6.3 Examination of Specified Inferences by Rodrik

2.6.3.1 Democracy and Long-Run Economic Growth

He uses a scatter diagram of a sample of 90 countries from which he infers that a strong and determinate relationship between democracy and long-run growth does not seem to exist. But the diagram suggests the existence of a partial relationship between a country's level of democracy and its rate of growth of per capita GDP during 1970-1989 when initial income, education and quality of public institutions were kept invariant. Democracy is measured by Freedom House index of civil liberties political rights on a scale of 0 to 1. Besides, the slope of the partial regression line appears to be virtually zero. He further opines that introduction of a quadratic term in democracy yields the pattern of coefficients similar to those found by Barro (1996), but neither coefficient is statistically significant. Knowledge of econometrics tells us that a non-significant coefficient is as good as zero which suggests rejection of the hypothesis of relationship between the dependent and independent variable. But Rodrik ascertains the factors that underlie the estimated regression equation. He examines individual cases and avers that such high growth countries as Taiwan, Singapore and Korea have low scores in terms of democracy.

As against these countries, Botswana and Malta have performed equally well or even better in terms of economic growth under fairly open political regimes. He further states that the poor economic performers such as South Africa and Mozambique under authoritarian regimes and Gambia and Jamaica are found existing similarly at either end of the democracy spectrum. Rodrik concludes that the mean long-run growth rates do not depend on the nature of political regime.

These results prompt him to test an alternative proposition. Variance of long run rate of growth is smaller in democracy than in autocracy. He postulates that mean growth rates do not significantly differ between democratic and autocratic political regimes. He further infers that the countries prefer democracy due to lower variance of long run growth rates. He uses unconditional as well as conditional coefficients of variation rather than variance of long run growth rates of two sub-samples which he obtains by the division of sample into democracies (score of 0.5 or more, n=45) and autocracies (democracy score of less than 0.5, n=48). Both UCV and CCV for the period from 1960-89 are greater for authoritarian regimes than democracies which support his above stated proposition. Conditional CVs (CCVs) are calculated from the regression which also uses regional dummies for Latin America, East Asia and sub-Saharan Africa.

For neutralizing his results for lower income levels of authoritarian regimes with possibility of greater impact of random factors on growth, he reclassifies the sub-samples on the basis of regression of democracy on per capita GDP and school enrollment ratios. The countries lying above the regression line constitute one group and those below it constitute the second group. This takes care of the effect of random factors. The recalculated values of CVs are consistent with the earlier values, and hence, the thesis stands validated empirically.

Rodrik then examines short term volatility of economic performance under democracy and authoritarian polity.

2.6.4. Democracy and Short-Term Economic Performance

Rodrik empirically tests Sah's postulate (1991) that short run economic performance under decentralized political regimes, especially under democracy, is less volatile than authoritarian regimes. Greater degree of decentralized decisions/policies encompasses greater diversity under conditions of imperfect information regimes and involves lower risk of error. Standard deviation of first difference of log of annual growth rates of three

macro aggregates: (a) GDP; (b) Real Consumption; and (c) Investment are used to evaluate the hypothesis. Standard deviation of annual growth rates of each of the above three variables are regressed on: log Per-Capita GDP, log Population, Exposure to External Risk, and Dummies for Latin America, East Asia, sub-Saharan Africa, and OECD. The negative partial regression coefficient of democracy index in multiple regression function is statistically significant. Thus, greater the level of democracy, lower is the volatility of short run growth rates. As one moves from pure autocracy (Democracy Index=0) to pure democracy (index=1), the volatility index of short run growth rates of PCGDP, real consumption and investment declines consistently. Results show that established democracies such as India, Costa Rica, Malta, and Mauritius have experienced significantly less volatility than countries like Syria, Chile, or Iran if influence of population size and external shocks is controlled. Besides, test of direction of causality shows that causality flows directly from regime type to volatility. Thus, Rodrik empirically validates Sah's hypothesis. Rodrik also validates two of his related postulations that growth of democratic economies irrespective of the length of the period is relatively more stable and hence predictable.

2.6.5 Democracy and Economic Resilience against External Shocks

Rodrik uses impact of successive Oil Shocks of seventies for testing the above proposition. These shocks posed serious payments problems to developing economies. He examines the hindering or facilitating role of participatory democratic institutions in restoring balance and process of growth after the collapse of differential degrees in the economy induced by external shock. He explores the role of democratic institutions in restoring health of the economy. He follows the lead of Pritchett (1997) who examined breaks in trend growth rates in developing economies during the 1970s with 1977 as median break year. Rodrik treats the difference in growth rates before and after the break as the dependent variable of the regression model.Changes in growth rates are regressed on indicators of latent conflict, proxies of institutions of conflict management and other variables. He finds a systematic relationship between the above two variables since countries with greater ethnic and linguistic fragmentation experienced larger declines in economic growth if the influence of all other independent variables is held constant. Democratic institutions provide ways and means of regulating and managing social conflicts through participatory mechanisms and the rule of law which dissipate the adverse consequences of external shocks. The finding is based on the cross section data of

101 countries in 1970. The partial coefficient of democracy in regression of growth rates is highly significant at 0.001 probability level.

2.6.6 Democracy and Wages in Manufacturing

Rodrik regress average wages in manufacturing in US dollars on democratic rights, labor productivity, income and other determinants. He uses the panel data of countries to show that democracy positively and significantly affects average wages if other determinants are constant. But labor productivity (VA) per worker) is the main determinant of wage differences across countries. However, higher per capita GDP and consumption prices also influence wages if productivity of labor is kept constant and all these variablesare also associated with greater democracy. It is, however, a commonly known fact that wages are generally much greater in manufacturing than primary sectors, especially in developing economies.

Thus, Rodrik empirically validates all four propositions that he set up for testing.

2.7 Joseph Tavares and Romain Wacziarg (2001), HOW DEMOCRACY AFFECTS GROWTH, *European Economic Review*, 45, 1341-1378

2.7.1 BACK-DROP OF STUDY

The authors claim to have used new methodology for empirically examining the relationship between democracy and economic growth. Democratic institutions are envisaged to affect growth through various channels. They specify and estimate a system of equations comprising variables of democratic channels affecting growth. They find that increase in human capital and reduction in income inequality under democracy foster growth. But reduction in the accumulation of physical capital and increase in the ratio of government consumption of GDP in democracy adversely affect growth. So, the overall effect of democracy on growth is moderately negative. The authors cite empirical results to argue that democratic institutions are responsive to the public demand which is reflected by enhanced access of the poor to education, health care and lower income inequality. It, however, results in reduced physical capital accumulation. Like Dani Rodrik and others, the authors of this paper also aver that democracy is desirable for non-material and several immeasurable benefits since democracy is viewed as a necessary condition for social justice. It may be added here that democracy entails promotion of social welfare, equitable and inclusive growth rather than growth which bequeaths benefits upon the few privileged sections of society. According to the authors of this

paper, the question whether development of political rights is a determinant or a consequence of material progress is the key policy issue to focus in this study, especially in the context of Latin American, East European and African democratizations and extension of financial assistance by international organizations to developing countries on the condition of political and economic liberalization. This necessitates evaluation of costs and benefits of policies that promote both economic development and democracy.

2.7.1 Relation between Index of Democracy and Economic Growth

The authors find that the simple coefficient of correlation between index of democracy and economic growth is positive but it is weak for the period 1970-1989. To support this finding, the authors cite the findings of Borner et al. (1995) who also find positive coefficient of correlation between democracy and growth in three countries, negative in other three and inconclusive in 10 out of 16 studies. The authors of the paper also cite the findings of Helliwell (1994) and Barro (1996a). These studies found a non-significant negative effect of democracy on growth when other growth affecting factors are held constant. But the authors of this study opine that the weak and negative partial effect of democracy on economic growth hides the costs and benefits entailed in democracy. Therefore, they explicitly identify the channels of influence flowing from democracy to economic growth for determining the economic costs and benefits of democracy. Thus, the authors attempt to fill up one gap in knowledge of relationship between growth and democracy.

The authors use their own definition of democracy as a body of rules and procedures that regulates the transfer of political power and free expression of disagreement at all levels of public life. They, like Huntington (1991), distinguish the concept of democracy from its outcomes and use Freedom House indicator of political rights based on this procedural definition of democracy. They think that the implications of this aspect have so far not been exploited in research. But they selected determinants/factors of economic growth both from political science and economics. These variables not only determine growth but these variables are themselves affected by democracy. Thus, the focus is on bi-directional relationships among the chosen variables. However, the authors of the paper do not distinguish between concurrent and simultaneous relation from the possible lags and lead structure of relations. But the authors argue that democracy increases public consumption and a larger size of democratic government lowers economic growth; the cost of "financing its activities through distortionary taxation far exceeds the economic benefits

of public goods or income transfers'. *A priori* reasoning suggests that democracy adversely affects growth through increased public consumption and decreased physical capital accumulation.

The authors empirically test this thesis and other possible linkages. In this context, it may be pointed out that both public and private consumption promotes growth via consumption multiplier. The authors overlook this empirically validated precept (See, for example, Prakash, Shri and Sharma, Ritu, 2014, Sharma, Ritu, 2014). Besides, the authors also overlook the benevolent impact of public investment on growth while they highlight the adverse effect of taxation on growth. The authors estimate a system of simultaneous equations for the joint determination of growth and democracy. They endogenized growth affecting democratic channels and decomposed total effect of democracy on growth into its components.

2.7.2. Democracy and Growth: The Channels

The authors, like Barro (1996a) and others, opine that democracy-growth channels involve many variables which are related directly or indirectly to growth. Rule of law, free markets, small government consumption and high human capital are highlighted as positive factors of growth. If these variables along with initial GDP are held constant, 'overall effect of democracy on growth is weakly negative'. They cite Helliwell (1994) to point out that some facets of democracy are ''more helpful to subsequent growth than others' as the basis for further probe.

The authors perceive democracy with two important features that influence economic growth: (i) Democracy incorporates the concerns of larger number of poor than the rich which changes the composition of the citizenry who influence the political process of decision making; and (ii) Discretionary power of political leaders is decreased since the political decisions are subject to the constraints of transparency and accountability which is beyond the control of politicians.

2.7.3 Political Instability

Prevalence of rule of law and adherence to the traits of transparency, accountability and opportunities of open debate of policy and its implementation in democratic polity eliminate political instability and uncertainty about policy. Besides, facilitation of peaceful transfer of power from one political party to another political party through periodic elections avoids violent method of political change. This contributes to political

stability and quality of governance which promotes investment and growth. This is supported by empirical findings of Alesina et al. (1996) that political instability negatively affects growth.

2.7.4 Distortions

Power is exercised arbitrarily in autocratic regimes which are not subjected to public scrutiny. Policy makers in such polity use discretionary power to formulate distortionary policies that benefit a few insiders at the expense of the general public. Democracy does away with this and it improves the *quality of governance and* also controls the quality of policy-making by subjecting these to public scrutiny and free debate. Opposition parties offer viable option. The authors use black market premium commanded by local currency; that is premium is determined as the ratio of the difference of black market and official prices to the official price of the currency as the indicator of policy distortions. Distortions in the foreign exchange market are strongly associated with other inefficient policies (Barro, 1991). The authors assume that higher the black market premium over official currency rate, lower shall be the rate of capital accumulation. The above thesis needs empirical validation.

2.7.5. Government Size

Theory envisages a causal link between political institutions and the size of government which is measured by the ratio of *public consumption* to GDP. Meltzer and Richard model (1981) summarizes the inducements in democratic states for public intervention financed from tax revenue while increased taxes obstruct economic growth which, in turn, results in increased poor votes for more public interventions "financed by higher taxes". Mancur Olson (1982) also argued that policy-making in democracies is generally captured by interest groups which results in the increased size and scope of government.

However, the misuse of power by a few is better controlled in democratic polity. The thesis was tested and empirically validated by Pommerehne and Schneider (1982) with cross-section data of Swiss municipalities, and they found that representative government spends more than direct governments.

Bureaucrats/autocrats increase their leverage over governmental activity in the economy by multiplication of their number and roles Niskanen (1971). However, Mauro (1995) showed that independence and the effectiveness of the judiciary, level of corruption and red tape adversely affect economic growth.

But data of these variables are available only for the 1980s which would considerably limit the time period of study and the countries covered by the study. Black market premium, associated with other inefficient policies, is used by the authors as a proxy for the quality of governance and macro-economic instability. Inflation rate is used as the additional channel of instability. As it is not theoretically clear whether democracies spend less or more than autocracies, the authors seek to examine this issue by empirical analysis.

The authors also cite the finding of Barro and Sala-i-Martin's simple endogenous growth model (1992) that there exists a growth-maximizing rate of taxation if public spending is productive. Alesina and Rodrik (1994) find that individuals vote over taxation in an economy with unequal distribution of capital and labor. The lower is the ratio of capital income to labor income of the median voter, larger is the tax rate and lower is the growth rate. The growth-maximizing tax-rate may be chosen if the median voter owns only capital in an economy. These theories suggest a negative effect of government size on growth.

Barro (1991) has found a negative relationship between government consumption and growth.

2.7.6 Human Capital

As democracies are more responsive to the basic needs of the people than dictatorships, their policies promote human capital accumulation by spending on social capital like investment in health and education, nutrition, potable water supply, etc. But the authors point out the need for the evaluation of endogeneity involved in human capital accumulation.Greater human capital is both a cause and consequence of democracy. Therefore, the authors examine reverse causality of democracy by instrumenting in the human capital channel. The authors like Engerman et al. (1999) and Wacziarg (1999) provide empirical evidence of positive association between democracy and human capital. Interestingly, Saint-Paul and Verdier (1993) and Mankiw et al. (1992) posit political equilibrium with the democratic trait of redistribution of income through public investment in education.

2.7.7 Income Inequality

Like Danik Rodrik and others, the authors of this paper also highlight the income reduction role of democracy which directly affects both public consumption nd public

investments. The social choice under democracy encompasses income redistribution mechanisms which reduces inequality in income distribution since greater weight is attached to the concerns of the poor who constitute the majority.

Similarly, the studies by the authors Alesina and Rodrik (1994) and Alesina and Perotti (1996) show that lower income inequality is directly related to higher taxation and lower economic growth.

2.7.8. Trade Openness

The degree of *trade openness* and the extent of political freedom are envisaged to be directly related while protectionist policies are supposed to be preferred for benefiting a few producers at the cost of consumers. Democracies give greater weight to the preferences of the latter group than autocracies. However, the authors also point out that the models of endogenous protection embedded in political economy with voting and lobbying easily generate a high level of protection in democracies. We may cite the example of India where Kulaks lobby exercised great deal of influence in the determination of minimum support and procurement prices of food-grains. Besides, democratically planned economies like the Indian one are also found to have opted for the policy of restrictive trade policy to extend protection to newly developed economies. One may also cite the examples of Germany and U.S. where listian arguments were used to advocate and adopt protectionism in democratic polity.

Potential beneficiaries of protectionism influence policy through donations to political parties and exercise of control over media through advertising. Some industrialists may themselves be the owners of newspaper chains and television channels to influence public opinion. Therefore, the effect of democracy on trade openness is also treated as an issue of empirical verification. However, Tavares (1998) uses factor endowment theory of trade to opine that democratization leads to increased trade openness in poor labor abundant countries rather than in capital abundant rich countries (Sachs and Warner, 1995 and Wacziarg, 1998). It is argued that by the use of comparative advantage, trade raises both the steady-state level of per capita income and the transitional growth rate. Trade also increases competition in internal product markets, spurs technological transmissions, allows access to larger markets and provides incentives for greater policy discipline through regional or global economic arrangements.

2.7.9 Physical Capital Accumulation

The authors discuss contrasting views about the impact of democracy on the rate of accumulation of physical capital. In view of the inconclusive or weak nature of evidence in support or against the negative or positive effect of democracy on physical capital and investment, they prefer to examine it empirically. There is evidence to support the view that the influence of trade unions and concern for the poor result in wages in democracies to be higher and rates of returns of investment to be lower in democracies than autocracies (Rodrik, 1999).

Secure property rights and strict contract enforcement and reduction in political, social and economic uncertainty in democracies raise the returns of investment while Levine and Renelt (1992) have shown investment as the most robust determinant of economic growth.

2.7.10 Econometric Methodology

The authors have followed the standard process of econometric modeling on the basis of cross country panel data. Obviously, in the system of simultaneous equations, dependent of one appears as an independent variable of the other. This poses the problem of identification and the nature and degree of identification determine whether OLS, ILS, TSLS or GLS are followed in the estimation of the specific equation.

2. 7.11 Findings

The authors infer from the estimates of the system of SEM that (i)

Increased human capital and reduced income inequality under democracy promote economic growth; (ii) Reduction in the accumulation of physical capital and increased ratio of government consumption to GDP in the democracies negatively affect growth; and (iii) Overall effect of democracy on growth is moderately negative.

2.8 PRZEWORSKI, ADAM AND LIMUNGI, FERNANDO (1993) *'Political Regime and Economic Growth', Journal of Economic Perspectives,* Vol., 7, No.3, PP. 51-69.

This study of these authors included in the paper is one of the best studies chosen for review since it provides very rich material as compared to the other studies. Besides, they focus on the contribution of institutional set up to growth which has not been analyzed in the past studies.

2.8.1 Focus on Institutional Set-Up

As it has already been explained, the review hereunder does not claim to be exhaustive. The approach of selectivity is used to focus on the studies accessible to the author. The choice of this paper for review is accounted by the fact that this is a review article and hence, it summarizes the findings of numerous studies based both on deductive reasoning and empirical evidence derived from statistical studies of the past. The authors seek the answer to the question 'whether democracy fosters or hinders economic growth' from the classical and statistical studies of the past. They analyze diverse and contrasting views, deductive arguments and empirical evidence which they have garnered from past statistical studies of inter-relation between economic growth and democracy. One may here argue that democracy is the outcome of economic growth and empirical evidence may be gathered from the past studies of some of the currently developed countries of the West and the East to support this thesis. However, it is equally plausible to argue that democracy promotes economic growth. It is only the latter one of these twin facets which is the subject of investigation of the paper under review. The regression models used in statistical studies include political regime as one the determinants of economic growth. The authors recognize the complexity of these studies but they largely focus on such studies which emphasize the methodological issues of research on investigating the relation of democracy with economic growth.

From the critical analysis of past studies, they infer that most of the social scientists are not aware of the fact that the institutional set up, especially political institutions, may be more decisive determinant of economic growth rather than political regime. They focus on this gap area in the past research on this topic. It may, however, be countered by the argument that the nature and type of political regime cannot be separated from the nature and type of institutional set up and hence, institutional set up has to be compatible with the regime in place. The authors seem to conform to the institutional school of economic thought.

They argue that the specification of the nature of political regime as the determinant of economic growth misses the impact of differentials of institutional set ups in different countries irrespective of the type of government in place. We may say that the institutional set up and their organizational structures in countries under the same regime may also differ and these differentials are likely to result in growth differentials.

2.8.2 Core Variables of Relations of Political Regime with Growth

The paper emphasizes property rights, democratic pressure for greater consumption and the autonomy of dictators as three important factors which make political regime to affect growth. They highlight the adverse effect of increased consumption on growth since increase in consumption results in decrease in investment and both these factors lower the growth under democracy. However, the authors forget the activation of multiplier process of growth due to increase in consumption which demotes the growth rather than promoting it. They say that the states which have institutional framework to insulate them from public pressure for greater consumption promote growth. But democratic states are susceptible to pressures from the voters. They further aver that "Poor use democracy to expropriate the riches, the rich are threatened and subvert democracy, typically by abdicating political power to the permanently organized armed forces, either capitalism or democracy or both crumble." Thus, both capitalism and democracy are inherently instable regimes. That is why Marx quipped that "Only the political form of revolution of bourgeois society and not in conservative form of life (1934, p. 18), only a spasmodic exceptional state of things as the possible form of life (1971, P. 98, cited from Prezwonski and Limungi, 1993).

Przeworski and Limungi also consider the views of authors like James Mill, D. C. North and Weingst about the relation between growth and democracy. Mill differed from the classical economists in so far as he contested the view that the poor are always inclined to rob the rich of their riches. The transfer of riches from the rich by force or consent reduces savings, and hence investment, reduction in investment, in its turn, lowers the rate of growth. Mill refutes such contentions.

The authors aver that there is agreement among the analysts that secure property rights foster economic growth. There also exists general agreement that democracy with universal suffrage gives secure right to property to all which promotes economic growth. The authors argue that this relation between democracy and economic growth is the precept of the twentieth century. This view of the authors is the denial of second half of the nineteenth century's economic thought and economic theory of welfare. Both these emerged as a distinguished branch of economics with the publication of Marshall's '*Principles of Economics*' (1892) and Pigou's 'Économics of Welfare'. It has been greatly enriched by Pareto, Hicks, Samuelson, Arrow and a host of other economists during the twentieth century.

Prozeworski- Limongi postulate that only secure rights to property and pressure on immediate consumption are the key variables of economic growth. However, this inference conforms to the observed facts of economic growth that occurred under socialist regimes in USSR, China and Eastern Europe before these East European countries joined EU. It is noteworthy that these countries kept the wage rates low to restrict consumption. It fostered investment for accelerated economic growth (Prakash, Shri, 1994). It is altogether a different matter that the countries like Germany, Japan, France, U.K .and others under democratic regimes and market based capitalism recorded greater rates of growth than the countries under socialist/communist party rule with planned and controlled economies without autonomous market (See, Friedman, Milton). But the rapid growth of People's Republic of China since early 1970s under Communist rule, which strategically combined socialism with market autonomy, offers a different story of the political economy of growth. Similarly, India also under political democracy with universal suffrage and mix of planning and market autonomy in the economy offers a different growth scenario. Indian economy was stagnant with negative rate of growth of 1.5% per capita income in 1951. The mixed planned economy model not only extricated the Indian economy from stagnancy but it also transformed the negative growth at a rate of 1.5% into the positive rate of growth of 2% per capita income per annum from 1951 to 1989- (Prakash, Shri, 1994).

The modern economic thought associates democracy with universal franchise which itself is organically linked to capitalism. Capitalism thrives on free enterprise, free economic choices, right to property and economic growth (See, Milton Friedman, 1967). However, this inference runs counter to the observed facts. During the Post Second World War period when Labor Party emerged as the strong political rival of Conservative Party in U.K., Labor and Conservative party have generally formed government alternatively. Consequently, the policy of Nationalization and De-nationalization has alternatively been implemented. This stopped only after 1979 when Britain opted for the policy of globalization. Nationalization of private enterprises embodies denial of secure right to property and free enterprise. Similarly, Indian economy witnessed nationalization of several private sector industries from 1956 onwards, and even the whole-sale trade in food grains was nationalized in early 1970s though the policy was reversed later. However, the policy of dis-investment in public enterprises has been implemented periodically since 1990-91. It is, therefore, erroneous to assume that economic policy and

public commitment to secure property rights may be guaranteed either under democracy, or autocracy or dictatorship. If a given policy succeeds in a country at one time, its very success would have altered the conditions which necessitate a change in policy. Similarly, if a policy has succeeded in one country at some point in time, it may not succeed in other countries at that time or later (Prakash, Shri, 1994). Therefore, no government, in our view, can vouchsafe for the permanency of any policy and commitment to any institutional or political set up. This includes right to property. Even the right to life was suspended during the emergency declared by the government of Indian National Congress under the Premiership of Indira Gandhi. History abounds in abdication of commitment to any system by the political class irrespective of the party or people in power or the type of political regime. That is probably why endogenous models of growth have acquired some respectability.

However, the analysts disagree with the view about the role of democracy with universal franchise as the harbinger of economic growth. The theory associates democracy with universal suffrage and capitalist economy with free enterprise and right to ownership of property. The theory that envisages democracy to promote economic growth acquired prominence in the second half of the twentieth century, especially after the Second World War, when the Socialist Block of countries, under the leadership of erstwhile USSR, emerged as the challenger and rival to the capitalist democratic Western Europe under the leadership of USA. As against the democratic capitalism, un-democratic Socialist economies ban private ownership of property, and substitute (i) private by state enterprise, (ii) market by executive fiats, and (iii) resource allocation according to the demand by priorities determined by centralized planning. Despite this, the Socialist Block of countries not only reconstructed their war and damaged economies but they could also grow at moderate rates of growth. Similarly, several countries of the third world not only broke out of economic stagnancy but their economies could also grow irrespective of democratic, autocratic or dictatorial political regimes.

However, Przeworski and Limongi argue that democracy gives much greater degree of choice of consumption than that given by socialist countries or countries under dictatorship.   It results in greater proportion of households' income allocated to consumption. It comes at the cost of investment. However, greater consumption, as has already been pointed out, results in lower investment which blunts economic growth. Thus, the authors overlook the role of consumption multiplier in economic growth

(Prakash, Shri and Sharma, Ritu, 2014). Ritu (2013) used the input output model and found that initial sector-wise consumption expenditure generated additional income and a part of this income is used for more consumption and other part is used for investment. The process of generation of additional income, consumption and investment, triggered by initial consumption, lasted over 17 rounds to sustain economic growth (Also See, Ritu Sharma, 2013, Shri Prakash and Sumitra Chowdhury, 1992). Besides this, Przeworski and Limongi neglect the fact that allocation of greater proportion of increased income for consumption need not necessarily reduce investment.

Thus, Pezeworski-Limongi have put their analysis of the role of democracy in economic growth in the context of different streams and strands of thoughts that prevailed during the nineteenth and till the last decade of the twentieth centuries. The authors have cited the views of numerous analysts as the part of their contextual framework. They averred that the institutional set up and structure of political organizations play a decisive role in economic growth irrespective of the political regime in place. In this context, they discuss the contribution of such economists as D.C. Norh, North and Thomas, North and Weingst, James Mill and others. James Mill is an exception among classical economists since he differs from them. According to Barro (1983, P. 204), James Mill alone sought to assuage the fears that the poor would plunder the rich. But, in view of Barro, Mill appears to have offered some spacious arguments of deductive nature to support his thesis. Ultimately, he relied on the empirical generalization when he stated, "We challenge them (the opponents) to produce an instance so much as one instance from the first page of history to the last, of the people of any country showing hostility to the general laws of property, or manifesting a desire for its subversion" (Cited from Collins, Winch, and Barrow).

D. C. North (1990) and North and Thomas (1993) postulate that secure property rights are needed for economic growth. However, North has not specified the mechanism by which property rights are linked to growth. But North and Weingst (1989, p. 803) state that it is more likely that the sovereign will alter property rights for his or her own benefits. Lower the expected return from investment, lower is the incentive to invest which lowers the economic growth. The sovereign or government must not merely establish the relevant set of rights to property, but it should also make a credible commitment to them. However, the question how credible is the 'credible commitment' remains unexplained. This is important in view of the fact that the policies are never permanent as these change with the change in government and its ideology even in democracies (See, Prakas, Shri,

Kiangi, Richard Fue and Sharma, Sudhi, 2017) However, North treated the institution of slavery as a factor of economic growth of American economy. He implicitly considered the slaves to be the property of the masters. North has explicitly listed other democratic institutions which propel economic growth in his book (1993).

Under democratic regimes, political leaders make commitments to voters which they try to fulfill. As against this, dictators or autocrats never make any commitment to anyone. Even if he/she makes a commitment, its honoring is never guaranteed. For that matter, even a democratically elected/formed government cannot guarantee the secure property rights forever. Policies of nationalization and de-nationalization pursued in different countries stand as a testimony to this (Cf. Olson, 1991, p. 153). Therefore, some authors treat state itself as the threat to secure property rights. Besides, capitalists' property is threatened by workers.

Like both consumption and investment, growth depends on the level and pattern of allocation of resources. Resource allocation occurs at three distinct levels: 1. Individuals/households; 2. Government; and 3. Business. Current and expected incomes together with part of savings constitute the resources which are allocated according to the households' priorities at the individual/household level. But the allocated resources of the individuals become the part of resources of the market. However, Przewrski and Lumungi treat market itself as the arbiter of resource allocation. It is pertinent to note that the state of the market releases signals which may guide the resource allocation, but the allocation decisions lie in the domain of agents/decision makers. Business houses are the agency of resource allocation for production and investment. They distribute resources among share-holders as dividend, employees as wages and salaries, payment of interest and principal of loans, and profits ploughed back for investment. All these allocation decisions do affect economic growth. But Prozeworski and Lumingi totally overlook this facet. Last arbiter of resources is the state and its government. Prozeworski and Lumingi state that the government is not the owner of resources, but it distributes the rights to resources. A relevant question is how can anyone, including the government, allocate resources which it does not own? Public revenue, including loans and fiscal deficits, constitutes the public resources which are allocated for meeting expenditure on 1. Administration, 2. Development;3. Welfare; 4. Discharge of loan and interest payments liability; and 5. Grants and Donations. Most part of public spending does foster economic growth irrespective of the political regime in place (Prakash, S., Kiangi, Richard Fue and Sharma,

Sudhi, 2017, Prakash, Shri and Chodhury, Sumitra, 1992). The authors of the study under review miss the point. However, Przewrski and Lumingi infer that "if the median voter is decisive and the market generated distribution of income is skewed downward, as it always is, majority's equilibrium (if it exists) will call for a greater equality of incomes. The wide spread image of democracy as a proxy for guarantee of property rights in econometric studies is thus not justifiable. Democracy may promote growth but not through this particular mechanism."

The entire argumentation about secure property rights as base of growth, in our view, misses the conceptual distinction between income/returns from property and property itself and its empirical operation since neither property nor wealth is used for growth under any regime. It is the yields of income stream from wealth or property, for example, rent from buildings and land which are actually used by the owners for consumption and savings/investment. It is, in fact, investment, and neither wealth nor property, which causes growth. Whether the property is owned by individuals or institutions or government, this hardly matters if part of the income derived from it is used for investment. Besides, the above cited statement of Prozeworski and Limingi contains several ifs and buts which reduce its practical applicability. Strategic voting by groups or communities generally influences the outcome of elections rather than the median voter who is considered as the pivot by these two authors and others. Interestingly, Virmani has also considered average voter. Such premises overlook the dynamics of electoral behavior. Voters may be divided into following groups: (i) those who are ideologically or otherwise committed to a particular party; (ii) those whose voting behavior is conditioned and guided by caste or religion or clan/community considerations; (iii) those who vote on the basis of past performance of the ruling political party and/or the candidates at the constituency level. Such voters may constitue a floating and unattached group.

2.8.3 Basic Nature of Relation between Democracy and Growth

Lastly, Przeworshi and Limungi emphasize the following as the core aspect of relation between democracy and economic growth. The arguments, thoughts, theories and empirical evidence and statistical models garnered by the authors have left the debate about relationship between economic growth and political regimes in general and democracy in particular inconclusive. This is evident from the following inferences which the authors have drawn in their paper from the review of literature:

1. Democracy with universal suffrage does not provide secure property rights which are the base of capitalist growth.

2. Democratic regimes face pressure from the people for the growth of consumption which reduces investment and affects growth adversely.

3. Dictatorship makes the state immune from particularistic pressures for the promotion of consumption, and hence, it may promote investment and economic growth.

4. Dictators are autonomous and autocratic rulers; this makes them predatory. Democratic capitalism is insulated against the autocracy. Hence, democratic capitalism promotes economic growth.

However, this review paper has covered an extremely wide range of thoughts and theories relating to the relationship between democratic elections and economic growth. The author of this dissertation/research investgation has also extended and/or presented arguments for or against the particular strand of thoughts put forward by the two authors of the paper under review.

2.9 ROBERT J. BARRO (1996), Democracy and Growth, Journal of Economic Growth

This is another important paper under review in this thesis. Barro has collected panel data of nearly 100 countries for the period from 1960 to 1990. Economic growth is measured by real per capita GDP and democracy is represented by subjective indices of political and economic freedoms. The following are treated as important political variables:

(i) Rule of Law,

(ii) Free Markets,

(iii) Low Public Expenditure on Consumption,

(iv) High Human Capital which is assumed to be accumulated from investment in health and education.

The author asserts that if the variables of above 4 categories and initial real per capita GDP are held constant, then the economic growth effect of democracy is found to be weakly negative. The assumption of constancy of initial per capita GDP and the above mentioned variables are the part of multiple regression of fixed variable effect model of

panel data which is used in data analysis. The inference seems to flow from cross section data when time is constant and the values remain fixed at the given level.

Barrow interprets the results to highlight the possibility of existence of the non-linear relation between democracy and growth. In our view, this inference is in-built in the data base of the paper. It is well known that several countries included in the panel have moved out of non-democratic regimes to democratic regimes since 1960 though in some cases, democratic regimes have been over-thrown by armed forces or some other dictators. Besides, most of the developing countries have obtained freedom from colonial rule during the post Second World War period. Consequently, both economic and political freedoms have varied non-linearly, temporally and in the cross section of countries in the panel. However, Barrow overlooks this point that diversity could have been taken into account either by decomposition of sample into sub-samples or inclusion of relevant number of dummies in the regression model.

He, however, concludes that economic growth is accelerated with an increase in economic democracy if the initial democratic base is low. But the rate of growth declines at moderate level of democratic freedoms. The author does not point out the statistical fact that a given amount of change represents high growth rate at low base value and low growth rate at high base value. Thus, an organic element of relation between level of democracy and rate of growth is left unaccounted. However, Barrow confirms the received thesis that growth is not strongly related to democracy.

Barro also lends support to the received thesis that the standard of living, measured by real GDP, health and education, is positively related to economic freedoms. But the relation between economic freedoms, which are proxied by free markets and small size of the government, and political freedoms still remains inconclusive.The author refers to the findings of the survey of research conducted by Sirowy and Inkles (1990) and Przeworski-Limongi (1993) who emphasize the secure property rights as the link between political democracy and economic growth. However, he also points out that this view is contradicted by economists like Milton Friedman who opines that economic and political freedoms are mutually reinforcing. He highlights that increase in democracy, reflected by majority voting, is counter- productive for economic growth since transfer of resources/income from rich to poor, land reforms and increase in the influence of the vested interest groups like farmers, labor unions and the like adversely affect economic growth. This lends support to the views of Przeworski-Limungi.

As against democracy, Barro points out that theoretically there is no incompatibility between non-democratic political regimes and economic freedom and property rights. In other words, economic system may be capitalist in dictatorship and authoritarian regimes also. He cites examples of Chile's Pinochet government and Peru's Fugimori adminstration. He further reinforces the point by citing some past and current political regimes in South Asia with limited political freedoms but with high economic growth in capitalist economies. Limited political democracy in early stages of economic development in most of the OECD countries with high economic growth is also highlighted to counter the idea of non-democratic regimes being anti-growth.

Besides, he distinguishes two types of dictators: First those, who promote personal wealth at the cost of public wealth and economic growth, and second those, who promote public well-being and economic growth though they may curtail personal political freedoms and some political rights to perpetuate their own rule. However, Barro approvingly cites Sah's (1991, PP, 70-71) observation that dictatorship is a risky political investment.He further argues that political rights to all sections of the people under democracy, notwithstanding constitutional and institutional checks and balances, prevent bureaucrats and politicians from misusing their power while certain policies of the government promote economic growth and command popular support. He cites Lipset's hypothesis (1959) that the interplay between political rights and economic outcomes, involving standard of living, tends to strengthen the democratic propensities of the people. Barrow notes that cross-country empirical evidence of his paper shows that there exists a systematic pattern of occurrence of relation between political and economic rights which lends empirical support to the Lipset's hypothesis.

2.10 ROBERT J. BARROW (1989) A Cross Country Study of Growth, Saving and Governance, NBER Working Paper, 2855

Barrow also used modified and extended form of neo-classical model in another study. In this paper, Barrow included (i) factors of human capital, (2) environmental elements of freedoms, and (3) choices in the classical model of economic growth. He also incorporated (i) fertility, (ii) savings, (ii) education etc. in the set of private sector choices. These choices depend on individual preferences and costs. Public choices include (i) pattern of public expenditure, (ii) business decisions, (iii) tax rates, (iv) market distortions which is measured by black market premium on local currency, (v) maintenance of rule of

law, (vi) property rights, (vii) degree of political freedom, (viii) terms of trade which depend on the state of international markets.

He develops regression models for three different periods from 1965 to 1990. Initial values of the relevant variables in 1960 are used as the part of instrument variables. Estimation uses instrument variable technique to find interesting empirical results.

He finds contrary results for males and females with regard to human capital which he describes as intriguing. In our view, this contradictory nature of gender based results should be imputed to the persistence of traditional bias against the females in numerous countries of the sample. In this regard, it may be mentioned that this finding of the study of Barro conforms to the finding of authors such as Satya Bhusan, Shri Prakash, Taru Jyoti Buragohain and and Abha Gupta (1995) about the relation of literacy with economic development in 114 countries during the period from 1901 to 1991. They state that literacy grows in geometrical progression with the common ratio ranging from 1.42 for Indian states to 1.50 for different countries. Besides, female literacy rate takes 14 years to double while male literacy rate takes 21 years to double. The differential results for males and females are due to base effect which is in-built in the prevalence of gender bias.

Barro's cross country panel includes several African and Asian countries where women are discriminated in terms of investment in their education and health. For example, V.K.R.V. Rao in his study of 1954 cohort of Delhi University graduates found that the parents of middle income groups invested in the graduate education of their sons while daughters were provided education only upto secondary and senior secondary levels. This also holds true for investment in health for women (cited from, Prakash, Shri, 1977). Barro does not explain this dichotomy between investment in female and male human capital when he interprets negative sign attached to the coefficients of female schooling and health related variables.

However, Barrow has contributed significantly to the stock of knowledge about inter-relation between democracy and economic growth. Our comments on his studies in this review are mentioned below:

2.11 Conclusion

The in-depth review of literature shows that

(i) Degree of industrialization, rather than per capita SDP, is a more important indicator of growth of developing economies like the Indian one and it is the decisive determinant of

seats won by a political party. The number of seats won and percentage of votes polled, these two are treated as the most relevant factors of political freedoms under democracy;

(ii) Caste and community affiliations play an important role in the votes of the poor of upper caste groups received by right wing party BJP in the areas where the Brahmins constitute the majority;

(iii) The ruling political party gets voted back to power in states whose development performance has been satisfactory;

(iv) Good-governance, lower inflationary pressures, expectations aroused by the past performance and perception about responsiveness to people's problems, agricultural development for rural voters etc. neutralize anti-incumbency factor;

(v) Economic growth has been found to be weakly related to democracy in statistical and econometric models based empirical studies of cross sections of 90/100 countries panel data;

(vi) High consumption and public expenditure, secure property rights, economic instability and economic inequality are specified as positive or negative determinants of growth as well as indicators of economic freedoms while good governance, size of the government and rule of law are specified as political freedoms.

CHAPTER THREE

DETERMINATION OF PERFORMANCE OF ''OTHER PARTIES'' IN GENERAL
PARLIAMENTARY ELECTION OF 2014

Preview of the Chapter

The chapter analyses the performance of all parties taken together other than BJP and Indian National Congress in the parliamentary election of 2014. The group of these parties is defined as 'Other Parties'. The chapter attempts to empirically examine the relation of the seats won by Other Parties with number of parties contesting election from different states, percentage of votes polled by Other Parties and per capita SDP. However, the joint as well as individual impact of these variables on seats won by Other Parties is examined separately. State and party wise cross section data has been used for estimating regression models by OLS. Econometric model, descriptive statistics and two factors ANOVA of alternative pairs of variables are used to analyze the data. Results of the multiple-regression of seats won by Other Parties on all three independent variables, taken together, are subjected to step-wise regression test of multi-collinearity. Park test of hetroscedastic error variances is also used. The model is found satisfactory on all counts. Percentage of votes polled by Other Parties, number of parties contesting parliamentary election of 2014 and real per capita SDP of states are found jointly as well as separately to be the decisive determinants of number of seats won by Other Parties. The degree of influence of percentage of votes polled, number of parties and per capita SDP decrease sequentially in that given order. Other Parties include all regional and national parties other than BJP and Indian National Congress.The performance of these two main national parties has been analyzed separately in other chapters. The reason of the grouping of 7 regional and national parties is based on the number of fewer seats won by these parties than the seats won by BJP and Indian National Congress. However, Other Parties, taken together, have won more seats than INC.

3.0 Rationale of Clubbing Seven Parties

The general election of members of parliament in 2014 was contested by 9 parties in different states of India. The performance of Bhartiya Janta Party (BJP), now the ruling party at the center, and Indian National Congress (INC) has been analyzed in two different chapters. This chapter focuses on the combined performance of all the parties taken together. Aggregation of these parties' performance needs explanation. Three natural questions also arise from the title of the chapter:

(i). What is the number of parties covered under the heading 'Other Parties'?

(ii). Which of the parties have been grouped together under the heading 'Other Parties'?

(iii) Why are these parties clubbed together?

One clear answer is that BJP with its allies of NDA has won more than half of the total seats of parliament and Indian National Congress has emerged as the single largest opposition party with 44 members in parliament. However, the Indian National Congress has fallen short of the numbers required to qualify as the leader of opposition in parliament. Each of the seven parties in the group of Other Parties has secured very few seats individually. Obviously, the performance of Other Parties in the election does not require party-wise analysis. Besides, most of these parties have not contested the election for even one seat from any of the states. Some of these parties have not even contested all the seats even in one state singly or jointly with their allies. However, Other Parties have together won more seats than Indian National Congress. Answers to the questions posed at the beginning of the chapter will also emerge and shall become clear in proper context from the discussion that follows.

3.1 Backdrop of Indian Polity and Political Parties

Anne Besant, a national of Britain by birth, founded the Indian National Congress with the co-operation of some Indian leaders such as Tilak, Gokhale and Ranade. Several other persons such as J. C. Kumarappa, Mohmad Ali Jinna, Madan Mohan Malviya and H.N. Kunjru were also important leaders. Mohan Das Karam Chand Gandhi was welcomed into the fold of Indian National Congress when he returned to India from South Africa with his experience of high handed and Oppressive British rule. M.K. Gandhi emerged as an undisputed leader of INC in no time. He transformed the INC with programs for struggle for independence and within a short period, INC emerged under the leadership of M.K. Gandhi as the National Party with massive following of the people, especially after the launching of non-cooperation movement and Dandi March to break the Salt Law. The following by the masses was made possible by his extensive tours to various places in India and the organization of public meetings by local leaders for him to address the people across the country. Holding of and addressing such public meetings, despite imposition of section 144 and banning of public meetings by local administration, often resulted in lathi-charge, use of tear gas and even firing by the police leading to injuries and even deaths of the people. All this aroused the anger of the people and opposition to

British rule. Other leaders of Indian National Congress also followed Gandhi's lead and undertook extensive tours of the country individually or jointly.

Mohamad Ali Jinnah, an erstwhile important leader of Indian National Congress, left INC and founded Indian Muslim League (IML) as a separate political entity since he felt out-numbered and marginalized by other Congress leaders who followed M. K. Gandhi. Political agenda of IML revolved round the Muslims of India, so it espoused the political ideology which was governed and guided by the tenets of Islam. Consistent and sustained publicity blitz led to the creation of serious gulf between Muslims and Hindus while communal strife became palpably crystalized. In due course, the first success of IML was reflected by the partition of the province of Bengal into West Bengal and East Bengal on the basis of communal divide. IML started demanding partition of India and creation of Pakistan as an independent nation of Muslims. It naturally created Hindu reaction and consequently Hindu Maha-Sabha (HMS) emerged as a different political party in pre-independent India. Hindu Maha Sabha emerged as a distinct political entity in response to the emergence of Indian Muslim League in Pre-Independence period in India. Hindu Maha-Sabha advocated that Hindustan is basically the country of Hindus where Hindu culture and civilization prevails.

Savarkar was an important ideologue of Hindu Maha-Sabha. Hindu Maha-Sabha propagated Hindu Nationalism to counter Indian Muslim League's attempt to spread Muslim Nationalism for the creation of Pakistan as a new country of Muslims by the partition of India. Pankaj Mishra opines that various thinkers and analysts have painted the Hindu Nationalism in varied colors and shades. He states that "Arrangement of figures- from Narendra Modi alleging that Sonia Gandhi with her Christian ancestry represents Rome Raj, and V.S. Naipaul raging about the Muslim invasions of India to today's trolls attacking Western scholars and journalists-have offered a distinctive version of Indian history: one in which the glorious Hindu past is violated by various foreigners". However, 'Hindu Nationalism is more Italian and Christian than Sonia Gandhi, P. 22, January 22, Sunday Times of India. However, V.D. Savarkar, freedom fighter and undisputed leader of Hindu Maha-Sabha, exclaims that 'Hindus are a people, who possess common pitrabhumi or fatherland, common blood, common sanskriti (culture and civilization), and a common punaybhumi or holy land' and Akhand-Bharat or indivisible India is the Hindus' karmabhumi or land of action for Hindus. In our opinion, L. K.

Advani has formulated an improved version of the concept of Indian/Hindu nationalism. He opines that India has the composite culture which has evolved over a long period of history. It has absorbed varied shades and strands which cannot be viewed in parts and compartments. Therefore, all the Indians have to adhere to and uphold the same Indian nationalism (Formulation based on L. K. Advani's views expressed in his public discourses from time to time). Incidentally, Hindu Maha- Sabha lost its sheen after the exile of Savarkar to Andman and Nicobar where he was put in Celural-Jail.

Communist Party of India also emerged after the spectacular political and economic success of communist regime which assumed power after Bolshevik revolution in 1917 in USSR. Khan Abdul Gaffar Khan, also known as Frontier Gandhi of North West Frontier Region, founded a socio-political group which was known as Khudai Khidmat Gars, 'Savants of God'. Meanwhile, Rastriya Swam Sevak Sangh also emerged as an important socio-economic outfit which espoused the cause of Hinduism and Indian culture. Jan Sangh, the 'Union of People', emerged as the political front of RSS. It was founded by Shyama Prasad Mukerji and Deen Dayal Upadhaya. It was thought to be the counter weight to Indian Muslim League. Thus, Indian National Congress, Indian Muslim League, Communist Party of India, Jan Sangh and Hindu Maha Sabha were the five main political entities in pre-independent India. Jai Prakash Narain and Dr Ram Manohar Lohia founded Socialist Party in 1946 after severing their ties with INC.

3.2 Schism and Ideological Divide in Indian Polity

An important aspect of Indian polity is its socio-economic, religious and regional schisms. Caste and community/ethnic schism is another factor of social divide among the people. The underlying factors of these schisms and the cleavages are that the backwardness of the regions and poverty of the people are coterminous with under-development of several regions relative to the developed states/regions on the one hand, and caste and community of the people and their poverty coincide on the other (Prakash, Shri and Mahapatra, A.C., 1980).

There exists a sharp divide between Bharat (Rural) and India (urban). Personality of the main leaders of the parties, ideology and socio-economic issues are important factors behind the formation of new political parties and splitting of the existing parties. The history of Indian polity and politics during the twentieth century and first 16 years of

twenty first century is dominated by the periodic splits in Indian National Congress Party and the Socialist Party (ie) in India. The Indian National Congress party has become the hegemony of Nehru-Gandhi family which resulted in the evolution of intolerance to views contrary to those of the High Command (under the control of Nehru-Gandhi family) and developed a culture of sycophancy among its member. These were some of the factors responsible for its periodic splits. The splits are further complemented by the formation of new parties such as AAP and Apni Party. Almost all the leaders of socialist hues and shades have been the members of Indian National Congress at one or the other time. The heritage of periodic breaks/splits in Indian National Congress has been further carried forward by the leaders who left Indian National Congress and formed new parties which profess the ideology of socialism. The tradition of dissent and the parting of ways with the mainline thinking of Indian National Congress party have been continued in Indian National Congress party till now.

Independent India witnessed rapid proliferation of political parties. Most of the newly created political parties had emanated from the stable Indian National Congress. Several young leaders of Indian National Congress were not in agreement with the main facets of political and economic ideology professed by the senior/nationally established leaders of Indian National Congress. The leadership of Indian National Congress came under pressure exerted by the emerging young leaders like Jai Prakash Narayan and Dr Ram Manohar Lohia who wanted the Indian National Congress to adopt socialism as its political and economic ideology. When they found themselves frequently over ruled by senior leaders of the party, they formed Congress Socialist Party (CSP) in 1934 as a separate political group/entity within Indian National Congress. However, they did not leave Indian National Congress. The idea was to put pressure on Indian National Congress from within the party rather than from outside the party to modify its socio-political and economic agenda to conform to the tenets of global socialist movement. Fabian Socialism had acquired considerable momentum in Britain during that period. Besides, the spectacular political and economic success of the communist regime by the implementation of tenets and principles of socialism in USSR influenced such leaders a great deal. Several young congress members with socialistic leanings had been greatly influenced by Prof. Laski at London School of Economics.

Some other parties were formed on the pattern of Indian Muslim League and Jan Sangh/Hindu Maha Sabha. A recent report of Election Commission of India, published in News Papers, shows that there are nearly 219 political parties in India and some of these parties have never contested any election ofparliament, state assemblies or even local self-governments. Some politicians leave their political parties if they are denied party ticket to contest assembly or parliament elections or even election of local self-government. Some of these parties may, however, contest some or the other election. For example, Sakhi Praja Party (SPP) of Gaziabad and Gautam Budh Nagar contested the 2014 election, but it fared very poorly in a handful of constituencies where its candidates contested general election in 2014. This party never contested any election before 2014. It sponsored candidates in few assembly constituencies for 2017 election for UP assembly. Some politicians contest elections after being expelled from or denial of ticket for election by their parties. Some of these parties are now delisted and derecognized by the Election Commission. Such parties are also reported to have been used for money laundering and disguising black money as white.

There is another segment of local, state and regional parties which exercises influence in specific areas/states/regions. Each local/provincial or regional party has its supreme leader or boss who wields power over the members of the party and a segment of voters follow them. They contest elections in the areas of their influence. National parties are generally governed by internal democracy to have an elected president and secretary besides the executive committee. Party President may also have one or more vice presidents. It is a different matter that Indian National Congress has become a party dominated by hereditary leadership of one family. Even though some election of party posts may be held, but the nominee of Gandhi family is not opposed by any one even if the election of Working Committee may be a sham in so far as the candidates sponsored by so-called high command get unanimously elected. This is the departure from sixties when at least elections of Working Committee were held and more than one candidate for each vacancy contested the election. Most of the provincial and regional parties are also family owned and operated outfits.

The Indian political landscape is dotted by diverse political, economic or social ideologies and politicians' personalities of different hues, shades and colors. Therefore, the ambitions, urge to differentiate one from the rest and personality clashes of politicians

abound in Indian polity. However, even during the colonial rule, a distinct group of young Congress leaders like Jai Prakash Narayan and Dr Ram Manohar Lohia and their followers operated in Indian National Congress to put pressure on national leaders of Congress to adopt the socialist Utopia. This group became known as Ginger group and Young Turks of Congress party in the second half of 1960s.

The Indian National Congress had two groups even during the pre-independence era, and these groups were known as Naram (soft/pacific) and Garam (hot/aggressive) groups. The first group was headed by Mahatma Gandhi which followed the path of Ahmisa/non-violence. The other group has had Ras Bihari Bose and Subhas Chandra Bose as the adherents to the ideology of Garam Dal who felt that the British would not quit India on their own, so they could be ousted only by armed struggle. Revolutionaries like Bhagat Singh, Chandra Shekhar Azad, Ram Prasad Bismil and Shafaqatullah also followed the ideology of Garam Dal in a militant way outside the Congress fold.

The Congress leadership found it very difficult to disown the revolutionaries due to the respect and the following they commanded among the Indian masses. These dissensions in Indian National Congress ultimately resulted in the formation of Forward Block towards the close of 1930s. Subhas Chandra Bose and Bishambhar Tripathi were important leaders of this outfit during those days. Interestingly, leaders of Forward Block (FB) did not call it a party though the Forward Block continues to act as a political party still in West Bengal. Meanwhile, Congress floated Bharat Sewak Sangh (BSS), a social service group while Rastriya Swam Sevak Sangh (RSS) emerged as a distinct entity which espoused the tenets of Hinduism as the foundation of composite Indian culture. Subsequently, Jan Sangh emerged as a distinct political entity which was supported by RSS.

In late 1960s, a group of young leaders like Chandra Shekhar, Tarkeshawri Sinha, Krishna Kumar and K. C. Pant came to be known as 'Ýoung-Turks' of the Indian National Congress party. They professed views which were different from those of senior leaders. Ideological differences among the leaders, clash of personalities, and espousal of the cause of specific social or occupational groups like labor and farmers, and even personal ambitions have been the root cause of split in political parties. Formation of Muslim League and Hindu Maha Sabha in pre independence era is an example of personality clash and espousal of sectarian causes as the factors of formation of political

parties in India. As against this, formation of Communist Party of India, Forward Block and Praja Socialist Party (PSP, headed by J. B. Kriplani) are examples of ideological differences as the root cause of split in the parent Indian National Congress party.

Subsequent break-up of CPI into CPI and CPI (M) was also caused by sharp ideological differences between two groups of communists in India. Moreover, ideological differences were greatly accentuated by the emergence of Gang of Four and Maoism in China in nineteen sixties. PSP was also split when Dr Ram Manohar Lohia formed Socialist Party (SP) since he differed from other erstwhile socialist leaders on ideological grounds. Both Communism and Socialism revolved round perennial conflict between labor and capitalist classes. The chasm/divide between these classes arose from conflict of their interests which was aptly highlighted first by Engel and Marx and later it was used as an ideological differentiation by Lenin, Maotusesung and others. This was the base of communist movement across the globe, including India.

Laski at London School of Economics became the patron of socialism and socialists, including Fabian Socialism. Fabian Socialism became the base of cooperative movement which played the role of mitigating the economic constraints of the poor. Like the banks, the Cooperative societies of different interest groups mobilize small sums of savings from its members and then transform the same into huge amounts to be used to help its members. However, Lohia differed from the traditional communist paradigm of class conflict between laboring and capitalist classes. He envisaged that the caste system in India was not only at the base of social differentiation, divide and discrimination but it also coincided with the economic divide.

Caste system lay at the base of economic inequalities. People belonging to Scheduled and Backward castes were not only socially handicapped but they were poor also. As against this, the people of upper castes called Savarns were rich as they owned land, other real estate and capital. Besides, most members of upper castes were also highly educated which enabled them to occupy positions of influence in the government and professions. This became a source of perpetuation of economic inequalities on the basis of castes. Almost all the people of Scheduled Castes (SC) and Scheduled Tribes (ST) category were and most of them are still poor. However, most of the persons of upper castes were and are still rich. The inter-mixing of poverty with castes was and still continues to be the fact of Indian society, its polity and economy. Dr Lohia wanted this to be used as the major

plank for popularizing socialism among the Indian masses. Other leaders did not agree with Lohia since they thought that the seeking of support and votes on the basis of caste, region or religion went against the ideology of secularism, which is an important aspect of Indian Constitution. They thought that political exploitation of caste and religious divide shall perpetuate the caste system which the founding fathers of Indian Constitution wanted to abolish. Despite this, Dr Lohia went ahead with his plan to establish a separate Socialist Party which will operate according to his ideological thoughts and tenets. Both PSP and SP performed poorly in the general election of 1962 which persuaded the leaders of both parties to come together and merged PSP and SP to form the new party and named it Sanyukt (Joint/Combined) Socialist Party (SSP) which again broke into different parties towards the end of 1960s.

Swatantra Party also emerged in the political horizon of India in early sixties. Its economic ideology was derived from the tenets of capitalism which operates on free enterprise and autonomous market as the arbiters of economic decisions. Indian National Congress also adopted the slogan of ''Socialistic Pattern of Society'' as the driving political force. Jawahar Lal Nehru, the then President of Indian National Congress and the first Prime Minister of India, coined this term at the Avadi session of the Congress party. This was a disguised attempt to snatch the political and economic ideology of other parties. It is interesting to note that socialism emerged as the potent political instrument in India thereafter. Only Swatantra Party, under the leadership of Rajgopalcharya, the first Governor of free India (who replaced erstwhile British Governor Mount Batten) and Minoo Masani and Jan Sangh under the leadership of Shyama Prasad Mukerjee and Pandit Deen Dayal Upadhaya were the only parties to advocate free enterprise and market based economy. Jan Sangh along with most other political parties merged itself in newly formed Janta Party after the lifting of emergency to contest parliamentary election of 1977 against the Indian National Congress which was divided into two Congress parties under the nomenclature of Congress (I) and Congress (O). O referred to old congress headed by Nilam Sanjiva Reddy and 'I' stood for Indira Gandhi, who was instrumental in the split in INC. Thus, Janta Party was an agglomeration of most of the political parties except the Communist Party of India. However, CPI also supported the Janta Party government from outside. Incidentally, Janta party was also broken into several splinter parties after the parliamentary election of 1983-84 which was won by Indian National Congress under the leadership of Smt Indira Gandhi. Bhartya Janta Party (BJP) was

formed under the leadership of Atal Bihari Bajpai and Lal Krishna Advani after the break of Janta party in eighties. Incidentally, Lohia's idea of confluence of caste and poverty was usurped by INC under the garb of secularism which, on paper, favoured SC/STs and OBCs and went out of its way to cultivate Muslims on the slogan of secularism.

The current Indian socialists of all hues and shades have degenerated into leaders of particular castes. However, the subsequent divisions of socialist party after the death of Dr Lohia were triggered largely by narrow personality clashes which gave rise to one or two castes as the base of vote banks of such socialist parties. An important episode in the annals of caste based parties in India occurred under the leadership of Chaudhary Charan Singh who coined the slogan of political unity of AJGAR. This represented the attempt to consolidate political support base among the members of these castes. Now, among the backward castes and dalits, new political slogan of maha backwards and maha dalits has been coined to consolidate members of these ethnic groups as the rivals to such existing groups.

Incidentally, Chaudhary Charan Singh (former Prime Minister), the founder of Rastriya/Bhartiya Lok Dal (RJD/BLD), a splinter group of socialists, tried to consolidate four backward castes into a single unified political force in parts of North-India, and he gave AJGAR as its slogan. Each letter of AJGAR refers to one caste: A, stands for Ahirs (Yadavs), J for Jats, G for Gujjars and R for Rajputs. His Bhartiya Lok Dal is now headed and led in U.P. by his son, Ajeet Singh. But its influence is confined to few constituencies in Western U.P.   There are remnants of original Lok Dal in Haryana also. It is controlled by the family of late Sh. Devi Lal (former Deputy Prime Minister), and the co-founder of Lok Dal. Om Prakash Chautala, son of Devi Lal, and his son control this party in Harayana. Incidentally, Mr Om Prakash Chautala was caught at Delhi Airport with contraband and his father Devi Lal, the then Deputy Prime Minister of Janta Party government at the center, publicly disowned Om Prakash Chautala as his son. However, father and son joined hands soon after. Politicians, thus, take advantage of short memory of the public.

Colonial rulers granted India limited autonomy as self-rule in the form of provincial assemblies and local self-governments even before the attainment of independence. Theses came into existence right from the villages and towns/cities to districts, and from districts to provinces due to relentless pacific as well as violent pressures put on the

British rulers by the people and political leaders of India who have massive following. These were designed as democratic institutions to be constituted on the basis of elections. The power and rights of these organisations, called municipal committees, district boards and provincial assemblies, were demarked distinctly. Elections were held for provincial assemblies in 1930s and local self-governments. Indian National Congress won these elections in all provinces except undivided Punjab where Indian Muslim League formed the government. North West Frontier elected the party of Khan Abdul Gaffar Khan. This became the precedent for post-independence democratic polity of India.

The Election Commission recognized the following five as National Political Parties for the General Parliamentary Election of 2014: 1. Indian National Congress (INC), 2. Bhartiya Janta Party (BJP), 3. National Congress Party (NCP), 4. Communist Party of India -Marxist (CPI-,M), and 5. Bahujan Samaj Party (BSP). Thus, the Election Commission of India distinguished national parties from the rest of the political parties. National parties are those which wield influence across the country and contest the assembly and parliamentary elections in most of the states of the Union of India. Influence and voters' support to Non-National parties are generally confined to one or two states, and therefore, such parties contest general parliamentary and assembly elections in one or two states. DMK and ADIMK (Tamil Nadu), Akali Dal (Panjab), Rastriya/Bhartiya Janta Dal (RJD/BLD), LJP and Janta Dal United (JDU) (Bihar), Samajbadi Party (SP), Lok/Bhartiya Janta Dal (Ajeet Singh), Kaumi Ekta Party and Apna Dal (UP), Bhartiya Janta Dal (BJD) (Odisha), and Trimul Congress, Forward Block, CPI (West Bengal), Shiv Sena and its splinter group, and Maharastra Nav Nirman Samiti are some of the examples of such regional parties. Though the division of Indian National Congress party during pre-independence era was based largely on ideological grounds, yet establishment of Indian Muslim League, Hindu Maha-Sabha and Jan Sangh was based partly on ideological and partly on personality clash. This trend continued during the post-independence era. But the vertical divide of Indian National Congress into Congress (O) and Congress (I) in late 1960s was caused by personality clash and individual ambition to acquire sole control of the party. The foundation of dynastic control over Indian National Congress was laid down sometimes in late 1950s when Jawahar Lal Nehru got his daughter, Mrs Indira Gandhi, appointed as President of Indian National Congress. It may also be mentioned that J.L. Nehru followed the lead of his father, Moti Lal Nehru, who got Jawahar Lal Nehru inducted into Indian National Congress when he returned from

Cambridge. The division of Indian National Congress in late 1960s was also an outcome of struggle against the stranglehold of the old leaders over Congress party after the death of Jawahar Lal Nehru. Once Mrs Indira Gandhi emerged as the sole undisputed leader of Indian National Congress in 1971, it became a continuous succession of one after the other member of Nehru-Gandhi family. Rajiv Gandhi became prime minister after the sad demise of Mrs Indira Gandhi though he has had no political experience of either the government or the party. After his death, his wife, Mrs Sonia Gandhi, took control of the affairs of Indian National Congress. Recently, Sonia Gandhi got her son, Rahul Gandhi, unanimously elected as the president of INC. Such elections are sham as no member of such parties challenges the heir apparent in the family hierarchy. Now Priyanka Gandhi may be another Gandhi in the line of successors. The dynastic control over the party and government gave birth to the concept of Congress High Command. The pattern of dynastic control and succession has been followed by caste/religion based leadership's control over regional parties in U.P., Bihar, Tamil Nadu, Punjab, Haryana, Jammu & Kashmir, and to some extent, in Karnataka and Andhra Pradesh. Interestingly, the succession of old by the young leaders of specific families has resulted in some systematic change.

Recent assembly elections in Panjab, U.P., Uttrakhand, Manipur and Goa have brought about an iconic change as the young successors of Indian National Congress and Samajbadi party of UP have challenged the existing system of hierarchy of the family itself with a view to overcome their anti-incumbency handicap. They seem to have followed Mrs Indira Gandhi's legacy who came out with a new slogan of Garibi Hatao (Remove Poverty) and 16 points formula based program of action to mop up majority's political support after she vertically divided Indian National Congress (Cf. Saba Naqbi-Arithmetic or Chemistry',Times of India, January 24, p. 22). Arithmetic and personal chemistry, both based on caste and community calculus and personal charisma, play a catalytic role in Indian democracy. This is also supported by Saba Naqbi, a political commentator, who opines that ''Most of the political analysis by politicians and political parties derives from equations such as X community plus Y community means victory'' in election ''and so on. Competing parties, therefore, spend as much energy on trying to split the votes of their opponents as on garnering their own votes''. She further asserts that "Indeed so many tickets given to Muslims by BSP results in counter polarization among other groups such as non-Chamar Dalits, ECB and upper castes" (Times of India,

January, 24, p.22). Declaration of results of these elections has now catapulted BJP and its allies as the ruling party in four of the five states where elections were held. Punjab, where Congress emerged as the victor, has emerged as an exception to Pan-India trend in favor of BJP from North West to West and from North West to North East.

The above discussion does not mean that there had been no political activity, politicians and democracy in India before the advent of British rule. Roots of democracy in India go deeper than the rest of the world. India was dotted by village democracies (Gram Gantantras) before the emergence of Gupta Empire in Ancient India. These village democracies were assimilated in Gupta Empire by Samudra Gupta (Prakash, Shri and Chaturvedi, H., 2013). During this period, each village was self-sufficient and self-reliant under Gram Swayraj (Village Self-Rule). But there were no full time professional politicians and political parties. Village leaders used to be elected directly by show of hands in the meetings held for this purpose. All members of the village communities participated in these elections. Village leaders were often elected unanimously or by consensus. The Scandinavian Direct Election of Local Self- government resembles this ancient Indian practice. However, the elections of village panchayats in modern India are contested on the basis of political parties.

3.3 Factors behind Proliferation of Political Parties

Indian polity is dominated by the competition for occupying political space and cultivating the people in the name of socialism and secularism which have also been used as the mask for creating vote banks or support base among specific castes and religious communities. Poverty of the people and their sticky and inflexible caste and religious affiliations and allegiances often offered the opportunities to political leaders to create vote-banks in the name of promotion of caste and communal interests. Besides, socialist movement in India had competed with communist ideology and they stole the thunder of communism by aligning socialistic thoughts with the socio-economic reality of India. Jawahar Lal Nehru, the first Prime Minister of India, also took away the basic tenets of socialism for Indian National Congress. Besides, communalism is being used as secularism. Secularism, the basic principle of Indian Constitution, has often been used to oppose BJP. Commitment to both socialism and secularism is skin deep, and it is used as a slogan by non-BJP parties to garner votes of the poor and the minorities, especially the Muslims. However, the Constitutional provisions stipulate that no one shall be

discriminated on grounds of gender, caste, religion or region, yet these social divisions are used as strategic elements for electoral gains by practically all the parties and politicians. These factors are perennially used as electoral strategy. Other factors such as anti-incumbency against the ruling party, performance reflected by development gains, corruption, inflation, good governance reflected by maintenance of law and order and timely decision making, efficiency, provision of basic needs such as supply of potable water and uninterrupted electricity and construction and maintenance of roads, etc. affect electoral calculus. Successful exploitation of various factors by the contestants influences the outcomes of voting. But the socio-political and economic environment changes from election to election.

Nation-wide, relatively greater success of the Indian National Congress and BJP than the Socialist and Communist parties in India is explained by the conglomeration of various factors. Caste and religious composition of population, personal image of the candidates and respect commanded by the national/regional party leader(s) do play decisive roles in elections. The influence of caste and religious composition as a part of electoral strategy may be gauged from the following headline (P.11, Hindustan Times, January 20, 2017): "SP-Congress eyes 35-37% of total votes-will attempt to get 25% of Non-Muslim and a big chunk of Muslim votes". It further states 'Also, as the lead Secular player at the national level, Congress is expected to check the drift of Muslim votes to BSP by creating the perception that the alliance is the main challenger to 'Communal' BJP'. "On offer in U.P. there are roughly 25% upper castes, 10% of Yadav and 26% of non-Yadav OBCs, besides 18% Muslims and 21% Dalits".

It further continues "The challenge for SP is the antagonism between upper castes and OBCs and the schism BJP is trying to crack open among backwards by wooing non-Yadav OBC and most backwards". Similarly, the same page carries the explanation of BJP's electoral strategy as follows under the heading, "In UP, BJP pins hopes on division in Muslim votes''. It continues "As the UP polls settle into a three way tussle with the Samajwadi party remaining intact and looked set by striking an alliance with congress, BJP is banking on a division in Muslim votes to facilitate an important victory…do not agree that Muslim vote will move en-mass'' in favour of SP-Congress alliance (The Times of India, p. 11, January, 20, 2017). The Times continues on the same page "Ajit Singh a victim of his own image? Ajit Singh's low trust quotient owing to his

controversial political innings has come to haunt him with one time Jat strong man having the weakest hand in the 'Secular' coalition in the making." It is paradoxical that such political leaders base their electoral calculus on castes and religious affiliations of voters and proclaim themselves as the saviors of minority community and/or protector of the interests of specific castes and declare themselves as secular. But this has been the bane of Indian polity for long.

3.4 Other Parties Members

It is obvious that the term 'Öther' in the political context of Indian political parties refers to all parties other than the ruling party at the center or states. But in the context of general election of parliament in 2014, "Other Parties" refer to seven parties, and their percentage of votes polled and seats won are aggregated for data analysis. This group excludes Indian National Congress and BJP. But the group includes the following three national parties: 1. Nationalist Congress Party (NCP), 2. Communist Party of India (M), and 3. Bahujan Samaj Party.(BSP). Other 4 parties, included in this group, are regional parties like DMK and AIDMK of Tamil Nadu, BLD of Odisha and TMC of West Bengal. As has already been explained, most of these are family controlled parties whose influence is generally confined to a state or part of it.

The above discussion furnishes evidence that (i) Number of parties which are grouped under Other Parties label exercise influence over electorates in regional and local confines as these are regional parties. This has been eloquently described by Mr Pranab Mukerji, former President of India, in an interview to The Times of India on 18th October, 2017 and he talked about the authority of prime ministers of coalition governments. His views are as follows: "PMs don't enjoy absolute authority in coalition govts". Further, he states that 'I feel coalition governments have deficiency in that they are largely dominated by regional parties and these parties are based in individual states-hardly there is a regional party except communists who have presence in more than one state. Major coalition partners are single state parties, and therefore, it is difficult to resolve and reconcile regional interests with national interests.' Such coalition governments have, most of the times, been headed by INC or BJP except the Janta government in late seventies when a new party, named Janta party, was formed by the merger of all opposition parties which formed the government. Besides, the governments headed by V.P. singh, Chandra Shekhar, Gujral and Devegoda were formed by the coalition of opposition parties without

BJP or Congress though the CPI (M) and INC supported the government of Gujral from outside. Incidentally, Morarji Desai and Charan Singh, prime ministers during Janta rule, V.P. Singh, Chandra Shekhar, Gujral and Deve Goda have all been the members of INC at one or the other time and they have also been ministers in the governments of INC. Such governments embodied both political and economic instability due to interpersonal fights and ambitions of regional leaders to occupy the seat of prime minister; (ii) Influence of Other Parties exists in the midst of vast diversity of Indian society; (iii) The above two factors provide rationale of clubbing such parties in one single group.

The above discussion provides a detailed background of political reality of India on the one hand, and it also points out the complexities for arriving at the workable political and socio-economic theory for the purpose of modeling which is capable of reasonably explaining the observed facts. This is attempted in the ensuing pages.

3.5 Data Base and Methods of Analysis

Data used in the chapter have been taken from the same source from which the data for analyzing the performance of BJP and Indian National Congress are taken. Party and state wise data have been taken from the Web site of Election Commission of India and the state wise data of real per capita GSDP is taken from Economic Survey, Ministry of Finance and Government of India.

Descriptive Statistics, Two Factor ANOVA and Bi-variate and multiple regression models are used for analyzing the data relating to the electoral performance of Other Parties in Parliamentary Election of 2013-14. Interestingly, several constituents of Other Parties have been in power in states: TMC in West Bengal, AIDMK in Tamil Nadu, BJD in Odisha, JDU in Bihar, and SP in U.P., INC in Rajasthan, Karnataka, Uttarakhand, Himchal Pradesh, Manipur, Assam etc. Though the 2014 election was for parliament and electorates do behave differently in elections of state assemblies and Indian parliament, yet the performance of these parties came to be scrutinized by the electorates in terms of promised agenda and its divergence from performance relative to development agenda of BJP. Besides, none of the constituent party was expected to form the government at the center.However, the perception was that if elected and their party got sizeable proportion of parliamentary seats from their state, such leaders as Mulayam Singh Yadav, Maya Wati, Mamta Banerji, Shard Pawar and Jay Lalitha shall scramble for becoming prime minister. In the event of such coalition in government being formed at the center, there

shall be great deal of political instability. Growth performance of the state economies under the rule of these constituents of the group of other parties and the perception about individual ambition operated as an incumbency factor and the influence of which was imperceptibly visible in election results. This explains the choice of exogenous variables of regression models.

The same three variables which have been used in the analysis of performance of BJP and Indian National Congress in the parliamentary election of 2014 are used as the pre-determined variables to determine the seats won by Other Parties from different states.These pre-determined variables are Percentage of Votes Polled, Number of Parties and Real Per Capita GSDP. These pre-determined variables are treated as the main determinants of number of seats won in the 2014 parliamentary election.

3.6 Analysis of Empirical Results

Empirical results are derived by the application of (i) Descriptive Statistics which comprises mean, median, standard deviation/cv, variance, range, and the coefficients of skewness and kurtosis; (ii) Two-Factor ANOVA without replication has been applied to the six pairs of per capita real GSDP, percentage of votes polled and number of parties in electoral contest indifferentstates, and (iii) econometric modeling. With a view to detect the possible presence of muti-collinearity in the multiple regression models, step-wise regression has been used to supplement multiple regressions having two or all three pre-determined variables in the models.

First, the results derived by the application of descriptive statistics are discussed. It is followed by the analysis of results furnished by two factors ANOVA. Discussion of results provided by econometric models follows this:

3.7 Analysis of Results of Descriptive Statistics

Tools of descriptive statistics are applied to data relating to seats won and percentage of votes polled by other parties, per capita real GSDP and number of parties which contested election of 2014. This is done for obtaining insights about the basic features of distribution of data pertaining to seats won and percentage of votes polled by other parties, number of parties which contested the election of 2014, and state wise real domestic product in 2014. Mean, Median, Standard deviation/variance and coefficients of Kurtosis and Skewness are the major tools of descriptive statistics. Excel is used for

calculating the values of the above mentioned statistics. **Table given below contains the results of calculations. Table-1- Descriptive Statistics of Performance of Other Parties**

DESCRIPTIVE STATISTICS							
	Seats Won	Percentage	*of Votes Polled*		*SDPPC*		*No. Of Parties*
Mean	6.0285714	Mean	35.06742857	Mean	1497.82857	Mean	6.8
Standard Error	1.8739639	Standard Error	4.404147899	Standard Error	290.238562	Standard Error	0.34495159
Median	1	Median	37.55	Median	752	Median	7
Mode	0	Mode	#N/A	Mode	53	Mode	9
Standard Deviation	11.08652	Standard Deviation	26.05529034	Standard Deviation	1717.07449	Standard Deviation	2.0407611
Sample Variance	122.91092	Sample Variance	678.878155	Sample Variance	2948344.79	Sample Variance	4.16470588
Kurtosis	3.2270192	Kurtosis	-0.891012702	Kurtosis	4.99999866	Kurtosis	-0.698418
Skewness	2.0796008	Skewness	0.257937117	Skewness	1.93476428	Skewness	-0.3074223
Range	37	Range	93.2	Range	8018	Range	8
Minimum	0	Minimum	0.57	Minimum	38	Minimum	2
Maximum	37	Maximum	93.77	Maximum	8056	Maximum	10
Sum	211	Sum	1227.36	Sum	52424	Sum	238
Count	35	Count	35	Count	35	Count	35

Source: Author's Own Calculations

3.7.1 Number of Seats Won and Percentage of Votes Polled By Other Parties

A perusal of the above table reveals that

(i) Other Parties won, on an average, 6 seats while they got an average of 35% of total votes polled by all the contestants in the election.

(ii)   Interestingly, average number of parties in the contest is also 6.8. Thus, average number of seats won by 'Other Parties' and average number of parties in election are almost equal. It implies an average of one seat won per state per party.

(iii)   As the average number of 6 seats won by 'Other Parties' is less than one sixth of total number of states where the general election was held, it highlights the fact that the influence of the Other Parties has remained confined to one or two states at the most. This lends support to the premise that each member of the group of other parties exercises influence on voters in one state. If the average number of seats won by all other parties is equally distributed among them, slightly less than one seat comes in the share of each member.

(iv)   Value of t-statistics of the difference between the mean and median of seats won by other parties is 2.69. Hence, the mean number of seats won is significantly larger than the median number of seats won by these parties. Therefore, it may be inferred that the number of seats won by 'Other Parties' is not normally distributed among the states. This also supports the premise that the influence exercised by other parties is restricted to one or two states.

(v)   The value of statistics of the difference between mean and median percentage of votes polled by 'Other Parties is 0.56. The value of t-statistics implies that the percentage of votes polled is almost normally distributed among the states from which these parties contested the election.

(vi)   The above two inferences may imply that though the seats won by Other Parties are unequally distributed among the states, yet the percentage of votes polled for winning the election by them does not differ significantly among the states. In other words, the winning percentage of votes polled by Other Parties does not differ significantly either among the member parties of the group or among the states. This inference needs more rigorous empirical analysis.

(vii)   The coefficient of variation of seats won is as high as 184% while the123 value of the variance is also very high. These figures imply a very high degree of unequal performance of 'Other Parties' measured by number of seats won in different states. This inference lends support to the earlier inference of unequal distribution of seats won by other parties from different states.

(viii)   These results point towards not only inequality in the distribution of seats won by Other Parties but also the possibility of high degree of concentration of seats won by these parties in few states. These inferences are supported by the values of the

coefficients of skewness and kurtosis. Values of these two coefficients are as high as 2.1 and 3.23 and both of which are greater than +1. Thus, the distribution of seats won by 'Other Parties' is positively skewed to show its departure from normal distribution, and the distribution of seats won is also highly concentrated in few states.

(ix)   The above results confirm the inference that (1) these parties are not national and their influence is confined to specific states, and (2) inferences drawn from t-statistics, coefficient of variation and variance conform to conclusions drawn from the coefficients of skewness and kurtosis.

(x)   Examination of values of same statistics of percentage of votes polled by Other Parties leads to such results which are quite divergent to the inferences drawn about the seats won. This is evident from the fact that though the value of coefficient of variation is 74.31% only, yet the variance is as high as 679.9. CV suggests that the divergence of percentage of votes polled from mean is relatively low, yet the variance implies very high degree of variation of percentage of votes polled among the states.

(xi)   Coefficients of skewness and kurtosis also have low values which conform to the value of t-statistics and the inference drawn from it that the percentage of votes polled by Other Parties is normally distributed. However, high value of variance suggests very high variation of votes polled among the states and probably among the members of the group. These results may probably be reconciled by the statistical property that normal distribution is normalized and standardized by changing the measurement in terms of standard deviation irrespective of its high or low value. Incidentally, percentages are also standardized units. As against this, seats won are absolute numbers.

(xii)   The simple test of t-statistics of normality has been found to furnish the results that may be derived from much more powerful Jack-Berra and other tests of normality (see Sharma, Sudhi, (2016) and Kiangi, Richard Fue, 2016, Khalid, Ramdhani, 2017).

3.7.2 Analysis of Results of Descriptive Statistics of Number of Parties

The following important inferences emerge from the analysis of descriptive statistics of number of parties:

(i)   On an average, 6.8 political parties contested the last parliamentary election held in 2014.

(ii)   The distribution of number of parties among the states, from which these parties contested the parliamentary election of 2014, is normal since the calculated value of t of the difference between mean and median is as low as 0.68, which is much lower than the critical value of 1.96 at 0.05 probability level of significance. Hence, the value of median converges towards the mean number of parties in electoral fray. Thus, the basic feature of equality of mean and median of normal distribution is satisfied by the distribution ofnumber of parties contesting general election from the states.

(iii)   The above inference is supported by the low values of the coefficient of variation and variance as 30% and 4.2.

(iv)   Besides, such low values as 0.31 and 0.70 of the coefficients of skewness and kurtosis show that the distribution of total political parties contesting election among the states is neither skewed nor the high values are concentrated in the narrow space around the mode. This means that the 2014 parliamentary election offered an even play field to all parties including Other Parties.

(v)   This facet is explained by the fact that larger the number of parties contesting the election from a state's constituencies, greater is the division of votes and lower is the percentage of polled votes required to win the election. All the loosing parties, taken together, may then represent the majority rather than minority support base of the winning party (ies).

3.7.3 Analysis of Results of Descriptive Statistics of Real Per Capita Gross State Domestic Product (GSDP)

Real per capita GSDP has also been referred as real per capita state domestic product in the text (SDPPC). The following important inferences emerge from the analysis of the results of application of tools of descriptive statistics to the data of Real Per Capita GSDP:

(i) Average per capita real SDP of states is Rs.1497.828 while the median real per capita SDP is only Rs 752. The median per capita real SDP may be taken as the base line which separates the developed states from the under-developed states of India.However, the

value of the median is obviously only a little more than half the value of the mean per capita SDP.

(ii) The high difference of mean and median values of SDPPC highlights the sharp divide between the developed and backward states.

(iii) The divergence of actual SDPCC of individual states from the median/mean value of SDPPC may probably also explain the differences between the votes cast as the percentage of the total voters spread over the states and electorates' choices of candidates as members of parliament.

(iv)The value of t-statistics of the difference of mean and median of Real Per Capita SDP is 2.57 which is 1.31 times the critical value of 1.96 at 0.05 probability level of statistical significance. This value of t shows that the distribution of real per capita SDP significantly diverges from normal distribution. It highlights the substantial degree of inequality of income distribution among the developed and backward/under-developed states. This also highlights the regional inequality of development.

(v) The above inference is supported by the high value of CV and variance which are equal to 115% and 2948344.79 respectively.

(vi) The coefficients of skewness and kurtosis are approximately equal to 2 and 5 respectively. These coefficients also highlight the fact that the spatial distribution of Real Per Capita SDP is positively skewed and its high values are concentrated in the narrow space around the mode.

(vii) The results highlight an important aspect of electoral politics. Poverty and backwardness coincide with illiteracy, blind faith, influence of personality cult and easy sway of caste and religious affinities which may easily be exploited by political parties and politicians. This has also been amply highlighted by the discussion in introductory part of the chapterand also by Yogesh Atal (1969) and Pavithra Suryanarayan. This inference is also supported by the fact that such states as Kerala and West Bengal which are highly literate and relatively more developed than U.P., Bihar, Rajasthan, M.P. and Odissa, have substantial support for ideology based parties like CPI(M), CPI and Forward Block, whereas BIMARU states, that is, Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh are dominated by parties whose political cout and support base is strongly associated with caste and religious divide/schism. It, however, does not mean that developed states like Tamil Nadu, Karanataka, Gujarat, Punjab, Haryana and Maharastra are totally free from such political schism. The quantitative differences between these two sets of states are highly marked.

3.7.4 Analysis of Results of Two Factors Anova without Replication

Results of descriptive statistics mainly highlight the nature of distribution of the values of the variables under consideration. It also contrasts and compares the mean and median values of the variables for determining the divergence or convergence of the observed distribution to normal distribution. But descriptive statistics does not compare/contrast the variances of the distribution of pairs of different variables. The degree and dimension of variation of two or more variables together or separately among the states indicates the possibility of their relatedness, that is, correlation. Besides, researchers may also be interested to discern and discover whether the variation between the states is greater or smaller than the variation between the variables. These two sets of variations also involve intra-class variation which reflects the degrees of inequality among the states which is of great interest analytically. Descriptive statistics does not capture such facets. These limitations of descriptive statistics are overcome by Two Factors ANOVA.

The results of Two-Factors Analysis of Variance (ANOVA) are discussed hereunder. The variables are combined in 6 alternative pairs.But the moot question to answer is the criterion of such pairings. This is discussed in the ensuing paragraph.

3.7.5 Seats Won as Base of Pairing

The winning of election by a party depends on the percentage of total votes cast in its favor by the electorates. The party which gets the greater proportion of total votes cast than the proportion of votes received by all other contestants wins the election. Even the difference of one vote may suffice to win/lose the election. Since the number of seats won by the parties is the most critical variable of the system, its pairing with all other three core variables is examined first. Besides, the number of seats won has also been treated as the dependent variable of causal relations. Thus, the pairing of seats won by Other Parties has three pairs- one each with percentage of votes received, real per capita SDP and number of parties.

3.7.5.1 Seats Won and Percentage of Votes Received By Other Parties

The number of seats won by a political party determines whether it will form the government or it will sit in opposition in the first past the post system of Indian democracy. But the candidate who obtains greater number of votes than all other

contestants wins the election. Total number of seats won by a party, thus, depends on the percentage of votes secured by the party concerned relative to the votes received by its rivals. Therefore, these two variables are treated as more important than the other two variables. The results of application of two-factors ANOVA are shown in table 2 of results of ANOVA.

Table-2-ANOVA-1: Seats Won and Percetage of Votes Received by Other Parties

Source of Variation	SS	Df	MS	F	P-value	F crit
Rows	18159.34	34	534.0981	1.995204	0.023858	1.772066
Columns	14756.97	1	14756.97	55.12688	1.3E-08	4.130018
Error	9101.492	34	267.6909			
Total	42017.8	69				

Source: Author's Own Calculations

Each row, corresponding to one state, contains the paired values of seats won and percentage of total votes cast by electorates in favor of Other Parties. Hence, the variation between the rows captures the togetherness of seats won and percentage of votes polled by Other Parties in divergence from the mean among the states. Significant variation between the rows may, therefore, suggest that the variables of the pair change together, and hence, these variables are likely to be significantly correlated. Here, one column shows the degree of variation of the number of seats won by Other Parties from different states while the other column shows the corresponding variation of percentage of votes polled by Other Parties from different states. Hence, the significant variation between the columns highlights the fact that one variable has significantly greater variation than the variation of the other variable from their respective means among the states. Significant variation between the columns may suggest that the two variables are not related at all or are only weakly related. This property of the results of two factors ANOVA without replication prepares the backdrop of the interpretation of the results.

The results of ANOVA-1 show that the seats won and percentage of votes secured by Other Parties significantly vary together between the states. The variation is statistically significant at 0.024 probability level. Therefore, the calculated value of F-statistics is treated as statistically significant. This may suggest that the seats won and the percentages

of votes secured by Other Parties in different states are correlated. But the variation between the columns is also statistically significant. The variance between the columns is statistically significant at 1.3E-08 probability. It is much smaller than the 0.024 value of probability at which between the rows variation of seats won and voting percentage is found statistically significant. Consequently, F-Statistics of between the columns variation is much greater than the value of F for rows. This suggests that the seats won and voting percentage secured by Other Parties may not be significantly related. The validity of this inference shall be rigorously examined by regression model.

3.7.5.2 Seats Won and Real Per Capita GSDP of States

Real per capita SDP denotes the level and status of economic development of the states. But the differentials of factor endowment, governance and policy among the states create inequalities of development while scarcity of resources constrains the strategy of development and investment and acts as the bottleneck to balanced regional growth. Besides, the theory of regional growth and observed status of regional development highlight that regional inequalities of development are accentuated in the early stages of economic development though at the mature stage of growth, regional inequalities tend to decline. Besides, economic growth is positively related to the development of such social infrastructure as education, nutrition, sanitation, health, low infant mortality and high literacy rate etc. all of which relate to the growth of human capital.

The states which lag behind the leading developed states in social infrastructure are characterized by low real per capita SDP, high illiteracy, low education level, low nutrition and low level of heath of the people and high incidence of poverty. These factors make people gullible to blind faith, strong caste and religious affinity, and pursuit of personality cult and hero worship (See Bardhan, 2004, Prakash, Shri and Sharma, Amit, 2017). These traits of voters are easily exploited by political parties and politicians at election time. These considerations lie behind the choice of real per capita SDP as one of the determinants of electoral performance of Other Parties. The results of two factors, ANOVA of seats won by Other Parties and real per capita SDP, are reported in table 3 of ANOVA-2.

Table-3 ANOVA- 2 Seats Won and Real Per Capita SDP

Source of Variation	SS	Df	MS	F	P-value	F crit
Rows	50460891	34	1484144	1.013535	0.484481	1.772066
Columns	38945677	1	38945677	26.59635	1.07E-05	4.130018
Error	49787011	34	1464324			
Total	1.39E+08	69				

Source-Author's Calculation

The results of ANOVA 2 show that the variation of seats won by Other Parties and per capita real SDP, taken together, does not differ significantly among the states. It implies that the Other Parties might have won/lost seats in states irrespective of per capita real SDP. It may suggest that the seats won or lost by Other Parties do not depend on economic development of the states. This finding conforms to the findings by Robert Barrow (1992), Dani Rodrik (1996) and few others who find weak correlation between economic growth and democracy. Election based on universal suffrage is the strongest indicator of democracy. These authors have used panel data of 100 and 90 countries respectively. Therefore, such factors as caste and religious composition of population of the states and their constituencies, concentration of influence of other parties in one or two states, and influence of leaders of these parties on one or some castes and religion may explain this result.

However, the variation between the columns is statistically significant. It means that the number of seats won by Other Parties from different states significantly differs from the variation of per capita real SDP among the states. This lends further support to the thesis that the number of the seats won by Other Parties from different states may not be related or only weakly related to per capita real SDP of states. Such results may also be expected if either economic development does not differ among the states or seats won are treated as fixed at the given level for each state. Besides, these results may suggest that the

caste/religion and ethnic based influence of such regional parties is confined to particular state.

3.7.5.3 Seats Won by Other Parties and Number of Parties

It is an observed fact that the number of candidates contesting election from a constituency reduces both the number and percentage of votes received by every candidate. Therefore, greater the number of candidates, smaller is the number of votes and percentage of votes polled by each candidate. It generally also reduces the margin of victory/defeat in the election. Even the difference of one vote may determine victory or defeat in election. But most of the candidates who contest elections represent their parties. Such sitting members in legislatures who are denied the party ticket either join some other party just before the election to get that party's ticket, or may contest the election as an independent candidate without any party affiliation. Therefore, the number of parties in electoral battles approximately represents the total number of candidates in electoral fray. This is the reason that the number of parties has been included as an important variable in the analytical framework.

The results of two factors ANOVA of seats won by Other Parties and total number of parties which contested the 2014 parliamentary election are reported in ANOVA-3.

Table-4-ANOVA-3- Seats Won and Number of Parties

Source of Variation	SS	Df	MS	F	P-value	F crit
Rows	2564.486	34	75.42605	1.460342	0.137264	1.772066
Columns	10.41429	1	10.41429	0.201634	0.656255	4.130018
Error	1756.086	34	51.64958			
Total	4330.986	69				

Source: Author's Own Calculations

The results reported in table 4 of ANOVA-3 show that neither the seats won by Other Parties together with number of parties contesting election of 2014 vary significantly between the states nor the number of seats won by other parties from all states, taken

together, differs significantly from number of parties which contested election from different states. Obviously, these results do not suggest that the seats won by Other Parties are related to the number of parties which contested the election from different states.

3.7.5.4 Percentage of Votes Received by Other Parties and Real Per Capita GSDP of States

Seats won by other parties do not seem to be related to percentage of votes received or Per Capita Real SDP. Does it imply that the percentage of votes cast in favour of Other Parties is related to Per Capita Real SDP? Therefore, ANOVA of this pair is examined now in order to answer the above question.The results of two factors ANOVA of percentage of votes received by Other Parties and Per Capita Real SDP of states are shown in table 5 by ANOVA-4.

Table-5 ANOVA- 4 Percentages of Votes Received by Other Parties and Real Per Capita GSDP of States

Source of Variation	SS	Df	MS	F	P-value	F crit
Rows	50356927	34	1481086	1.008957	0.489705	1.772066
Columns	37444228	1	37444228	25.50805	1.48E-05	4.130018
Error	49909878	34	1467938			
Total	1.38E+08	69				

Source-Author's Own Calculations

The table shows that (i) the percentage of votes received by the candidates of Other Parties in parliamentary election of 2014 taken with Per Capita Real SDP of states does not vary significantly between the states. It is as if the differences of percentages of votes secured by other Parties and SDP of states from the combined mean are practically zero. Nil differences of change from state to state may imply that no relationship exists between these two variables. Variation of percentages of votes secured by Other Parties from different states, if all states are taken together, does differ significantly from inter-state variation of Per Capita SDP of all states taken together. The disjoint movement of percentage of votes received by Other Parties and Per Capita Real SDP of all states,

measured as differences from their respective means, also highlight the possibility of these two variables being statistically unrelated.

3.7.5.6 Percentage of Votes Received by Other Parties and Number of Parties

The rows given below show the percentage of votes received by Other Parties and number of parties in election fray, taken together, in different states. Two columns separately depict the state wise percentage of votes received and number of parties in electoral battle. The results of two factors ANOVA of these variables are shown in table 6 by ANOVA-5

Table-6-ANOVA-5- Percentage of Votes Received By Other Parties And Number of Parties

Source of Variation	SS	Df	MS	F	P-value	F crit
Rows	12207.54	34	359.0453	1.108173	0.383158	1.772066
Columns	13983.33	1	13983.33	43.15876	1.58E-07	4.130018
Error	11015.92	34	323.9975			
Total	37206.79	69				

Source-Author's Own Calculations

The results of ANOVA-5 show that the state wise percentage of votes of Other Parties and state wise total number of parties in election of 2014, taken together, do not vary significantly between the states. But the variation of percentage of votes of Other Parties for all states, taken together, significantly differs from the variation of number of parties in all the states taken together. This may lend support to the thesis that these two variables taken singly and separately significantly differ from each other. Therefore, the variables may change differently and dis-jointly from each other in all states. This may also imply that the percentage of votes received by other parties is not influenced by the number of parties contesting elections.

3.7.5.7 Number of Parties and Per Capita Real GSDP of States

The rows of this table display joint variation of number of parties in electoral battle and Per Capita Real SDP between the states. The first column depicts the variation of number

of parties in electoral battle of 2014 between the states and second column shows the variation of Per Capita Real SDP between the states.

Table-7-ANOVA-6-Number of Parties and Per Capita Real SDP

Source of Variation	SS	Df	MS	F	P-value	F crit
Rows	50193210	34	1476271	1.002848	0.496716	1.772066
Columns	38905409	1	38905409	26.4289	1.13E-05	4.130018
Error	50050654	34	1472078			
Total	1.39E+08	69				

Source-Author's Own Calculations

The results in table 7 of ANOVA 6 show that the number of parties and per capita real SDP does not significantly vary between the states. This may suggest that these two variables are almost uniformly distributed among the states. Therefore, these variables may have some relation with each other. However, the variation of number of parties among the states significantly differs from the variation of per capita real SDP of all the states. The disjoint significant variation of number of parties and per capita real SDP among the states lend support to the possible absence of any relation between number of parties contesting election of 2014 and per capita real SDP of states.

3.7.6 Analysis of Results of Econometric Models

Bivariate and multiple regression models are important methods of econometric analysis. Discussion of results of 6 pairs of two factors ANOVA paves the way to consider the results of seven regression models. Six step-wise regression models serve the objectives of (i) Detecting the presence and location of serious multi-collinearity in the multiple regression models of two or three determinants of seats won by Other Parties, if any; and (ii) It facilitates the rejection of the result which may not be conclusive due to its specificity to the given method or model of data analysis; and (iii) Identification of one or more independent variable (s) of multiple regression models which are irrelevant/redundant in the explanation of change in the values of dependent variable. This separates tru from psedu determinants of seats won by Other Parties in 2014 election of parliament.

3.7.6.1. Seats Won By Other Parties As A Function Of Percentage Of Votes Received, Per Capita Real Sdp And Number Of Parties Contesting Election Of 2014

First model is a multiple regression model which treats number of seats won by Other Parties as a function of (i) Percentage of Votes secured by Other Parties, (ii) Per Capita Real SDP of states, and (iii) Number of parties contesting Election from different states. These three variables are treated as pre-determined and exogenously given variables to the system from outside. In other words, values of these variables are given and are already fixed. Theoretical underpinnings of these variables have already been discussed in the context of their pairings for two factors ANOVA. Ordinary Least Squares (OLS) are used for estimating the regression model. Usual assumptions of OLS hold true. As the data is cross sectional, serious auto correlation is not expected to affect the parametric estimates. The above model is specified as under:

$$Y_{1j} = \alpha + \beta_1 X_{1j} + \beta_2 X_{2j} + \beta_3 X_{3j} + U_{1j\ldots} \tag{1}$$

Y_{1j} shows the seats won by other parties from states, and X_{1j}, X_{2j}, and X_{3j} stand for percentage of votes obtained from state j, per capita real SDP of state j and number of parties which contested election from state j respectively. U_{1j} refers to stochastic error and j denotes j-th state. Subscript 1 attached to Y stands for econometric model 1. OLS estimate of function 1 are reported in table 7

Table 8- OLS Estimate of Regression Model-1

Intercept	Beta $_1$	Beta $_2$	Beta $_3$	t $_0$	t $_1$	t $_2$	t $_3$	R^2	F	F*
-9.99793	0.14579956	0.002247	1.11005188	-1.79988	2.415821	2.08223	1.167031	0.44653	8.336767	0.000328

Source: Author's Own Calculation

Results reported in Table 8 reveal that:

(i)   Regression model 1 moderately fits the data since the coefficient of determination has a value of 0.4467. Thus, the function 1 explains about 45% of total variation of seats won by Other Parties from all the states. However, the coefficient of multiple correlation is highly significant at 0.00033 value of probability which is lower than even 0.01

probability. It may thus be concluded that almost 100 out of 100 such samples drawn from similar populations are likely to furnish similar results.

(ii)   Random factors may, however, influence 55% of change in seats won by Other Parties. The greater degree of influence exercised by random factors may be explained partly by (a) Aggregation of regional parties in one single group; (b) High uncertainty generally attached to the exercise of choice by electorates. It is surmised that the Indian voters may be classified into three categories (i) Ideologically or other-wise committed voters of political parties who are not generally influenced by the performance of the party concerned while it was in power. Such voters constitute a small proportion of total voters and this generally is the case for cadre based parties like CPI(M) and BJP and to some extent INC; and (ii) Voters who caste their votes in favor of parties whose leaders belong to their caste/religion/ethnic group. Some voters may be committed to individual leaders rather than their party; (c) Unattached and floating voters who exercise their choice in favor or against a political party on the basis of their performance and fulfillment of promises made to the electors at the time of preceding election. First two categories of voters constitute the part of systematic voting behavior while the third category of voters constitutes the part of uncertain voting behavior. Besides, canvassing and election campaigns of different political parties also influence the voting behavior. As the intensity of campaign increases as the voting day approaches, some voters may also change their decision to support or oppose the particular party. In view of the above, sizeable influence of uncertainty and random factors on the outcomes of election is not surprising. However, it does not take away the explanatory power of the systematic factors as pre-determined variables included in the model.

(iii)   Intercept, α, has an approximate value of 10, which is statistically not significant at 0.05 probability. Non-significance of intercept at probability level of 0.05 may suggest that variables other than those included as explanatory factors do not influence the votes cast in favor of other parties. This inference runs counter to the theses enunciated by Atal or Pavithra.

(iv)   Partial regression coefficients of percentage of votes secured by other parties and per capita SDP of states are statistically significant at 0.05 probability level.

(v)   Significance of the coefficient of per capita SDP shows that this finding is   highly different from the findings of Robert Barrow and Rodrik who found only weak negative relation between democracy and economic growth. But the inference conforms to the findings of Gupta-Prakash and to some extent Virmani. This result is, thus, an important

contribution to the existing stock of knowledge about the relation of democracy with economic growth.

(vi)   The partial regression coefficient of percentage of votes polled also shows that corresponding to one unit increase in the percentage of votes secured by Other Parties if the per capita SDP and number of parties are held constant,the number of seats won by these parties increases by only 0.15. Thus, the seats won by other parties are not very highly responsive to change in percentage of votes gained. However, an increase of 0.15% in percentage of votes may equal 100s of votes in absolute numbers. This may probably be accounted by the winning percentage of votes received by Other Parties and it does not differ significantly among the states.

(vii)   But the partial regression coefficient of per capita SDP shows that corresponding to one unit increase in the per capita real GSDP of a state when the percentage of votes polled and the number of parties are kept constant, the number of seats won by Other Parties increases by 0.22. Thus, the seats won by Other Parties have greater response to an increase of unit in per capita real SDP of states than the unit increase in percentage of votes polled. But one unit increase in real per capita SDP equals hundreds of rupees and thousands of votes cast in favor. This finding is not in consonance of the finding of Barrow and Rodrik who analyzed the cross-section data of 100 and 90 countries respectively and worked out the effect of democracy and negative influences of such factors as rule of law, mis-governance etc.

(viii) But the regression coefficient of number of parties is not significant. This may be explained by the possible significant relation between number of parties and percentage of votes secured which has already been explained on *a priori* reasoning in the context of ANOVA. This postulation shall be examined by step wise regression that follows the analysis of results of model 1.

The validity of model 1 is provisionally accepted on the empirical evidence furnished by the OLS estimate of the function. Final validity of the model depends on the result of test of multi-collinearity.

3.7.6.2 Stepwise Regression Models

If the dropping of number of parties as an independent variable from the estimated multiple regression model 1 does not affect the explanatory power of the multiple regression model 2 with one less explanatory variable, then it indicates that the number of

parties does not contribute to the explanatory power of the model 1 in which the coefficient of number of parties contesting the election is found to be statistically not significant.

Then, the non-significance of the coefficient of number of parties in model 1 is the reason for the dropping of this variable as an explanatory variable in the new regression function 2. Therefore, regression model 2 treats the number of seats won by Other Parties as the function of only percentage of votes secured by Other Parties and Per Capita Real SDP of states. Model-2 excludes the number of parties as the determinant of the dependent variable and the seats won by Other Parties. The results of this model are discussed in the ensuing paragraphs.

3.7.6.3 Seats Won by Other Parties as Function of Percentage of Votes Polled and Per Capita Real GSDP

Econometric model 2 is specified as follows:

$$Y_{2j} = \alpha + \beta_1 X_{1j} + \beta_2 X_{2j} + U_{2j\ldots} \tag{2}$$

Obviously, model 2 excludes number of parties, X_{3j} as an explanatory variable. OLS Estimate of regression model 2 is shown in table 9.

Table 9-OLS Estimate of Seats Won As function of percentage of votes secured by Other Parties and Per Capita Real SDP of states

Intercept	Beta $_1$	Beta $_2$	t_0	t_1	t_2	R^2	F	F*
-4.313124 2	0.1672 73	0.0029 88	-1.6065 3	2.8938 7	3.4068 89	0.4222 14	11.691 92	0.0001 54

Source-Author's Own Calculations

The results reported in table 9 highlight that

(i)   Function 2 fits the data reasonably well. The coefficient of multiple correlations continues to be statistically significant despite one explanatory variable being excluded from the function.

(ii)   The explained proportion of this function is 42.221% of total variation of seats won by Other Parties, which is reasonably good.

(iii)   The explanatory power of this function is approximately 3% lower than that of model 1. It means that the Number of Parties as an explanatory variable contributed at

least 3% of explanatory power to model 1. It is, therefore, inferred that number of parties is not infructous or irrelevant as the determinant of number of seats won by Other Parties; *a priori* reasoning about the role of number of parties in the determination of number of seats won strengthens the case for inclusion or retention of number of parties as the explanatory factor in model 1.This may also be taken to lend credence to the inference that the coefficient of number of parties turned not significant in model 1 due to multi-collinearity.

(iv)   Non-significance of the coefficient of number of parties in model 1 is probably accounted by its significant relation with percentage of votes secured by Other Parties or per capita SDP.

(v)   Intercept is not significant statistically in this case also. It implies that the variables, including number of parties, excluded from the model 2, do not influence the number of seats won by Other Parties. This contradicts the inference drawn from the value of the coefficient of determination relating to the explanatory power of the model.

(vi)   Coefficients of percentage of votes secured by Other Parties and Per Capita GSDP are statistically significant as before.

(vii)   The results of this model lend credence to the results of model 1 and strengthen the premise that the coefficient of number of Parties has turned to be not significant in model 1 due to muti-collinearity.

For testing the premise about multi-collinearity, we move to model 3.

3.7.6.4 Seats Won by Other Parties as Function of Percentage of Votes and Number of Parties

The results of model 2 suggest the need for further evaluation of causal relation of seats won by Other Parties with percentage of votes secured by Other parties and number of parties in poll fray in 2014. Model 3 is specified as follows:

$$Y_{3j} = \alpha + \beta_1 X_{1j} + \beta_2 X_{3j} + U_{3j} \tag{3}$$

OLS estimate of econometric model 3 is given in Table 10.

Table 10-OLS Estimate of mode 3-Seats Won by Other Parties as Function of Percentage of Votes obtained by Other Parties and Number of Parties

Intercept	Beta$_1$	Beta$_2$	t_0	t_1	t_2	R^2	F	F*
-14.2694	0.137457	2.276139	-2.63057	2.172221	2.817285	0.369122	9.361469	0.00063

Source-Author's Own Calculations

An examination of the results of model 3, reported in table 10, reveals that

(i) The function fits the data very well since the coefficients of (1). Multiple correlations; (2). Intercept; (3). Percentage of Votes secured by Other Parties; and (4). Number of parties in election battle in 2014, are statistically significant.

(ii) The explained proportion of variation of seats won from different states is 36.91% of total variation of seats won from the states. The explanatory power of this function is lower than that of models 1 and 2. The explanatory power of this fubction is nearly 6% less than that of model 2 and 9% less than that of model 1. This means that neither Per Capita SDP nor number of parties is an irrelevant factor of determination of seats won by Other Parties.

(iii) The statistical significance of the coefficients of percentage of votes and number of parties implies that the non-significance of number of parties in model 1 is conclusively explained by multi-collinearity. The results of this function support the authenticity and validity of model 1. The results of this model also suggest the possibility of existence of significant correlation between number of parties and per capita SDP. This premise is tested by next model.

3.7.6.5 Seats Won by Other Parties as Function of Per Capita Real Gsdp and Number of Parties

Model 4 treats the seats won by Other Parties as the function of Per Capita Real SDP and Number of Parties in electoral contest. The model is specified as follows

$.Y_{4j} = \alpha + \beta_2 X_{2j} + \beta_3 X_{3j} + U_{4j}...$ (4)

OLS estimate of model 4 is reported in Table 11.

Table-11: Regression Model 4 of seats won by Other Parties As Function of Number of Parties and Per Capita Real GSDP

Intercept	Beta $_1$	Beta $_2$	t_0	t_1	t_2	R^2	F	F*
-9.38993	1.810641	0.002074	-1.57717	1.862923	1.795223	0.342332	8.328379	0.001225

Source-Author's Own Calculations

An examination of the results of model 4, reported in table 11, reveals that

(i)   Regression model 4, which treats the seats won by Other Parties as a function of number of parties and per capita real GSDP, fits the data well so far as the statistical significance of the coefficient of multiple correlation is concerned.

(ii)   The function explains only 34.23% of total variation of seats won by Other Parties in parliamentary election of 2014. Thus, this function has the lowest explanatory power among the first four regression models.

(iii)   The coefficients of number of parties and per capita real SDP are statistically significant only at 0.07 and 0.08 probability levels. These probabilities are greater than 0.05 probability at which the partial regression coefficients of models 2 and 3 are found significant. The fact that the coefficients of number of parties and per capita GSDP in models 2 and 3 are significant and model 2 excludes number of parties while model 3 excludes per capita SDP as an explanatory variable. It may be inferred that the statistical non-significance of the partial regression coefficients of per capita SDP and number of parties at 0.05 probability in this function is accounted by multicollinear nature of these two variables. This result refutes the proposition that the number of parties and percentage of votes received by Other Parties are significantly related.

(iv) The A above discussion suggests that the non-significance of the coefficient of number of parties in model 1 is explained by multicollinearity. It is, therefore, reasonable to accept model 1 as valid.

However, for the removal of any lingering doubt about the correctness of the above inferences about model 1, regression models of seats won by Other Parties as a function of each of the three explanatory variables taken separately are examined.

3.7.6.6 Number of Seats Won By Other Parties as A Function of Percentage of Votes Polled

Regression model 5 treats the seats won by Other Parties in 2014 as a function of percentage of votes received by Other Parties alone. The model is given hereunder.

$$.Y_{5j} = \alpha + \beta_1 X_1 + U_{5j...} \tag{5}$$

OLS estimate of model 5 is given in table 12.

Table 11- OLS Estimate of Regression model 5: Seats Won by Other Parties Depend on Percentage of Votes

Intercept	Beta $_1$	t_0	t_1	R^2	F	F*
-0.85206	0.196211	-0.29826	2.985353	0.212642	8.912335	0.005303

Source-Author's Own Calculations

The results, reported in table 12, reveal that

(i) The function fits the data well since the coefficients of correlation and regression coefficient attached to percentage of votes polled by Other Parties are statistically significant.

(ii) Percentage of votes polled by Other Parties is found as the genuine determinant of number of seats won by Other Parties.

(iii) An increase of 1% in percentage of votes secured facilitates an increase of 0.2 seats won by Other Parties.

(iv) Relatively low explanatory power makes the function non-preferable despite the above results. But the percentage of votes cannot be excluded from model 1 either on theoretical or empirical counts.

3.7.6.7 Seats Won by Other Parties as Function OF Per Capita Real GSDP

Model 6 considers the number of seats won by Other Parties to depend on Per Capita Real SDP of states. Besides the social and political factors, economic development is an extremely important function of modern democracies. Economic growth/development is a universal objective of all countries of the world, irrespective of the developed or developing status of their economies, socialist or capitalist system and democratic or despotic polity. As democracies strive to promote welfare of the people and people aspire for growth of their incomes, democracy and economic development have been found to be directly related (Friedman, Milton, 1995). It is this *a priori* reasoning and theoretical underpinning that prompted the researcher to select per capita SDP as an important determinant of electoral performance of politicians and political parties, including Other Parties.

The function is outlined below:

$$Y_{6j} = \alpha + \beta_2 X_{j2} + U_{5j\ldots} \tag{5}$$

OLS estimate of econometric model 6 is reported in table 13.

Table 13-Seats Won by Other Parties as Function of Per capita Real SDP

Intercept	Beta$_2$	t$_\theta$	t$_2$	R^2	F	F*
0.99405554	0.003361	0.458344	3.502551	0.271006	12.26787	0.001346

Source-Author's Own Calculations

The results of table 13 show that

(i) Function 6 fits the data better than model 5 since the coefficients of correlation and per capita SDP are statistically significant and the function explains 27% of total variation of seats won by Other Parties from different states. Thus, the explanatory power of the function is greater than that of model 5.

(ii) The results furnished by the function conform to the findings of such scholars as Virmani and Prakash and Gupta.

(iii) Per capita SDP influences the seats won much more than the percentage of votes received by Other parties. Thus, per capita SDP cannot be dropped from model 1 despite its collinear nature with number of parties in election.

3.7.6.8. Number of Seats Won By Other Parties As A Function of Number of Parties

The function considers the number of political parties in electoral battle as the sole determinant of the number of seats won by Other Parties in 2014. The rationale of inclusion of number of parties as an important determinant of election results has already been discussed. Therefore, it need not to be elaborated again. The model is specified as follows:

$$Y_{67} = \alpha + \beta_3 X_{j3} + U_{7j}$$

The results of OLS estimate of function 7 are contained in Table 14.

Table-14.-OLS estimate of model 7: Seats Won by Other Parties as Function of Number of Parties

Intercept	Beta$_3$	t_0	t_3	R^2	F	F*
-13.3822	2.85452	-2.3454	3.547696	0.276096	12.58615	0.00119

Source-Author's Own Calculations

The results of model 7 show that

(i) This model fits the data reasonably well as the coefficients of correlation and numbers of parties are statistically significant. The function explains 27.61% of total variation in number of seats won by Other Parties from different states. This percentage of explained variation of seats equals the variation explained by function 6 and greater than that explained by function 5. Therefore, number of parties is as important a determinant of seats won by Other Parties as the percentage of votes received and per capita SDP.

The results of models 5, 6 and 7 conclusively show that the non-significance of the coefficient of number of parties in model 1 in the presence of per capita SDP and/or percentage of votes received by other parties is explained by multicollinearity. Therefore, model 1 is accepted as valid. This validates the specification of model 1 and the theory underlying it.

The results of this chapter are important in view of the fact that no other study of Indian polity has included percentage of votes polled and number of parties in electoral contests as explanatory factors of voting behavior. Even the studies of foreign scholars have also not focused on these factors. Besides, the political parties have also not been classified in distinguished groups as has been done in this thesis.

CHAPTER FOUR

PERFORMANCE OF BHARTIYA JANTA PARTY IN 2014 GENERAL ELECTION

Preview of the Chapter

The chapter focuses on the success of Bhartiya Janta party in the parliamentary election of 2014 after having been the main opposition party for 10 years long during the rule of UPA-1 and UPA-2. The results of application of Descriptive Statistics, Two Factors ANOVA without Replication and Econometric models form the base of empirical analysis. Empirical analysis shows that (i) seats won by BJP and the number of parties are approximately normally distributed among the states while distribution of percentage of votes polled by BJP and GSDPPC diverges from normality; (ii) Bivariate and regression models and regression models with two or three exogenous variables show that GSDPPC, percentage of votes polled and number of parties individually as well as jointly affect the number of seats won by BJP significantly. But step-wise regression shows GSDPPC and number of parties to be collinearly related which is also suggested by the results of two factors ANOVA.

4.0 Background

Human behavior is a unified entity which has many shades and dimensions. It is intricately complex but intertwined like human life itself. Human wants and actions have been classified by Kautilaya into the following four categories, and the satisfaction of wants of each of these categories requires distinct action. But Joan Robinson opined that no human lives by bread alone. Each human needs bread, sex and ideology. There is certain level of commonality between the views of Robinson and Kautilaya's taxonomy of first three groups of wants and as far as the actions to satisfy these wants are concerned. Robinson's ideology is a bit broader as it may be based not only on religion, which at least partly relates to moral values and 'Dharm'.

However, ideology may also relate to social, political and economic philosophy. All actions of humans are indivisible though every action has multiple aspects embodied in it. Therefore, voting behavior of people is no exception to this general rule. Voting behavior is influenced by political, social, caste, religion, race and community/ethnic allegiance, economic and other problems of life in a dynamic state. Consequently, election, and hence, voting behavior of the people is influenced by all above factors. However, caste/religion/ethnic and such other allegiance act as the decisive determinant of voting behavior if the group decides to vote strategically against or for a particular party and its candidates. But such allegiances cannot fulfill the economic needs of the day today life of

the people and/or promote their welfare. Therefore, voting behavior has the underpinnings of distinct economic facets. Level, style and quality of living under the rule of a particular political party has an important bearing upon the decision of voters to oppose or support political rivals. Economic performance during the government of the particular party and its alliance partners act as an incumbency factor which influences voters' choices to a great extent. Economic performance is generally measured by economic development or growth which is closely related to the employment opportunities, investment, consumption, economic in-equalities in the distribution of income and wealth, secure property rights, public expenditure, inflation etc.

Corruption and economic growth may also be perceived to be inversely related. Besides, political freedoms like freedom of speech, freedom of movement and settle down anywhere in the country, freedom of choice of educational institution, health care service center, occupation, etc. are an inseparable part of democratic polity. Administrative facets like size of the government, quality of governance, availability of safe and cheap means of transport and communication, rule of law and administration of justice are other important aspects which directly as well as indirectly affect the lives of the people and influence their electoral choices. Another aspect is that elections are inseparable part of democratic polity (Cf. Barrow, 1992, Dani Rodrik, 1991).

4.1 Historically Important Electoral Issues

If we go into the history of elections in independent India, the issues and problems that were the major point of contention among the contestants offer an interesting reading. In the initial years of political independence, elections were surrounded by certain euphoria, and an election aroused enthusiasm and high expectations. It was an occasion of expression of the rising expectations that came to reside in the minds and hearts of the common voters though the majority of them were illiterate. Indian National Congress, the main but not the only party involved in the freedom movement, commanded wide spread support. Besides, the political leaders had been weaving dreams around political independence as if political independence by itself was the panacea of solution of all problems of Indians. This is evident from the fact that the Indian freedom movement is unique in two respects; (i) It has largely been non-violent though thousands of people sacrificed their lives in the cause of independence, (ii) Economic self-reliance and long term self-sustained economic growth have been in the center stage of political movement

to get freedom from British rule (See, Prakash, Shri, 1977). This has been the backdrop of almost all the parliamentary elections in Independent India.

This chapter focuses on the electoral performance of Bhartiya Janta party in the parliamentary election of 2013-14. The NDA government headed by BJP was displaced by UPA-1 headed by the Indian National Congress. Besides, the period from 2008 to 2013-14 under the rule of UPA-2 has been marked by policy paralysis under the UPA-2 government headed by a Prime Minister who was projected to be a puppet of of the president of INA. The period was plagued by multiple scams and mis-governance. In the light of the above, BJP and its allies were expected to emerge with the majority in parliament after the declaration of the results of the election.

4.2 Sources of Data

Data base of this research investigation is secondary. These data have been taken from the (i) Web-site of Election Commission of India; and (ii) State-wise Gross Domestic Product (GSDPPC) in 1993-94 and the prices have been taken from the Web-site of Reserve Bank of India Central Statistical Organisation (CSO), Ministry of Planning and Program Implementation, government of India.

4.3 Methods and Models of Data Analysis

Methods and models for analyzing data have been chosen to suit the basic profile of data base, objectives of the study and the hypotheses relating to the objectives of investigation. The following methods and models have been used for analyzing data. Methods and models are chosen to highlight the basic features of the pattern of distribution of the values of the variables included in the study. The pattern and nature of values of the variables are important aspects of data analysis. Descriptive Statistics are used for this purpose.

(1) Descriptive Statistics comprises (i) Mean; (ii) Standard Error of Mean; (iii) Standard Deviation; Coefficient of Variation;(iv) Variance and Range; (v) Coefficient of Skewness; and (vi) Coefficient of Kurtosis.

Mean and median display the average of the movements of the variation across the states, and hence, it displays the general propensity of voters in favor or against the BJP in India during the period of election. This propensity and dispensation of voters has been building over the years against the government of UPA-2 which was characterized by policy

paralysis, multiplicity of scams, economic slowdown and inflation. The economy was characterized by recession in manufacturing in the midst of general inflation. Despite this, neither the government nor RBI were inclined to reduce interest rate to encourage investment and revive the slackening manufacturing sector. As against this, SD and CV display changes around the mean which highlight convergence or divergence of voting behavior among the states. Coefficient of skewness shows the even or uneven spread of values away from the mean and median. In other words, this coefficient highlights the degree and nature of inequality in the seats won, or voting percentage polled by BJP or SDPPC. But inequality and concentration are the two faces of the same coin. Coefficient of Kurtosis shows the degree of concentration of values of the variable in or around the barrow space of the mode.

(2) Besides descriptive statistics, Two Factor ANOVA without Replication is used for highlighting the statistical significance of differences of variances of core variables. This is important in view of the fact that (a) regression model is easily translated into ANOVA and vice versa. Therefore, the results of ANOVA may highlight the possibility of existence or absence of relation between the two factors included in the pairing of two factors ANOVA; (b) Intra-class correlation highlights whether the degree of inequality within or between the classes is greater. This aspect is important because it highlights the inequality in the number of seats won and proportion of votes polled among the states by the given political party, that is, BJP in this case. It shows the spatial sphere of influence of the parties on the one hand, and spatially weak spots for political party's (ies') vote base.

(3) Winning and losing of elections by any party, including BJP, depends on the number of seats secured in the by it. However, the victory in election depends on inter-relations of political, social and economic factors on the one hand, and overall environment preceding the election on the other. This necessitates the analysis of such factors. Regression models are used for this purpose. However, both Bi-variate and Multiple Regression models are used to capture the inter-relations between voters' choice of the ruling party and economic development, percentage of votes polled and number of parties contesting election from different states. Per capita SDP in constant 1993-94 prices is treated as an indicator of economic development of states. The author is aware of the fact that after the publication of the book ofAdleman-Morris (1967), GDP or per capita GDP/SDP as the sole indicator of economic development has been challenged by a host of economists For

example, See, Prakash, 1977, Gupta-Prakash, 1981, Barrow, 1996, Dani, 1989). But it is a fact that the growth of per capita GDP/SDP is the cause of generation of additional job opportunities, increase in consumption and investment, expansion of economic and social infra-structure like education and health though growth is also the consequence of investment and consumption, since the consumption multiplier and investment accelerator lie at the base of economic growth (Prakash, Shri, 1992, 1995, Prakash-Sharma, Ritu, 2014, Sharma, Ritu, 2014). However, these bi-directional relationships embody lead and lag structure (Prakash, Shri, 1992, Prakash, Shri and Sharma, Ritu, 2014).

It is this precept of growth which prompted the scholar to treat SDP/Per Capita GSDP as an indicator of economic growth of the states. It is interesting to note that immediately after the attainment of political independence, the political leadership and the masses intensely desired rapid economic development of India and social uplift of the masses. As industrialization, education, health, physical and financial infrastructure have played catalytic role in the development of now economically developed economies of the West, Indian planners accorded high priority to these areas in development plans. People also used to demand establishment of schools, hospitals, supply of electricity and construction of roads from their elected representatives.

Wherever these already existed, voters demanded up-gradation and improvement in these facilities. Incidentally, one assembly election in M.P. was won by BJP on the plank of rozi or livelihood, that is, employment, bijli/electricity and sadak/roads. But with the convergence of process of growth towards maturity, reduction in unemployment, elimination of wide-spread corruption among politicians and bureaucrats and cascading effect of inflation on the common man have come to the centre stage of parliamentary elections. But unemployment, inflation, uninterrupted power supply, roads, hospitals and health care services, schools/colleges/universities, and hence education services, and financial services like banks and insurance, other services like transport and communication are all directly as well as indirectly related to economic development, which is indexed by real per capita SDP in this study.

4.4 Analysis of Empirical Results

Empirical results are taken up for discussion sequentially. Therefore, the results of application of Descriptive Statistics to the parliamentary election 2013-14 are taken up first. The data relating to the performance of major national parties alone are analyzed.

Electoral performance of Bhartiya Janta Party, the winner of last General Election, is discussed in this chapter.

4.5 Analysis of Results of Descriptive Statistics

The following table shows the results of Descriptive Statistics of the data relating to

(i) State wise seats won by BJP; (ii) per capita SDP in 1993-94 constant prices, (iii) State-wise number of parties which contested the elections; and (iv) percentage of votes polled by BJP and votes polled per party.

Table –1-Descriptive Statistics of Seats Won by BJP and Related Data

Name of Statistics	Seats Won	No of parties	SDPPC	Votes per party %
Mean	8.75	6.78	1492.09	12.11
Standard Error	2.54	0.37	310.83	1.47
Median	2.50	7.00	846.54	9.23
Mode	0.00	9.00	#N/A	#N/A
Standard Deviation	14.36	2.12	1758.32	8.33
Sample Variance	206.13	4.50	3091680.70	69.38
Kurtosis	10.91	-0.64	5.08	8.01
Skewness	2.95	-0.41	1.96	2.66
#REF!	71.00	8.00	8017.54	39.72
Minimum	0.00	2.00	38.39	5.70
Maximum	71.00	10.00	8055.93	45.42
Sum	280.00	217.00	47746.80	387.36
Count	32	32	32	32

Source: Author's Calculations

The above results of Descriptive Statistics may be used to determine whether

(i) The distribution of values converges/diverges towards normal distribution;

(ii) If the distribution is not normal, then it is likely to have relatively high variance, positive/negative skew distribution, and high values/frequencies will tend to be concentrated in a narrow space around the mode.

(iii) Above properties of the distribution of the values of the variables may also suggest the time series of such data to be non-stationary. Above criteria are used in the analysis of the results of each variable separately to draw appropriate inferences:

4.5.1 Number of Seats Won by Bjp

The t value of difference between the mean and median of the distribution of seats won by BJP among the states is given by

t={/Mean-Median/}/standard error of mean.

The assumption, underlying the application of this simple test, is that the mean and median values of normal distribution are equal. If the seats won by BJP from different states are normally distributed, then the mean and median number of seats won by BJP shall be equal. This is treated as the null hypothesis. The t statistics evaluates the validity of this assumption and the value of t-statistics suggests the acceptance or rejection of the null hypothesis.

The calculated value of t is 2.86, and it is much greater than 1.96, the critical/table value of t-statistics at 0.05 probability. Therefore, the null hypothesis that seats won by BJP are normally distributed among the states of India stands rejected. The distribution of seats won by BJP is not normally distributed among the states. Consequently, the coefficient of variation (CV) is also as high as 163%, and this is the variance per unit of mean number of seats or seats won by BJP per state.

Non-normal distribution of seats won by BJP among the states implies that the distribution of BJP's seats in parliament is distributed around the mean number of seats in a highly skewed way. The inference is supported by the value of the coefficient of skewness, which is as high as 2.95. It is much greater than 1, and the upper theoretical

limit of the coefficient of skewness suggests the absence of skewness in distribution. It implies that the number of seats won by BJP is not evenly spread over states. These are rather highly concentrated in a narrow range around the high value or mode. That is why the coefficient of kurtosis is as high as10.91.

These results may probably be accounted by the following factors: (i) Number of total seats differ significantly among the states. U.P. has the highest number of 80 parliamentary seats whereas Union Territories like Lakshadweep and Andaman and Nicobar have one seat each;

(ii) Number of parties which contested election against BJP in different states also differs from state to state,

(iii) Total number of seats contested by BJP also differs among the states as it had shared seats with its allies and nominated candidates according to its area of influence.

(iii) Proportionate share in total number of valid votes polled by BJP from different states.

In fact, larger the number of parties contesting against BJP, the winning party, greater is the division of votes among the contestants, and hence, smaller is the proportionate share in total votes polled required for winning the seat by the candidate of BJP. Therefore, the results of descriptive statistics of these two variables are also examined.

4.5.2 Break Ups and Birth of New Political Parties

Election Commission has listed only 5 parties which satisfy the criteria for recognition as national party. These are the following parties: 1. Bhartiya Janta Party, 2. Indian National Congress, 3. Bahujan Samaj Party, 4. Communist Party, 5. Communist Party Marxist

However, there are a large number of local and regional parties though their number differs among the states. Consequently, on an average, 6.78 parties contested general parliamentary election of 2013-14 in different states of India. This is far from the early years of parliamentary elections in post-independence India when 3-4 parties contested these elections. There were only 3 political parties during the pre-independence era. These were Indian National Congress, Communist Party of India and Hindu Mahasabha. Muslim League was next to join the group (For details, See Kaushik, P. D. 1965).

There has been a great deal of proliferation of regional and local parties over the years. Division and sub-division of parent party (ies), like the division and sub-division of the family owned land holdings, accounts for the proliferation of political parties. Indian National Congress was the first to break when a group of eminent freedom fighters broke away from Indian National Congress under the leadership of Jai Prakash Narayan. His party was known Socialist Party. There were other leaders also who differed from the policies formulated and implemented by the Government of Jawahar Lal Nehru in post independent India and the policies advocated by INC during pre-independence period. The new party was named Praja Socialist Party and Acharya J. B. Kripalani and Dr Ram Manohar Lohia were the lime-lights of this party during the fifties.

But then Dr Ram Manohar Lohia formed his own party under the name Socialist Party of India and many of the followers of Jai Prakassh Narayan joined this party. Another party, named Swatantrata Party, which ideologically subscribed to the economic ideology of free enterprise and unhindered operations of the market for rapid economic growth came into existence. Raj Gopalacharya, the first Governor General of Free India, was the founder of this party. Luminaries like Minoo Masani were at the head of this party. But this party soon disintegrated after a few years under the sweeping leftist ideology that got political upper hand in electoral politics of India. The ruling Indian National Congress snapped away the socialist and communist ideology of the socialist and communist parties. It touched the nerve center of the poor of India and aroused the expectation of economic equality and reduction, if not total elimination of the inequality of income between the rich and the poor from the face of India.

The Indian National Congress was subsequently divided into two parties: Congress (I) and Congress (O). But after Bangladesh War of Liberalisation, 1971, Congress (O) was obliterated. West Bengal witnessed the rise of Trimul Congress, another off-shoot of congress. In assembly elections for assemblies of states and parliamentary elections in 1967, Indian National Congress lost power in many states and coalition governments were formed in many states where the opposition parties joined hands together to form government in the states. Congress was left with power only in only a few states. This resulted in the rise in regionalism and regional parties like DMK in Tamil Nadu, which subsequently broke into DMK and AIDMK, PMK etc. Similarly, Telgu Desam Party and

then Telegana Samiti also emerged in erstwhile undivided Andhra Pradesh. Punjab and Harayana witnessed the emergence of Akali Dal and Lok Dal respectively.

After the death of Dr Ram Manohar Lohia, it was the turn of socialist party to break and re-break again and again. Incidentally, political or economic ideology has not been the base of these divisions and sub-divisions. Divisions revolved solely round personalities and individual political ambitions of feuding leaders. Consequently, the erstwhile Socialist Party of India was reduced to several regional parties. Currently, we have Socialist party confined largely to the state of Uttar Pradesh which was headed by Mulayam Singh Yadava till recently as it is dominated by his family, and Akhilesh Yadav, his son, is its president. Then, there is Rashtriya Janta Dal, a splinter of Janta Party of post emergency era when most of the opposition parties merged into Janta Party to oppose the then Indira Congress. Laloo Prasad Yadava and his family control the party, known as RJD. There is Janta Dal United (JDU) which is controlled by Nitish Kumar, and Deva Gauda heads another Janta Dal in Karnataka.

Even Communist party of India broke into communist party (Marxist) and Communist Party of India. Forward Block and a few other left leaning groups operate in West Wengal. All these divisions and sub-divisions of Congress, Socialist and other parties have resulted in the birth of several smaller parties and the divisions had revolved round personalities rather than ideology. Panjab, Kerala and North East have their own splinter groups and parties. This accounts for such a high average number of political parties contesting parliamentary elections in India.

4.5.3 Descriptive Statistics of Number of Parties

In view of the above cotext, it is not surprising that *6.78 is the mean number of political parties per state which* contested the parliamentary election of 2013-14 from various states. Interestingly, the value of 7.00 of median number of political parties per state is slightly greater than the mean value as generally, the mean is greater than the median. But the difference between the mean and median is not statistically significant. The calculated value of t is as low as 0.77 which is not significant at 0.05 probability level. Therefore, the null hypothesis that the number of parties contesting the parliamentary elections is normally distributed is accepted. Consequently, the distribution is neither skewed nor it has a high degree of concentration in narrow space of mode. The distribution is negligibly

negatively skewed and the value of CV has a low value of 30%. The value of CV is also low at 35%.The electoral battles of BJP in different states may probably be treated as being fought on level playing fields.

4.5.4 Descriptive Statistics of Valid Votes Polled Per Party

In Indian polity, the candidate who polls more votes than all his rivals touches the post first. Therefore, the proportion of total valid votes polled by the party candidate is an indicator of success or failure in the election. The number of seats won directly depends upon this. Therefore, the state wise data relating to the percentage of valid votes polled by BJP is subjected to the application of descriptive statistics. The results are analyzed herewith:

The mean percentage of votes polled per party is 12.11 which is greater than the median value of 9.23 percent valid votes polled per party. But the question is; 'is the difference between the values of mean and median statistically significant?' The calculated value of t of this difference almost equals 1.96 which means that the difference of mean and median is statistically not zero, and the null hypothesis stands rejected.

The percentage of votes polled by BJP is also not normally distributed among the states. This is supported by the 69% value of CV, which is quite high. Thus, the mean percentage of votes polled per party differs significantly from the median. It suggests that the distribution is skewed. It has a high degree of concentration of votes of winning parties around the mode.The inference is well supported by the 2.66>1 value of the coefficient of skewness and 8.01>3 value of coefficient of kurtosis.

4.5.5 Descriptive Statistics of Real Per Capita GSDP

Planning is focused on the development of basic and heavy-goods industries. Heavy goods industries require extremely heavy capital investment and production involves long lead times. Besides, these industries also carry low returns which are spread over long periods. The enterprise and capital deficient Indian economy opted to nourish and nurture public enterprises for the establishment and development of such industries. The socialistic pattern of society put the political leadership and bureaucracy in the control of economic development. Perennial scarcity of essential goods and licensing and control regime bred corruption. Inflation became the concomitant of development since a major

proportion of development expenditure was appropriated by middle men and decision makers. Besides, the scarcity of resources and inter-state differences of natural and physical factor endowment impelled the policy makers to opt for the strategy of selectivity in the choice of programs and projects of development and their spatial locations. Consequently, regional inequalities of development were greatly accentuated as the economy moved from lower to higher stages of economic development. Then, inequalities of opportunities of employment, inadequacy of public expenditure on health, education, roads, electricity, potable water supply and other amenities of modern living have been marked sharply from year to year and from one election to another election. The extent and intensity of differentials of these variables is highly marked among the states.

These differentials are perceived to play an important role in the electoral choices of the people. Besides, the last general election was contested by BJP mainly on the agenda of rapid economic development, reduction in surging inflation, elimination or reduction in corruption and unearthing of black money and its elimination from the Indian economy. Inflation in Indian economy is accounted by scarce supply of food-grains and items of protective foods rather than excess money supply. This can be overcome by rapid growth of production of agricultural goods and services (See, Prakash, Shri and Sharma Sudhi, 2016, Sharma Sudhi and Prakash, Shri, 2015, Sharma, Shalini, 2005, Prakash, Shri, 1981, Sharma, Sudhi, 2016). Therefore, the differentials of real per capita SDP is assumed to be an indicator of all the above differentials of development among the states.

The results of descriptive statistics of GSDPPC show that (i) Mean SDP of states of Rs1492.09 is much greater than its median value of Rs 846.54, and the mean value of per capita SDP is nearly 1.7 times more than its median value. The calculated value of t is 2.09 which is greater than its corresponding table value of 1.96 at 0.05 probability level. The null hypothesis that SDPPC is normally distributed among the states is rejected. Therefore, it is inferred that the spatial distribution of real per capita SDP is not normal, and it significantly diverges from normal distribution. Therefore, CV is also as high as 120%. Thus, the observed real per capita SDP diverges greatly from the mean value which highlights high degree of economic inequalities of development. This accounts for differential degree of success of BJP in terms of seats won and proportion of total votes polled by it. The inequalities of spatial distribution are also displayed by the distribution

being highly skewed and high SDPPC being concentrated among few states. This facet has conferred great electoral advantage on BJP over its political rival UPA in general election which was in power at the center and several states and Union Territories.

4.6 Analysis of Results of Two Factors Anova

As the means and variances of all above four variables appear to be greatly different from each other, two factors ANOVA without Replication is used to evaluate the statistical significance of the differences of variances. The results of ANOVA may lend conclusiveness to the observations of results of Descriptive statistics. ANOVA test is more powerful than the tests of Descriptive statistics. Six pairs of above four variables are subjected to the ANOVA analysis.

The results are given in Tables below:

Table 1. SEATS WON BY BJP AND PERCENTAGE OF VOTES POLLED BY IT

Two Factors ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Rows	12827.42	32	400.857	2.033927	0.024289	1.804482
Columns	9158.008	1	9158.008	46.46725	1.04E-07	4.149097
Error	6306.727	32	197.0852			

Source: Author's Own Calculations

4.6.1 Discussion of Results of Anova of Seats Won and Percentage of Votes Polled by BJP

The above table contains the results of application of two factors ANOVA to the data of number of seats won by BJP and the percentage of valid votes polled by it. The data contained in the rows depict the state wise seats won and percentage of valid votes secured by BJP. As against this, data in one column shows the number of seats won and the other column depicts the percentage of total votes cast obtained by BJP. The results in

the table show that the variances both between the rows and the columns differ significantly and statistically.

The variances, when both the columns are taken together, differ significantly between the rows. The results display that both the seats won and votes secured by BJP differ significantly among the States and Union Territories of India. It means that BJP as a national party is not equally popular and its support base differs radically among the states. Consequently, the number of seats won and percentage of votes secured vary greatly between the states. Naturally, the distribution of seats won along with percentage of votes are together unequally distributed among the states. The states in which greater proportion of votes is procured also show larger number of seats won by the party. As against this, if the differences of rows, taken together, with the differences of variances among all states taken together are considered, the variance of seats won significantly differs from the variance of percentage of votes procured by BJP in all states. These inferences conform to those drawn from descriptive statistics.

4.6.2 Two Factors Anova of Seats Won by Bjp and Number of Parties

The results of calculation are reported in table 2 given below:

Table-2.Two Factors of Anova of Seats Won by BJP and NP

Results of Two Factors ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	3619.485	32	113.1089	1.227461	0.282757	1.804482
Columns	52.74242	1	52.74242	0.572362	0.454856	4.149097
Error	2948.758	32	92.14867			
Total	6620.985	65				

Source: Author's Own Calculations

The table shows that variation of seats won by BJP and number of parties in electoral fray, taken together, is not statistically significant. The inference lends support to the

inference drawn from the descriptive statistics that total number of parties in electoral battle against BJP in different states is normally distributed, and hence, inequality in the inter-state distribution is not expected to differ significantly between the states. If both the rows are considered together, then, the variance between the columns is also found to be statistically not significant. This may suggest that the number of parties contesting election against BJP in different states may also not be the significant determinant of the number of seats won by BJP. This may indicate that the electoral environment was heavily in favour of BJP.

4.6.3 Two Factors Anova of Percentage of Votes Polled By BJP and Number of Parties

The results of calculation are reported in table 3 given hereunder

Table 3- TWO FACTORS ANOVA OF VP OF BJP AND NP						
Source of Variation	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Rows	6156.641	32	192.395	0.921461	0.590767	1.804482
Columns	10600.74	1	10600.74	50.77142	4.37E-08	4.149097
Error	6681.388	32	208.7934			
Total					23438.76	65

Source: Author's Own Calculations

Now the question is that does the number of parties contesting election against BJP affects its percentage of votes polled? Answer may be inferred from the ANOVA results reported in the above table. The table shows that the number of parties contesting election against BJP and percentage of votes polled by BJP (shown in rows), taken together, do not vary significantly between the states. However, the variation between the columns is statistically significant. It means that the percentage of votes polled by BJP in all the states, taken together, differs significantly from the number of parties contesting election against BJP in all the states. Therefore, the number of parties contesting election against BJP will significantly influence BJP's percentage of votes received. Consequently, if both these variables are together used as determinants of seats won by BJP, it will make

multicollinearity to creep into the results. Therefore, the presence of multicollinearity is likely to make the regression coefficient of one or both these variables non-significant.

4.6.4 Two Factors Anova of Seats Won by Bjp and Real Per Capita GSDPPC

Estimated values of variation between states (rows) and between variables (columns) are given in table 4.

Table 4. TWO FACTORS ANOVA OF SEATS WON BY BJP AND GSDPPC						
Source of Variation	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Rows	48476702	32	1514897	1.018018	0.480015	1.804482
Columns	35212561	1	35212561	23.66302	2.95E-05	4.149097
Error	47618687	32	1488084			
Total	1.31E+08	65				
Total	1.31E+08	65				

Source-Author's Own Calculation

The results of this table constitute the core part of this thesis. An important premise of the thesis is that the democracy and economic growth are significantly related. Besides, it is assumed that the economic performance directly affects the outcomes of democratic elections for the ruling party. Good economic performance, an outcome of good governance and appropriate economic and financial policies, outcomes of which are measured by SDPPC, make incumbency factor positively influence the results of election for the ruling party. However, absence of prevalence of rule of law, corruption and negligence of the concerns of the majority become the cause of anti-incumbency factor against the ruling party which favours the opposition party (parties). Therefore, electoral success of BJP may be an indicator of anti-incumbency factor having worked against INC and its allies due to less than satisfactory and below expectation of growth performance of Indian economy during UPA-2 rule.

The results of ANOVA show that number of state-wise seats won and SDPPC of states, taken togeter, do not vary significantly between the states. It may imply that the winning

electoral performance of BJP has been uniformly spread over the states while the lack-luster performance of INC and its allies does not differ significantly between the states. However, the seats won by BJP in all the states, taken together, and SDPPC of all states, taken together, vary significantly between the seats won and Per Capita GSDP. It means that the inequalities of SDPPC might have adversely affected the electoral fortunes of BJP in some states. Therefore, Per Capita GSDP may emerge as the significant determinant of seats won by BJP in the majority of states.

4.6.5 Two Factors Anova of Percentage of Votes Polled by BJP and Per Capita GSDP

The calculated results of two factors of ANOVA of percentage of votes polled by BJP and per capita GSDP of states are shown in the table 5 given below:

Table 5- Voting Percentage of BJP and Per Capita GSDP

5. ANOVA						
VVP+SDPPC-BJP						
Source of Variation	SS	Df	MS	F	P-value	F crit
Rows	48044649	32	1501395	0.999743	0.500288	1.804482
Columns	34085978	1	34085978	22.69703	3.94E-05	4.149097
Error	48057009	32	1501782			
Total	1.3E+08	65				

Source: Author's Calculation

State-wise percentage of votes polled by BJP and PER CAPITA GSDPP, taken together, does not significantly vary between the states. It implies that the percentage of votes polled by BJP along with per capita GSDP is uniformly distributed among the states. It may further mean that the inequalities of development, measured by per capita GSDP, have not significantly and adversely affected the percentage of votes polled by BJP.

Operation of anti-incumbency factor against the INC and its allies in UPA-2 implies that lower the relative level of per capita GSDP of a state, greater is likely to be the percentage of votes polled by BJP in that state.

But the percentage of votes polled by BJP in all states, taken together, significantly varies from Per Capita SDPPC of all states, taken together. It implies that if the inter-state differentials of Per Capita SDPPC are overlooked, then the variation of per capita GSDP of all states, taken together, significantly differs from votes polled by BJP in all states, taken together. Therefore, the presence of these two variables as joint determinants of seats won by BJP in regression model may not cause multicollinearity.

4.6.6 Two Factors Anova for BJP of Number of Parties (NP) And Per Capita SDPPC

The pairing of number of parties and per capita GSDP of the states is the last pair of the variables of analysis in this chapter. The results of two factors of ANOVA for these two factors are contained in table 6, which is reported hereunder.

4.5.7.6 Discussion of Results of Two Factors Anova for BJP of Number of Parties (NP) and Per Capita SDPPC

The results of calculations are reported in the table 6.

Table 6: Two Factors Anova for BJP of Number of Parties (NP) and Per Capita SDPPC

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	48111053	32	1503470	1.002772	0.4969	1.804482
Columns	35298804	1	35298804	23.54331	3.05E-05	4.149097
Error	47978040	32	1499314			
Total	1.31E+08	65				

Source: Author's Own Calculations

As in five earlier cases, the number of parties and per capita GSDP in states, taken together, does not vary significantly between the states. It seems that the clubbing and consideration of joint variation of two variables taken together for each state obliterates the significance of their individual variation between the states. This also implies that these variables vary jointly between the states marginally. But the number of parties which contested 2014 parliamentary election from different states, taken together for all states, significantly differs from the variation of per capita GSDP of all states taken together. It highlights the differential degrees and pattern of variation of these variables. These results suggest that these two variables may be significantly related with each other which is expected to cause multi-collinearity in all regression models if both these variables are present together among the explanatory factors.

Discussion of results of descriptive statistics and Two Factors ANOVA of four core variables of data analysis has highlighted the nature and pattern of distribution of the values. The results familiarized us with whether the pattern of distribution converges or diverges from normality, the degree and direction of dispersion of values and their degree of concentration in the narrow space of modes of these variables.

As against the results of descriptive statistics, analysis of the results of two factors ANOVA of six pairs of these four variables of data analysis highlighted as to (i) which of these variables vary similarly among the states, and (ii) which of these variables vary significantly between the states when considered singly or jointly with other variables.

Discussion of results of both the descriptive and ANOVA have paved the way for the application of regression models to these data sets. Regression models and correlation analysis discover and test whether the theoretically postulated causal or bi-direction relations between two or more variables are empirically valid. But it is advisable theoretically that both correlation analysis and regression modeling are performed together because (i) Correlation analysis highlights whether two variables are related and whether the relation is inverse or positive, but it does not show which variable is cause and which is its consequence. Correlation analysis depicts togetherness in variation. But regression models treat changes in the value of one of the variables as dependent upon the changes in the values of other variable(s). However, both regression and correlation coefficients hold true at the average values of the variables involved. Besides, regression and correlation coefficients are estimated from the ratio of co-variance to variance(s) of

the variables involved. Besides, in case of partial regression and correlation coefficients, influence of the changes in the values of independent variables, other than that coefficient of which is considered, is netted out (See, Yule, Y.A. and Kendal, M.G (1968). It is these facets of regression models which may be anticipated by the analysis of results of descriptive statistics and ANOVA. This is what prompted the scholar to choose all three methods and models for data analysis.

4.7   Theoretical underpinnings of inter-Relations Between Seats Won, Real Per Capita GSDP, Number of Parties, and Percentage of Votes Polled By BJP

Ordinary Least Squares (OLS) method of estimation of regression coefficients is used for deriving parametric estimates of seven alternative regression models. Three of these models are biavariate in nature and orientation as the number of seats won by BJP has been treated as a function of GSDPPC, or VP or NP turn by turn. Each of these models captures the influence of GSDPPC on the number of seats won by BJP; and alternatively, the influence of VP on the number of seats won by BJP; or influence of NP on the number of seats won by BJP. The results of these models enable the scholar to detect/discover if any of these variables is not the true determinant of number of seats won by BJP. It is an established feature of regression models that the intercept or the coefficient of X^0= (1, 1,.......1) is autonomous and independent of any influence exercised by other pre-determined/exogenous variables on the dependent variable, Y_j. This is also interpreted as the influence of variables excluded from the regression model (See, Prakash, Shri 1978).

Next three models contain one pair of two independent variables as determinant of seats won by BJP. These models screen not only the influence of one exogenous variable on the number of seats won by BJP and the influence of the other determinants in the regression model but it also indicates the likelihood of the presence of multi-collinearity in the results. These six models are part of the Step wise regression modeling suggested by L.R. Klein (1965).

4.7.1 Criteria of Determination and Detection of Location of Multi-Collinearity

The criteria of determination and detection of the location of multi-colllinearity are as follows:

(i) If the introduction of second (third in case of regression models having two explanatory variables) determinant in bi-variate model makes the significant coefficient of the earlier determinant in one variable determinant model non-significant, or the sign of the coefficient is changed from positive to negative or from negative to positive, it signals that the two independent variables of the second model are significantly correlated;

(ii) The change in the value of coefficient determination furnishes the criterion to decide and determine the spurious or real nature of the second variable introduced in the model. If the coefficient of multiple determination of first model remains constant, or it increases just negligibly, it indicates that the second/third determinant does not contribute to the explanatory power of the initial model. Hence, the second/third variable is redundant and need not be inserted in the earlier model.

The above criteria hold true for all models, having three or more explanatory variables, in the regression.

The following notation is used to express the variables of these models.

SW_{BJPj} denotes the number of seats won by BJP from state j in last parliamentary election of 2014. The focus is on seats won by BJP since it won the last parliamentary election. $SDPPC_j$ shows real per capita GSDP of states j in 2014 in 2001 constant prices, and NP_j refers to number of parties which contested the elections from different states. VP_j stands for the proportion/percentage of Valid Votes Polled by BJP_j in state j.

The choice of the pre-determined variables is guided by proper logic based on politico-economic theory, relevant to the dependent variable and the availability of data. Politico-economic theory combines both political and economic aspects/factors of growth which are directly related to the seats won by BJP. Factors which determine the outcomes of parliamentary elections have been evolving since 1952 when the first general election of independent India was held though legislative assembly elections were also held in mid-thirties during the British Rule.

In the initial period, when economics was known as political economy, economic issues and problems were decided on political considerations. The King was considered as God's representative on the basis of divine principle of Rulers and their kingdoms. But then the political philosophy of thinkers like John Locke (See, Kuper and Kuper, 1996)

enunciated the principle that the King is the representative of the people, and therefore, the people have the right to decide the choice of their king. French and American Revolutions lent support to this theory. Concerted efforts of the challengers and logical argumentation resulted in the formulation of the concept of democracy and the roles and functions of the governments in Democracy have been developed over the years. Democratic government is defined as the government of the people, by the people and for the people. Obviously, election is the means of people's choices of their government. There was a concurrent transition from the concept of the ruling state to the concept of welfare state. Welfare of the people depends on economic growth with equity and distributive justice.

Therefore, modern democratic polity is generally guided by economic issues of the common people. Political elections more often than not, especially in developing economies, are contested generally on issues of economic development, inflation and employment. Besides, health, nutrition, education, roads, power supply, drinking water, sanitation and hygiene are also taken into account in the process of economic growth. But the leakages and seepages of development funds could not confer desired development benefits in requisite measure on the masses. Such problems and issues emerge in the center stage in the election agenda of political parties. In view of this, GSDPPC is specified as the central/core pre-determined variable of the regression model of seats won by BJP.

But the winning and losing the elections depends on the relative proportion of valid votes secured by the parties/contestants. It is a decisive determinant of defeat or victory in election. But the number of parties in election fray also affects the election results. Larger the number of parties contesting election, greater is the division of votes and smaller is the proportion of valid votes secured per party. This explains the choice of pre-determined variables of the regression model.

4.7.2 Multiple Regression Modeling and Multicollinearity

Among several other assumptions of the method of Ordinary Least Squares (OLS), which is used for estimating the parameters of regression models, absence of multicollinearity is an important assumption and the violation of this leads to serious problem. The reason is that if the two or more independent variables are significantly correlated, then the

standard errors of parametric estimates are generally not estimated accurately. Either the errors are over-estimated which leads to the non-significance of a truly significant coefficient, or errors are under estimated which may lead to consider a non-significant coefficient to be significant.

Consequently, a significant coefficient may be dismissed as not significant or vice-versa. But there is no real remedy for multi-collinearity. If the choice of pre-determined variables is correctly guided by the thrust of an appropriate theory, results should not and cannot be dismissed. We don't throw away the baby with bath water. Multi-collinearity is a statistical rather than theoretical feature. Besides, econometric modeling is guided by economic theory rather than by statistical considerations. Therefore, theory cannot and should not be compromised for statistical considerations, and multicollinearity is a statistical problem. Hence, baby is not thrown out with bath water.

An error of theoretical misspecification of the pre-determined variables may result in the inclusion of an undesirable variable in regression model. Therefore, Klein's step-wise regression is used so that the location of multicollinearity and the collinear variables are identified and inclusion of a redundant or irrelevant pre-determined variable is located and remedial measure can be taken to remove it from the model. This is the only ground on which a variable included in the regression may be dropped from the model.

4.7.3 Results of Step-Wise Regression Models

Step wise regression modeling proceeds gradually step- wise-step. It means that first we estimate the regression relation of the dependent variable with each of its pre-determined or independent variables identified theoretically for inclusion originally in the multiple regression model. Then, the dependent variable is regressed on all possible combinations of two and three independent variables. This is the case if we have 4 variables involved in the regression model as is the case in this study. Thus, we have all seven regression models/equations OLS estimates which are reported hereunder sequentially.

4.7.4. Discussion of Inter-Party Dynamics and Election Results

A priori logic and theoretical discussion in introduction of the chapter highlight the crucial effect of economic issues in general and economic growth in particular on election results in fairly developed democracies. As a country rises above from its less to more developed status, economic and social rather than religious, regional, caste or creed issues lose importance, and such economic issues and problems as unemployment, income

inequalities, inequalities of development, inclusive growth, inflation, uninterrupted supply of electricity, water, sanitation, good quality roads, rail connections and aviation connections, other means of transport and communications, and more rapid development become more important for the daily life and living of the people.

India, in fact, has still not reached the status of the development economy when economic issues will mostly prevail over the petty political, social and regional schisms which lose relevance. The fact of the matter is that political and economic ideology, regionalism and religion dominate the electoral scene in states like Tripura, West Bengal and Kerala where the coalition of communist parties has been ruling till last assembly elections in West Bengal, and Trimul Congress defeated the monolith left alliance. Kerala offers a slightly different scenario where Indian National Congress comes into power periodically in alliance with other parties; and at other times, the leftist alliance wins the elections.

States like Maharashtra, (Martha Vs Non-Maratha, and MaharashtriansVs non-Maharashtrians) have been the major electoral issues like BJP+Shiva Sena and their allies or Congress and its allies come to power alternatively in the state. Religion and regionalism do play some role in Punjab elections also where Akalis+BJP or Congress and its allies come to power alternatively. Tamil Nadu is dominated by DMK and AIDMK where Congress has been contesting elections in an ally of AIDMK or DMK, but it has no major influence left in Tamil Nadu. In U.P. and Bihar, BJP and several Samajwadis and BSP have been in forefront for more than two and a half decades while Indian National Congress has been put in the margins. Congress has still got substantial influence in Karnataka though castes do play significant role in electoral politics. BJP worked very hard to succeed to form its government in Karnataka and then also won quite a number of seats from Karnataka in the last parliamentary election.

Madhya Pradesh was the first state of India to have BJP as the ruling party when the party was struggling to make its presence felt in other states. Rajasthan has been the other state in BJP's domain. Haryana has been witnessing high caste drama and political upmanship where Lok Dal, Congress and BJP have been playing spoil sports for each other. Himachal Pradesh and J & K have also witnessed the resurgence of BJP recently in elections.

Andhra Pradesh (now Andhra Pradesh and Telegana), Assam and other North Eastern states have their own schisms. The following results of regression modeling, therefore, need discussion in this context.

In view of the above discussion, economic growth and other economic factors are not expected to have dominated the last parliamentary elections, but the issues of inflation, policy inertia regarding economic reforms (needed for accelerating growth), corruption (which is also an economic issue), and anti-incumbency have been the dominant factors which worked against members of UPA-II in general and National Congress Party in particular in the last parliamentary elections.

4.7.5 Discussion of results of three Bi-Variate Regression Models of Seats Won by BJP on Per Capita GSDP, Or VP Or NP

The OLS estimates of three step-wise bivariate regression models are reported hereunder:
(i) $SW_{BJPj} = 1.9850 + 0.0045\ GSDPPC_j., R^2 = 0.2978, F = 13.16, P = 0.00102$

$\quad\quad t = \quad (0.716)\quad (3,63)$

(ii) $SW_{BJjP} = 0.3048 + 0.2567\ VP_j, R^2 = 0.1301, F = 4.64, P = 0.029$

$\quad\quad t: \quad\quad (0.0679)\quad (2.153)$

(iii) $SW_{BJPj} = -8.1107 + 2.4648\ NP_j R^2 = 0.1285, F = 4.57, P = 0.041$

$t: \quad (-1.0)\quad (2.14)$

The results are discussed sequentially one by one.

4.7.6 GSDPPC as main determinant of SW_{BJPJ}

The first regression equation in step wise regression analysis treats SW_{BJP} as the function of real $SDPPC_j$ alone. The estimates of the function show that:

(i) The model fits the data reasonably well since the (a) Coefficient of Correlation is 0.5457 which is statistically significant. The calculated value of F is significant at 0.0013 probability level. (b) The coefficient of SDPPC is positive and it is highly significant also.

(c) Non-significance of the intercept implies that the variables, excluded from this model equation, do not exercise any significant influence on the seats won by BJP.

(d) The coefficient of SDPPC implies that if the real per capita GSDP of each state increases by Rs 1000, BJP will win 4.5 or approximately 5 parliamentary seats more.

(e) However, the value of the coefficient of determination is only 29.78% which means that 61.22% of total variation in seats won by BJP from different states may be influenced by random factors.

Do the above results imply that the exclusion of such systematic factors as percentage of total votes polled by BJP and number of other parties contesting election against BJP from this regression equation need incorporation in this model?

4.7.7 VP as main determinant of SW_{BJPJ}

The influence of percentage of votes polled and the number of parties contesting parliamentary election are examined separately. Therefore, the results of OLS estimates of these two bivariate regression models are discussed separately.

The OLS estimate of the regression of SW_{BJPj} on VP_j shows that:

(a) Regression model (ii) of SW_{BJPJ} on VP_J fits the data well since the positive coefficients of correlation and regression are statistically significant.

(b) But the fit of this function is greatly inferior to the fit of the regression model (i). The coefficient of correlation is only 0.36522 which is much lower than the 0.5443 value of correlation coefficient of model (i).

(c) The explained proportion of total variation of seats won by BJP among the states, as shown by the value of the coefficient of determination, is only 13.34%. It is even less than half the explanatory power of the model (i).

(d) The positive and significant coefficient of VP lends support to the thesis that larger the proportion of valid votes polled by BJP, greater is the probability of larger number of seats to be won by BJP from states.

(e) However, the intercept is also positive and statistically significant. This may be taken to suggest that the exclusion of GSDPPC makes the intercept of this model positive and significant. This is further supported by the fact that the random factors explain almost

86.66% variation of total seats won by BJP from different states, if this function is accepted.

In view of the above results, it is, therefore, inferred that the proportion of votes polled by itself is not adequate to explain the number of seats won by BJP from different states. This suggests incorporation of GSDPPC as an additional explanatory variable in this function, or incorporation of VP as an additional explanatory variable in function (i).

4.7.8 NP AS main determinant of SW_{BJPj}

OLS estimates of the regression function (iii) show that:

(a) The regression model (iii) of seats won by BJP on NP fits the data even less satisfactorily than the model (II). Its correlation coefficient is 0.3551 and its explanatory power is only12.85%. Both these are much smaller in magnitude than the corresponding values of these coefficients for model (i) and model (ii) respectively.

(b) However, the coefficient of correlation and the regression coefficient of NP are positive and statistically significant. Therefore, the function is not rejected despite its less satisfactory fit to the data than the fits of other two functions.

In view of the above results, it is inferred that the number of parties, though a significant determinants of seats won by BJP, is not an adequate determinant of seats won by BJP. This function may, therefore, need the incorporation of either GSDPCC or VP as the additional determinant of seats won by BJP.

4.6.2.6 Discussion of Results of Multiple Regressions of Seats Won by BJP as functions of pairs of two of GSDPCC, VP AND NP

The above discussion of results of three bivariate regression models of seats won by BJP moves us to the next stage of step-wise regression modeling which focuses on all three combinations of two explanatory variables as the joint determinants of the seats won by BJP from different states. These models of combinations of two explanatory variables are represented by models (iv) to (vi). OLS estimates of these models are shown hereunder:

(iv) SW_{BJPj}=-8063+0.4269NP+0.0042 SDPPC, R=0.5480,R^2=0.3003,F=6.44,P=0.005

$t =$ (0.06) (0.331)   (2.71)

(v)$SW_{BJP}=-6.3500+0.2589VP\%.+0045SDPPC$,   R=0.6558, $R^2=0.4301$,   F=11.321, P=0.0002

   t= (-1.57)   (2.64)   (3.97)

(vi)$SW_{BJP}=-22.5701+0.3204VPP+3.0826NP$, R=0.5684, $R^2=0.3231$, F=7.16, P=0.003

t= (-2.57)   (2.94)   (2.93)

Estimates of all three equations are discussed one by one.

4.7.9 Real Per Capita Gsdp and Number of Parties as Determinants of Seats Won by Bjp

A careful perusal of relation 4 shows that introduction of NP in model 1 improves the explanatory power of the first function from 29.78% to 30.033%. Introduction of NP as second determinant raises the explained percentage of variation from 29.78% to 30.033%. Thus, the explanatory power of first model is increased by 0.25 per cent points on the introduction of NP as an additional determinant of SW_{BJP} in relation 1. Therefore, NP cannot be dismissed as redundant or irrelevant determinant of SW_{BJP}. Both the partial regression coefficients are positive, and the positive sign and significance of the coefficient of GSDPPC are not altered by the introduction of NP as the second determinant of seats won by BJP. However, the significant coefficient of NP in relation (iii) changes from significant into not-significant in this function. This signals the presence of serious multicollinearity between GSDPPC and NP in relation (iv). This may imply that more prosperous a state, larger is the number of parties in election fray. High education and economic prosperity go hand in hand, and this may induce greater ideological and/or other differences among the politically aware segment of the population to form new parties. Education and economic prosperity also increase the affordability of the cost of elections to increasing number of parties along with the emergence of new interest groups.

If regression model (iii) is considered as the base in which GSDPPC is introduced as an additional determinant of seats won by BJP, then the explanatory power of the base function increases from 12 to 30% of the total variation of seats won by BJP. But the positive significant coefficient of NP turns non-significant by this change. This affirms the significant correlation between NP and GSDPPC which also lends support to the

postulation that growth of per capita GSDP leads to the formation and entry of more political parties in elections.

4.7.10. Real Per Capita GSDP and Percentage of Votes Polled as Determinants of Seats Won by BJP

Regression relation (v) is derived by incorporation of VP in relation (i), or by inclusion of GSDPPC in relation (ii) as an additional determinant of seats won by BJP. This function furnishes the best fit to the data so far since the regression function (v) explains 43.01% of total variation of SW_{BJP} which is much greater than the proportion of total variation explained by models (i), (ii), (iii) and (iv). Besides, the coefficient of correlation is significant at probability level 0.0002, which is much lower than 0.05 and F=6.97, which is highly significant. Hence, the null hypothesis is that the seats won by BJP are not related to SDPPC and Proportion of Valid Votes polled by BJP is rejected. The positive sign and significance of the coefficients of GSDPPC and VP of relations (i) and (ii) are not altered by incorporation of both SDPPC and VP as determinants of SW_{BJP} in this relation. This function is the best among all the five models that have been examined so far. Therefore, the Percentage of Votes Polled by BJP and GSDPPC do not emerge collinear in this function. Neither of these two pre-determined variables can be designated as the innocuous determinant of seats won by BJP.

4.7.11. Percentage of Votes Polled and Number of Parties as Determinants of Seats Won by BJP

Regression relation (vii) treats SW_{BJP} as the function of GSDPPC, NP and VP. The function also fits the data well since coefficient of correlation and the regression coefficients of NP and VP are statistically significant. F is significant at 0.0028 level of probability which is lower than 0.05. Therefore, the null hypothesis that NP and VP, taken together, are significantly related to SW_{BJP} is rejected. The function is not affected by serious multicollinearity since the coefficients of both VP and NP remain positive and significant. The explanatory power of the function is moderate, but it is greater than the explanatory power of first three relations: (i), (ii) and (iii). The explained proportion of total variation of SW in this case is more than twice the explanatory power of relation (iii). These results mean that neither of these two variables should be discarded as unimportant or irrelevant determinant of SW_{BJP}.

4.7.12. Seats Won by BJP as function of Real Per Capita GSDPPC, VP And NP

The discussion of results of six alternative regression functions in the preceding paragraphs has highlighted that (i) the seats won by BJP are a function of GSDPPC, VP and NP since none of these pre-determined variables has been revealed as an innocuous determinant of seats won by BJP; and (ii) NP and GSDPPC are significantly correlated with each other which has made the coefficient of NP as non-significant in one of these functions. Thus, the above discussion has paved the way for the discussion of the results of regression model (vii) which includes GSDPPC, VP and NP as the joint determinants of seats won by BJP. The OLS estimate of the function is given below:

(vii) SWBNP=-14.288+0.2841VP+1.2413 NP+0.0036 SDPPC,R=0.67113. R^2=0.4504, F=7.92, P=0.0005

t: (-1.65)   (2.81)   (1.04)   (2.59)

The function fits the data best. The coefficient of multiple correlation is significant at as low probability level as 0.0005. The F-statistics of correlation coefficient has a value of 7.92 which is highly significant at 0.0005 probability level. Therefore, the null hypothesis that the number of seats won by BJP in the last parliamentary election is not correlated with the SDPPC, VP and NP stands rejected. The function explains 45.041 per cent of total change in the number of seats won by BJP from different states and this is the highest percentage of explained proportion of variation among all these functions. Besides, all three partial regression coefficients are positive and statistically significant. This supports the earlier inference that neither GSDPPC, nor VP or NP is a redundant or innocuous determinant of number of seats won by BJP from different states of India. Incidentally, this function does not seem to be seriously afflicted by the presence of multicollinearity. Therefore, the results, furnished by this model, are finally accepted.This model is accepted as the legitimate model for the determination of the seats won by BJP in last parliamentary election.

CHAPTER FIVE

DETERMINATION OF SEATS WON BY INDIAN NATIONAL CONGRESS PARTY

IN PARLIAMENTARY ELECTION, 2013-14

Preview of the Chapter

This chapter first examines the aggregative electoral performance of all national and regional political parties, taken together, to furnish the backdrop for analyzing the performance of the Indian National Congress in the General Election of Parliament in 2013-14. In other words, the number of seats won by Indian National Congress and their determinants constitute the main subject matter of this chapter. Descriptive Statistics, Two Factors ANOVA and seven Econometric Models have been used for analyzing the data. Analysis of data shows that (a) Number of parties in electoral battle approximates normal distribution; (b) Percentage of votes polled by INC, numberof seats won and GSDPPC diverge significantly from normal distribution; and (c) Number of seats won by INC is determined by GSDPPC, VP and NP though the influence exercised by GSDPPC is greater than the influence exercised by VP and NP on the seats won by INDIAN NATIONAL CONGRESS.

5.0 Background

Political democracy needs two or more political parties to contest election in order to avoid the possibility of one party rule. One party rule represents oligarchy. However, there have been instances when only one party was in active operation. For example, African National Congress was the only party in South Africa which opposed the rule by White men during the prevalence of Apartheid. However, such instances are exceptions rather the rule in democracy. The party which wins the larger number of seats in the election has the right to form the government while the losing party (or parties) operates as an opposition party. United Kingdom has had two party sytem for long when the Conservative and Labor parties were the contender for power. After that, Liberal party emerged as the third contender for power. Currently, U.K. has got multi party democratic polity.

The multiplicity of parties results in an increase in number of candidates per seat and division of valid votes among more than two parties. Consequently, the government may be formed by a party or coalition of parties which have polled less than 50% of the valid votes polled in an election. The role of the opposition party is to oppose the government *per se.* But it does not mean that the opposition party should oppose the government for the sake of opposition. Therefore, the opposition party is expected to operate in a

constructive manner. Constructive opposition implies that the opposition party has to offer constructive opposition. It means that the opposition party should extend a hand of cooperation to the ruling party on matters which are of paramount national interest such as defense of the country. Alternatively, opposition should cooperate with the government if matters relating to the promotion of people's welfare are concerned. Opposition party has to work as the counter balancing force in the parliament so that the ruling party does not become autocratic and/or works against the national or social interest.

 However, the opposition party has to operate in a constructive manner. If a party has ruled the country for too long, then it tends to operate autocratically and, at times, it may also act against the interest of the country or people. Besides, addiction to power may make such party anachronistic and it may not hesitate even to use dirty tricks to unseat the ruling party if such a party loses power and becomes an opposition party. This trait may be acquired by a party which has ruled the country for several decades. Incidentally, Indian National Congress has been the ruling party of India for nearly six decades. Incidentally, it lost power to BJP in the last parliamentary election after having been the ruling party for nearly one decade without break. As habits die hard, Indian National Congress may not be reconciled to the loss of power to BJP.

But the results of elections largely depend upon the number of political parties and their candidates in electoral battles, the votes polled by the candidates or their parties determine the fate of the contestants. Larger the number of parties or the candidates contesting the election, smaller tends to be the proportion of popular votes polled by the winning party/combination of parties. Such governments virtually represent minority of polled/popular votes. An important aspect in such situations may, therefore, be that the number of parties which have the base in the entire country may be called national parties. But the parties whose influence is confined only to one or some states/regions fall in the category of regional or local party. Election Commission of India has laid down the criteria for the classification of parties into these two categories. The popular support for several regional or local parties may be confined to particular regions/state or even areas of a state. Current Indian polity is a typical representation of this phenomenon. Therefore, total parties in India are classified into two categories: National parties and Non-national or regional/local parties. Those political parties which are not spread over the entire nation fall in the second category. Consequently, they do not contest the

elections from all the constituencies in the country. It may, therefore, be surmised that the number of seats contested and popular votes polled by the contestants may determine the number of seats won though the percentage of votes secured may exercise greater influence on the number of seats won by any party.

As the democracy has been maturing in India with the increasing experience of democratic institutions and their operations with time, many voters have stopped casting their votes on the basis of mere sloganeering or lofty promises or loyalty to the party/candidate. The performance of the ruling party always plays an important role in the voting decisions of the people. Economic development and the benefits derived from the same, especially supply of potable water, electricity, good roads, inflation, and employment are the important factors that sway the voting behavior of the people. Besides, the past performance of individual candidates, seeking reelection, also comes into reckoning. Transgression of rule of law, indulgence in corruption and wide spread interference in the working of autonomous organization for conferring benefits upon kith and kin or others for financial or other considerations emerge as elements of anti-incumbency factor. For example, abrogation of constitutional provisions and suppression of freedom of expression during emergency led to the defeat of the Indian National Congress in the 1976-77 General Election. But economic growth is the most important factor among the social, political and economic factors that influences the outcomes of electoral battles. Economic factors are directly related to the change in per capita income of the people. The view is amply supported empirically by the fact that Indian National Congress twice lost the general election to BJP in 1998 because it could not deliver satisfactorily on growth front despite the adoption of New Economic Policy in 1990-91. Growth of GDP and per capita GDP slackened quite a bit during the rule of Third Front as well as Indian National Congress. Similarly, BJP and its allies of NDA lost the 2004 general election because people did not find India shining, as was claimed by BJP. In view of the above, per capita Gross SDP has been selected as one of the important determinants of the seats won by Indian National Congress Party in the last parliamentary election. However, the most important criteria of the winning or losing is first past the post, that is, the candidate who polls the highest number of votes in the constituency wins the election. Consequently, the party which polls the greater proportion of votes cast all over the country generally wins the majority of the seats of parliament. But more often than not, no single party may win the absolute majority which results in coalition

government. Indian National Congress party ruled India unchallenged till 1976-77 when Janta Party, a conglomerate of practically all opposition parties, except the communist party, won the parliamentary election. But the challenge to the hegemony of Congress over Indian polity emerged in fifties and continued till mid-sixties. Arrogance of power and unchallenged popular support were reflected in a statement of Prime Minister, belonging to INC, that even if an electric pole is fielded as a candidate in an election, it will win. Mr Rahul Gandhi, the then Vice President of INC, acknowledged in a recent public meeting that his party became arrogant due to 10 years of uninterrupted rule at the center. He implied that it lost to BJP in last election due to this. INC started losing its grip on power in mid-sixties.Consequently, Samvid Sarkar, that is, joint/coalition government, emerged in several states of India where INC had ruled earlier. This heralded a new era of a new political paradigm of consolidation of anti-Congress and Pro-opposition votes at the time of election. Besides, regional parties have also started emerging during this period. These parties revolved round personalities of their leaders, castes, religion and language, etc. Many of these leaders separated from their respective parent political party to form a separate party. This also resulted in the diminishing of the support base of Indian National Congress. Congress lost the parliamentary elections more than once after 1976-77. But the Congress quickly learnt the lesson and started gathering other parties around itself on the pattern of NDA. It ruled India since 2004-05 till the last parliamentary election. This is the reason that BJP and Indian National Congress Party are treated as two important political entities of India.

5.1 Objectives of the Chapter

As Indian National Congress Party has ruled India for more than six decades, it is one of the two major national parties. All parties other than BJP and INC party are grouped under 'Other Parties'. The main objectives of this chapter are as follows:

1. Broad Aggregative analysis of the performance of all National Parties. This furnishes a broad view of the outcomes of last parliamentary election of 2014.
2. Analysis of the electoral performance of Indian National Congress (INC).

Almost all the states of India have one or more regional or local parties. The reason of grouping all such parties together is that all the parties of this group are regional in orientation and influence though leaders of some of these parties may nurture ambition to become the prime minister of India sooner or later. Incidentally, Non-BJP and Non-

Congress parties had joined hands to form coalition government at the center and states several times, and such governments have been called the governments of Third Front.

5.2 Empirically Tested Hypotheses

H_0: The seats won by the Indian National Congress, its vote share in total valid votes cast by the electorates and the number of parties against it in election fray are normally distributed among the states. This hypothesis is tested empirically by the t test of significance of difference between the values of mean and median of the variables;

H_{01} The number of seats won by the Indian National Congress is determined by non-systematic and random factors;

H_{02}: The number of seats won by the Indian National Congress is determined by Per Capita GSDP of states;

H_{03}: The number of seats won by the Indian National Congress is determined by the Percentage of Valid votes polled by it;

H_{04}: The number of seats won by the Indian National Congress is determined by the Number of Parties which contested election against it and the corresponding division of votes among the contestants;

H_{05}: The number of seats won by the Indian National Congress is determined by the Percentage of Valid votes polled by it and the Number of Parties in Election fray;

H_{06}: The number of seats won by the Indian National Congress is determined by the Percentage of Valid votes polled by it and GSDPPC;

H_{07}: The number of seats won by the Indian National Congress is determined by the GSDPPC and the Number of Parties in Election fray;

H_{08}: The number of seats won by the Indian National Congress is determined by the GSDPPC, the Number of Parties in Election fray and Percentage of Valid votes polled by it.

The formulation of above hypotheses is based on the Approach of Nested Hypotheses formulation. Under this approach, none of the hypotheses is the 'null hypothesis ', and all

the hypotheses stand on par. The traditional approach contains only two hypotheses; Null and Alternative. Rejection of the null hypothesis is taken to validate alternative hypothesis automatically without explicit testing of the same. Besides, the entire reality is assumed to be compressed and exhausted by two possible outcomes of hypothesis testing. It is not possible to have a closed and bounded set of two hypotheses to exhaust all possible facts of real world phenomenon. Under the Nested hypotheses formulation approach, each hypothesis relates to one possible outcome and each of these outcomes is assumed to be equally probable. Under traditional approach, null hypothesis has a greater probability of rejection than the alternative hypothesis. It is in-built in the process of formulation of the null hypothesis which is expected to be rejected on empirical evidence.

These hypotheses are tested by alternative regression models.

5.3 Methods and Models of Data Analysis

It has been discovered in empirical analysis several times that some results are embodied inseparably in the specific model or method used in the analysis of data. Therefore, this study has preferred to use more than one method of data analysis. Choice of methods/models has been guided by the objectives of the study, assumptions and limitations of the methods/models chosen and their compatibility with the data which constitute the information/facts base of the analysis.

The following methods/models are used in the study:

5.3.1 Descriptive Statistics

Descriptive Statistics comprises mean, median, standard deviation, coefficient of variation, coefficients of skewness and kurtosis. These statistics portray the summary picture of empirical features of the data used in the study. More specifically, values of these statistics reflect the nature of distribution whether it is evenly or unevenly distributed among the units of observations, degree of concentration and the spread of the values around or away from the mean of the values of the variables. In view of this, descriptive statistics has been used as the preliminary step of empirical study.

5.3.2. Anova for Two Factors Classification without Replication

It is noteworthy that the nature of the distribution of the values of variables depends basically on their averages/means and variances. Besides, in case of time series data, constancy of the mean and variance determines the stationarity of the series. In view of

the above, ANOVA is used to assess the significance of the differences of the variances of the pairs of four variables that constitute the data base of the study.

ANOVA has also been used in data analysis since it displays the degree and nature of variation of the variables among the states and the variation of values of all states, taken together, between the variables under consideration and their differentials of variation. The results of ANOVA supplement the results of Descriptive Statistics.

5.3.3. Bi-variate and Multiple Regression Models

The main objective of the study is to determine the number of seats won by INC and identification of the determinants of seats won by INC. Regression models of econometric modelling are used to determine the degree and direction of inter-relations among the seats won by INC. Percentage of Valid Votes polled by the INC, Per Capita Gross SDP of the states and the number of parties in election fray against the Congress party are treated as the individual or joint determinants of the dependent variable, that is, seats won by INC party.

5.4 Analysis of Empirical Results Derived from Application of Methods/Models

The empirical results are analyzed systematically and sequentially. First step in the analysis of results derived from the application of methods/models focuses on the results relating to all the national political parties of India.

5.4.1 Analysis of Overall Performance of All National Parties of India in General Election of 2014

Six political parties, designated as National Parties by Election Commission of India, contested the general election of parliament in 2013-14. The largest number of seats was contested by BSP which was followed by INC and BJP. The number of seats on which a national party puts up its candidates in an election displays the perception about the influence a party considers on its command area. The perception may be largely facts based or it may relate to the particular party's expected potential area of influence in future where it wants to register its presence.

The data reported in table 1 show that the total number of candidates who contested the election in 2014 was 1591, but only 342 candidates won the parliament seats. Thus, only 21.5% of total contestants won the parliamentary seats. This lends support to the above stated thesis that the actual number of seats contested may not be the true index of the influence and standing of a political party because the perception of the electorates about

individual parties changes from election to election and the number of seats contested highlights the perceived influence by the leader(s) rather than actual influence of a political party.

Average number of seats won by the national parties is 57 though the average of all the seats won by all parties, including Non-National parties, is only 8.75. The difference in the values of the two averages is accounted by the large scale failure of such parties as BSP and INC which fielded an extremely large number of candidates from numerous states where these parties' perceived influence was not matched by the responses of the electorates.

5.4.2 Number of Seats Won Per Seat Contested by National Parties

Since none of the national parties contested all the seats of the parliament, use of total seats of parliament as the denominator may not be an appropriate index of success or failure of the parties. Number of seats won by a party as the proportion of the total seats it contested is an important and more appropriate indicator of success or failure of the party in the democratic elections. The party wise proportion/percentage of seats won out of total contested seats is shown in the Table 2 given below. But the data reported in three different rows has three different base values. The last row of the table reports percentage of votes polled rather than the number of seats.

Table 2- Proportionate Shares of Parties In Base Values

Party	BJP	CPI	CPI(M)	INC	NCP
Percentage	0	0.15	9.68	9.48	16.67
Percentage	0	0.29	2.63	12.65	1.16
Percentage	6.9	1.3	5.4	32.16	2.6

Base of First Row -Seats contested; * Base of Second row-Seats won by all national parties.* Base of Third Row -Obtained Percentage Relative to percentage of all valid votes.

It is interesting to note that BSP contested the largest number of seats among all the national parties and it has come out as a total cropper on both the counts, that is, seats

won as a proportion of total seats BSP contested and the seats won by BSP as the proportion of total seats won by all the national parties. In fact, it has lost all the seats that it contested. Naturally, its success index is zero percent on both the counts. BSP had lost the 2008-09 assembly election to SP in U.P. where it had been the ruling party multiple times. Cast and communal card did not help it in 2014 parliamentary election probably due to its lingering image of mal-governance in U.P. (CF. Pavithra, Gupta and Prakash, 1981, Virmani).

BJP shows the best performance on both the counts used as criteria in the calculation of percentages. It is followed by NCP. BJP won the largest number of seats from U.P. and minimum number of seats from Kerala. BJP has, in fact, performed well even in such areas where it had hardly any presence either as the ruling or opposition party. The following reasons may be adduced for its success (i) Its prime ministerial candidate, Mr Narendra Modi, has earned the image of the competent development administrator as chief minister of Gujarat where he headed the government for approximately one decade; (ii) Mr Narendra Modi has the clean image of a politician who has not been able to maintain himelf above corruption; (iii) As a man from a very humble economic background, he could establish emotional link with the common electorates; and (iv) Anti-incumbency factor against the INC whose government of UPA-2 faced not only numerous corruption charges but it had also acquired the reputation of running a government under a puppet prime minister and policy paralysis.

Success of NCP is accounted by its performance in Maharashtra and North East India. It has been the coalition partner in the government both at the center and Maharashtra and somehow it succeded in keeping itself seprate from the negative facets of INC, the party heading both the state and central governments.

 The performance of INC and CPI (M) on first criterion is similar though INC follows the BJP on second criterion. The above inferences are also supported by the relative shares in total percentage of valid votes received by the above mentioned parties.

 All three percentages are, therefore, consistent with the relative performances of all national parties. Besides, the percentages in all three rows are consistent with each other also which suggests the existence of direct relationship among all these three relative shares.

Total number of seats won by the Indian National Congress is only 44 which is lower than the average of all national parties other than INC. But the difference of 13 seats between the average number of seats won by all parties, except INC and total seats won by INC, may not be statistically significant since the calculated value of t is only 0.91<`1.96 at 0.05 probability value. It means that if 100 repeated samples are taken from such populations as this, performance of the Indian National Congress will be similar to its performance in 2014 in 95 samples.

5.4.3 Analysis of Performance of All Parties Including Regional Parties

The general election of parliament or assembly elections are not contested only by the national parties and the number of parties/candidates in electoral battles result in (i) Reduction in the votes received by each party/candidate; (ii) percentage of valid votes required to be polled by the winning party/candidate; and (iii) Larger number of contestants and mobilization of voters supporting them to cast their votes result in greater proportion of total voters casting their votes. Therefore, the total number of parties and candidates exercise a substantial influence on the outcomes of elections. Hence, it is desirable to consider the performance of both national and regional parties in 2014 election.

In the following table 3, the results derived from the application of descriptive statistics of the performance (aggregates of seats won, etc.) are considered. The results are based on the consideration of performance of all political parties, including non-national parties. The results are reported in table 3.

Table 3: DESCRIPTIVE STATISTICS OF PERFORMANCE OF ALL PARTIES INCLUDING REGIONAL PARTIES				
	Seats Won	No of parties	SDPPC	Votes per party %
Mean	8.75	6.78	1492.09	12.11
Standard Error	2.54	0.37	310.83	1.47
Median	2.50	7.00	846.54	9.23
Mode	0.00	9.00	#N/A	#N/A

Standard Deviation	14.36	2.12	1758.32	8.33
Sample Variance	206.13	4.50	3091680.70	69.38
Kurtosis	10.91	-0.64	5.08	8.01
Skewness	2.95	-0.41	1.96	2.66
#REF!	71.00	8.00	8017.54	39.72
Minimum	0.00	2.00	38.39	5.70
Maximum	71.00	10.00	8055.93	45.42
Sum	280.00	217.00	47746.80	387.36
Count	32	32	32	32

Source: Author's Own Calculation

5.4.4. Analysis of Results of Parliamentary Seats Won

The parliamentary seats won by different parties from different states are not evenly distributed among the parties. The calculated value of t of the difference of the values of mean and median is 2.56>1.96 which is statistically significant at 0.05 value of probability. The null hypothesis, tested by this t statistics, is that the seats won are normally distributed among all the political parties. It is, therefore, concluded that the seats won are asymmetrically distributed both among the parties and among the states. Consequently, the values of the coefficients of skewness and Kurtosis lie outside the acceptable range/criterion of non-skewed and non-concentrated equitable distribution. The distribution of parliamentary seats won by political parties is positively skewed and an extremely high number of seats are concentrated in and around the narrow space of the value of the mode, which may be associated by the seats won by BJP. This provides the backdrop in which the performance of INC may be analyzed and judged in the ensuing pages.

5.4.5. Analysis of Results of Number of Parties

Average number of parties contesting last parliamentary election from all states is 6.78, which is just a little more than the total number of 6 national parties. Difference between the average and median number of parties is only 0.22, which is not statistically different from zero. Its calculated value of t is as small as 0.694<1.96. It may, therefore, be inferred that the number of political parties in election fray in different states is evenly/symmetrically distributed among the states. This also suggests that the number of candidates who contested last election is also evenly distributed among the states. But the distribution is slightly negatively skewed and negligible degree of concentration is visible on the left side of the curve.

5.4.6. Analysis of Results of Percentage of Votes Polled

Percentage of votes fetched by the contestants is an important determinant of win or loss. Its descriptive statistics reveals that polling percentage of valid votes significantly differs among the Indian states as well as among the parties. The t value of the difference of mean and median percentage of valid votes has a value of 1.959>1.96, which just equals its critical value 1.96 at 0.05 probability. Thus, the percentage of valid votes polled by the parties differs significantly. It also explains the differentials of seats won by these parties.

5.4.7. Analysis of Results of GSDPPC

The last variable to be considered is real per capita GSDP. The differentials of GSDPPC among the states make development issues differently important for voters in different states. Voters in states like U.P., Bihar, Jharkhand, M.P. Rajasthan and Orissa, which are relatively much lower on development scale, will decidedly prefer such parties that make credible promise of development, especially generation of more job opportunities, jobs with higher average earnings in non-primary sectors, and amelioration of poverty, mitigation of illiteracy and better health services (Gupta-Prakash,1981, Barrow, 1992,Dani, 1996). As against this, voters in developed states such as Panjab, Haryana, Maharashtra, Gujarat and Karnataka will like to maintain their development lead over other states by accelerating economic growth. Therefore, per capita GSDP emerges as an important variable that may sway voters and tilt them one way or the other. Good or poor performance of the previous government at the center and/or the states becomes the bench mark for comparison of the promised and actually realized targets set by the ruling party in the past.

Calculated value of t statistics of the difference between mean and median values of GSDPPC is 2.08>1.96, which highlights the fact that the income distribution is greatly uneven among the states. The spatial distribution of GSDPPC is positively skewed and highly concentrated in selected pocket/states. This reflects the validity of the above premises. This sets up the backdrop for anaysing the electoral performance of INC.

5.4.8. Electoral Performance of Indian National Congress in 2013-14

The number of parties in electoral battle and real GSDPPC has been shown not to significantly differ among the parties by the results of preceding sections. But the seats won and the percentages of valid votes polled differ significantly among the parties. Therefore, the seats won by Indian National Congress party are considered in this section for detailed analysis. In view of the discussion of the performance of all parties at the aggregative level, percentage of votes polled by the Indian National Congress party has been considered as an important factor of analysis. Number of seats won by a party is the most important determinant/factor of whether the particular party may succeed in forming its government on its own or in coalition with other parties.

The Indian National Congress has dominated the political scenario in India since independence. Therefore, the performance of INC is considered separately. The electoral performance of any party is reflected by the number of seats it wins, but the number of seats won depends on numerous factors, both qualitative and quantitative. At macro level, as against the constituency level, most important among these factors is the per capita GSDP of states which reflects the level of development or the backwardness of the state, and the prosperity or poverty of the people who live in the state (Prakash-Mohapatra, 1980). Number of parties contesting the election and the percentage of total valid votes polled by the party are other important determinants of the seats won. In view of this, descriptive statistics of seats won and percentage of valid votes polled by INC are considered as important factors of analysis. Incidentally, total number of parties and per capita GSDP are two common factors for all the parties contesting the election. But both these common factors may differently affect the fortunes of different parties. The party in power is judged by its past performance relative to what it received from the preceding government at the time of formation of its government and the promises/targets made in its manifesto. Besides, promises made in the manifesto may also be considered as the bench mark for evaluation of the performance of its government. Opposition parties do not carry this baggage. Hopes and expectations they arouse among the masses, the work

that their members do among the constituencies and prestige of the leadership constitute the important factors of evaluation by electorates at the time of voting.

Leadership has three distinct layers: national, regional/state, district and constituency levels. The UPA-2 government headed by INC has been perceived to suffer from policy paralysis.It is firmly and universally held responsible for high inflation, especially food, vegetables and fruits inflation and the high degree of incidence of corruption in high places. Several scams have become public and some semblance of action had also been initiated. But the common people thought that finally no one shall be brought to book. All these were negative factors that ran against INC on the eve of election for the eighteenth parliament.

As against this, Mr. Narendra Modi has distinguished himself as a successful chief minister of the state of Gujarat. Moreover, he did not suffer from any negative baggage except the communal riots and one police encounter with terrorists. SIT had cleared him from this, and therefore this did not make any adverse impact on the electoral fortune of BJP under his leadership. There was Modi wave visible all around. These are some of the qualitative factors which are not amenable to quantitative analysis.

The above discussion paves the way for the discussion of performance of the Indian National Congress in the above context. The data base is spread over all the states and Union Territories of India.

5.5 Results of Descriptive Statistics of Indian National Congress

The results of Descriptive Statistics of the performance of INC are considered hereunder. Data relating to the GSDPPC and number of parties in election fray is common to all the political parties. The results of application of Descriptive tools to the number of seats won and percentage of votes polled by INC alone require consideration. Table 4, given below, shows the results of application of tools of Descriptive Statistics to the data pertaining to the performance of INC:

Seats won by Congress			Column1	
Mean	1.333333		% of Votes	
Standard Error	0.376051		Mean	9.69

Median	0		Standard Error	0
Mode	0		Median	9.69
Standard Deviation	2.160247		Mode	#N/A
Sample Variance	4.666667		Standard Deviation	#DIV/0!
Kurtosis	6.306838		Sample Variance	#DIV/0!
Skewness	2.430144		Kurtosis	#DIV/0!
Range	9		Skewness	#DIV/0!
Minimum	0		Range	0
Maximum	9		Minimum	9.69
Sum	44		Maximum	9.69
Count	33		Sum	9.69
			Count	1

Source: Author's own Calculation

The results of Descriptive Statistics are considered hereunder sequentially. First the seats won by INC are analysed, and it is followed by the analysis of the percentage of votes polled by INC in 2014 general election of Indian parliament.

5.5.2 Number of Seats Won and Percentage of Votes Polled by Indian National Congress

As the preliminary step, descriptive statistics is taken into account.Indian National Congress won 44 seats. It constitutes only 7.52% of total parliamentary seats. This represents a great fall from grace for the Indian National Congress in the eyes of the

people. UPA-2 under INC had been in power since 2004 and it was having a comfortable majority in the parliament. The average (per state) number of seats won by INC is only 1.33 and its average (per state) percentage of votes polled is as low as 9.69. Incidentally, the median value of the percentage of valid votes polled by INC is also 9.69. The equality of the values of the mean and median percentage of votes polled shows that the performance of INC among all the states has been normally/evenly distributed poorly. This is not surprising in view of the fact that its overall percentage of votes received is slightly less than 20% for India as a whole. Obviously, it secured much higher percentage of votes in 44 constituencies where its candidates won the election while its share in valid votes in the rest of the constituencies was much less than this. This makes the distribution of percentage of votes polled by INC evenly distributed among the states. This is supported by the fact that the mean and median values of VP are equal, which implies even/symmetrical distribution of the percentage of votes secured by INC among the states.

But the distribution of seats won by INC over the states is highly uneven. This inference is supported by the calculated value of t statistics of the difference of the mean and median number of seats won by INC which is as high as 3.54 and it is much greater than the table value of 1.96 at 0.05 value of probability. This suggests the distribution of seats won by INC to be highly skewed and concentrated in few spatial units around the mode. These inferences are supported by the high values of the coefficients of variation and skewness which are as high as 162% and 2.43>1 respectively. Consequently, the spatial distribution of seats won by Indian National Congress is uneven and highly concentrated around the narrow space of mode. This is shown by the coefficient of kurtosis which is as high as 6.31. The results highlight the fact that the electoral influence of INC has greatly shrunk as it is confined to small hilly states like Meghalaya, Mizoram, HP and the like. The result is accounted by the wide-spread discontent about the rule of UPA due to corruption in high places, its attempts to shield the corrupt and the guilty, low and slow economic growth and inflation.

5.6. Discusssion of Results of two Factors ANOVA

Variance is considered to be a highly reliable measure of the degree of dispersion over the sample observations. Besides, mean and variance are the most important indicators of the nature of the distribution of the values of the variables. Therefore, the differences between the sample and population means, sample mean and median, and sample variances reflect

the representative and distributive nature of the values of the variables under consideration. Therefore, the inferences drawn from the Descriptive Statistics are subjected to Two Factors ANOVA without replication. This ensures that the inferences drawn from data analysis are firmly entrenched in factual base of the study and no spurious result is accepted as the final truth or empirically valid inference of thesis.

Pairing of four variables of the data analysis with one another gives 4C2 =6 non-repetitive and exclusive combinations for analysis of differences of variances by ANOVA.

The results of application of Two Factors ANOVA to these four pairs are reported sequentially for discussion.

5.6.1results of Two Factors ANOVA of Seats Won and Percentage of Votes Polled by INC

Table 5 contains the results of the pairing of seats won and the percentage of votes polled by INC.

Table 5- Indian National Congress - ANOVA of Seats Won and Percentage of Votes Polled

Source of Variation	SS	Df	MS	F	P-value	F crit
Rows	3062.885	32	95.71516	1.012516	0.486077	1.804482
Columns	12101.78	1	12101.78	128.0178	1.02E-12	4.149097
Error	3025.025	32	94.53204			
Total	18189.69	65				

Source: Author's Own Calculation

Seats won and voting percentage polled (VP) represents first of the six pairs of four basic variables of analysis. The table furnishes conclusive empirical evidence to draw the following important inferences:

Variances of rows, which contain state wise seats won and percentage of votes polled together, do not differ significantly from each other. It means that the number of seats won and percentage of votes polled by INC, taken together, are uniformly distributed

among the states. The calculated value of F-statistics is less than its critical value. The calculated value of F can be significant only at as high value of probability as 0.49, which is much greater than 0.05 critical value of probability. This lends credence to the inference drawn from the results of the Descriptive Statistics. Besides, the number of seats won is consistent with the state-wiseVP of INC.

Two columns, each considered separately from the other, vary significantly between the seats won and percentage of votes polled in all states together. This result conforms to the fact that INC secured winning percentage of votes only in 44 constituencies while its percentage of votes polled fell short of the winning percentage in all other constituencies. The hypothesis that the seats won and percentages of votes secured by INC vary differently from each other is accepted.

The data in all rows of the first column relate to state wise seats won/lost by INC, and the data in all rows of the second column has percentages of valid votes secured by INC in all states considered together. ANOVA results show that the number of seats won in all states, taken together, significantly varies from the percentage of votes polled in all states taken together. It means that the number of seats won and percentage of votes polled do not converge at the aggregate level though these two do converge at the state level.

Non significant differences of seats won/lost and voting percentages mean that the winning/losing of seats moves in dissonance with the percentages of votes polled. This implies that the variations of these two factors among the states are disassociated with each other which runs counter to the underlying null hypothesis. Therefore, regression function of these two variables may be expected to furnish results that may be conclusive.

As against the variances between the rows, variance of all rows taken together differs significantly from the variance of all rows of second column (VP) taken together. The calculated value of F is much greater than its critical value. The F-statistics is significant at as low a probability as 1.02E-12. It is lower than 0.05 value of probability. It suggests the rejection of the hypothesis that the seats won and voting percentages are not related. This inference lends credence to the inference drawn from non-significant differences of variances between the rows/states.

5.6.2 Discusssion of Results of Anova of Seats Won by Indian National Congress and Number of Parties in Poll Fray

This is the second important pairing of two of the four core variables. The results of Two Factors ANOVA of seats won by INC and number of parties in poll fray are depicted by the table 6 reported hereunder.

TABLE 6- INC-ANOVA OF SEATS WON AND NUMBER OF PARTIES IN POLL FRAY						
Source of Variation	SS	Df	MS	F	P-value	F crit
Rows	207.3636	32	6.480114	2.657476	0.003557	1.804482
Columns	485.4697	1	485.4697	199.0897	2.74E-15	4.149097
Error	78.0303	32	2.438447			
Total	770.8636	65				

Source: Author's Own Calculations

A perusal of the table 6 shows that number of seats won by INC and the number of parties in electoral battle in states, taken together, significantly vary between the states.The calculated value of F is much greater than the table value at 0.004 value of the probability. This value of probability is smaller than the critical 0.05 value of probability. It suggests the rejection of the hypothesis that the number of parties and seats won by INC from different states do not vary significantly among the states. It means that the number of parties and seats won by INC, taken together, significantly differ among the states. It conforms to the fact that the electoral performance of INC differs from state to state.

The variance of the seats won from all states and the variance of number of parties in all states differ significantly from each other. The calculated value of F is greater than the critical value and it is significant at the probability of 2.74E-15. This is much smaller than the corresponding critical value 0.05 of probability. This also suggests the rejection of the null hypothesis that the number of parties and seats won by INC are not related. Hence, regression of these variables may be expected to furnish results in consonance with it.

5.6.3 Seats Won by Indian National Congress and GSDPPC of States

This is the third important combination of two of the four core variables of data analysis. Results of ANOVA are reported in the table 7 given below.

Table 7: ANOVA of Seats Won by INC and GSDPPC of States

Source of Variation	SS	Df	MS	F	P-value	F crit
Rows	48071887	32	1502246	1.001139	0.498726	1.804482
Columns	35561103	1	35561103	23.6989	2.91E-05	4.149097
Error	48017218	32	1500538			
Total	1.32E+08	65				

Source: Author's Calculations

The table 7 shows that seats won by INC and the GSDPPC of all states, taken together, do not vary significantly between the rows, that is, among the states. The calculated value of F is much smaller than the critical value. The probability of calculated value of F for being statistically significant is approximately 0.5.   It is ten times greater than 0.05 which is the critical value of the probability for the significance of F. But the variance of seats won by INC in all states and the variance of GSDPPC of all states, taken together, differ significantly from each other. The probability associated with the calculated F is 2.91E-05. This is much less than 0.05. The hypothesis that the seats won and GSDPPC are uniformly distributed over space is rejected.

5.6.4. Percentage of Votes Polled by Indian National Congress and Number of Parties in Poll Battle

Percentage of Votes Polled by INC and number of parties in electoral fray are directly related to each other per se. Larger the number of parties, smaller is the percentage of votes polled per party. Indian National Congress has always benefitted historically by the greater degree of division of votes among the opposition parties. Larger number of parties in contest for the given number of seats is, in fact, beneficial to the ruling party. The results of ANOVA for this pairing are reported in table 8 reported below.

Table 8: ANOVA of Percentage of Votes Polled by INC and Number of Parties

Source of Variation	SS	Df	MS	F	P-value	F crit
Rows	2851.823	32	89.11945	0.884886	0.634242	1.804482
Columns	7739.551	1	7739.551	76.84761	5.12E-10	4.149097
Error	3222.815	32	100.713			
Total	13814.19	65				

Source: Author's Calculations

Table 8 shows that

(i) Percentage of votes polled by INC and the number of parties, taken together, move together in all the states. Therefore, their state wise joint variances do not differ significantly between the states. Both these factors move together. These variables may be closely related to each other. The joint variation of the percentage of votes received and number of parties may cause multi-collinearity in multiple regression models which contain both these variables as the determinants of seats won by INC. However, if one of the two variables of ANOVA or regression models is relatively invariant or varies marginally, as is the case of variation of the number of parties among the states, this type of result of non-significant variation may be expected.

(ii) But the variance of the number of parties in all states, taken together, differs significantly from the variance of the percentage of votes polled by INC in all states taken together. This result may also lend credence to the above inference that the variances of the number of parties and voting percentage of INC do not differ significantly between the states due to nominal differences of number of parties among the states.

5.6.5. Results of Anova of GSDPPC and Number of Parties in Electoral Battle

The pair of these variables is also important. These two variables are, in fact, commonly present in all three cases relating to the poll performance of Other Parties, BJP and INC. Therefore, results different from other two cases are not expected. Result of ANOVA of this pair for INC is reported in the table 9 given below.

Table 9: ANOVA of GSDPPC and Number of Parties for INC

Source of Variation	SS	Df	MS	F	P-value	F crit
Rows	48111053	32	1503470	1.002772	0.4969	1.804482
Columns	35298804	1	35298804	23.54331	3.05E-05	4.149097
Error	47978040	32	1499314			
Total	1.31E+08	65				

Source: Author's Calculations

The results shown in in the table 9 show that

(i) GSDPPC and number of parties contesting election from different states do not differ significantly between the states.

(ii) But the variance of GSDPPC of all states, taken together, differs significantly from the variance of the number of parties in all states.

(iii) Above results suggest that if these variables are included as determinants of the seats won by INC, the regression may be free from multicollinearity.

5.6.6. Results of Anova of GSDPPC and Percentage of Votes Polled by Indian National Congress

Table 10: ANOVA OF GSDPPC AND

Source of Variation	SS	Df	MS	F	P-value	F crit
Rows	47910561	32	1497205	0.994318	0.506379	1.804482
Columns	34261179	1	34261179	22.75341	3.87E-05	4.149097
Error	48184334	32	1505760			

Total	1.3E+08	65				

Source: Author's Calculations

The results reported in table 10 show that

(i) The variance of GSDPPC and Percentage of Votes polled by INC in the states, taken together, do not differ significantly among the states. This shows that the joint variance of this pair in one state does not differ from the joint variance of the pair in other states.

(ii) But the variances of GSDPPC of all states, taken together, differ significantly from the variances of voting percentages of all states taken together. The results are in consonance with the observations.

(iii) Regression of seats won on these variables may be free from multicollinearity.

5.7 Regression Modeling of Seats Won by Indian National Congress

The rationale of the choice of real per capita GSDP of states, Number of national parties (NNP) and Voting percentage polled (VP) has already been discussed. But NP, VP and GSDPPC may be related to each other in the linear combination in the regression model. All three variables are selected as important determinants of the seats won by INC. OLS estimates of seven regression models are derived: (i) Three models are bi-variate and each of which has only one determinant of the seats won by INC; (iii) Three multiple regression models and each of which has one pair of the above three pre-determined variables as the determinant of the seats won by INC; and (iii) One multiple regression model treats the seats won by INC as the function of all three pre-determined variables listed above. These models facilitate the realization of the main objective of the study, that is, determination of seats won by INC in the democratically conducted parliament election of 2014.

5.7.1. Discussion of Results of Bi-Variate Regression Models of Seats Won by Indian National Congress

The results of Bi-variate regression models are taken up first for discussion. These models perform the following important functions: (i) Influence of a pre-determined variable on the changes in the values of dependent variable is captured; (ii) these models constitute an important step in Klein's step wise regression for the determination of the presence and location of multicollinearity in the multiple regression models; (iii) It facilitates

determination of each pre-determined variable to the explanatory mode; and (iv) Identification and differentiation of relevant from the irrelevant determinants of the dependent variable.

5.7.2 Real Per Capita GSDP as Determinant of Seats Won by Indian National Congress

Real Per Capita GSDP is used as the first important determinant of the seats won by Indian National Congress Party in the last parliamentary election.

OLS estimate of the regression of seats won by Indian National Congress on Real GSDPPC in last parliamentary elections is reported hereunder:

SWC=0.9153+0.0003GSDPPC, R2=0.0502, F=1.72. P*=0.20……………….. (1)

t: (1.865) (1.305)

The relation 1 highlights the fact that the regression of seats won by INC on Per Capita GSDP does not fit the data well since the proportion of total change in seats won explained by this function is as low as 5.02% and the function leaves as much as 94.98% of total variation to be explained by the random factors. Besides, the coefficients of correlation and GSDPPC are not statistically significant. GSDPPC and its differential growth in states have not affected the performance of National Congress Party, measured by the seats won, in the last parliamentary election at all.

In view of the fact that during the last few years of UPPA-2's rule, the rate of growth has declined, rising food inflation adversely affected the people, government came to be known as one under whom the country faced policy paralysis and numerous persons got pink slips from their employers. Besides, with one unit change in per capita GSDP of a state, the number of the seats won by INC increases only by 0.0003. Therefore, non-performance of UPUA-2's government affected the performance of Indian National Congress more than the performance of its partners in the election. This negative perception of the people about INC has very deeply seeped into the minds of the electorates. Besides, high inflation and corruption, especially during the Commonwealth Games, became the important factors of negative image of Indian National Congress Party among the masses. Therefore, despite the high claims of the Indian National Congress about the all round development of the country during its rule and promise to deepen the roots of development further, electorate did not buy the plank of economic development. The fact is that the annual rates of economic growth of India had been

sliding down since 2008-09, resulting in unemployment and pink slips to those already employed combined with high food inflation.All these factors have adversely affected the life of the people. It is, therefore, not surprising that per capita SDP does not significantly affect the number of seats won by the Indian National Congress Party. It may be inferred from this discussion that the negative effect of factors associated with anti-incumbency must have neutralized the influence of GSDPPC on the number of seats won by INC.The function for INC poorly compares with the influence of per capita GSDP on the number of seats won by BJP and Other Parties.

5.7.3 Percentage of Votes Polled as Determinant of Seats Won by Indian National Congress

Other important variable that directly affects the seats won by a party in any election is the percentage of votes polled by it relative to the percentage of votes polled by its rivals. Greater the percentage of votes polled, greater is the probability of more seats being won. Therefore, the number of seats won by INC is envisaged to be positively related to the seats won.

OLS estimate of the regression of the seats won by the Indian National Congress party on VP is reported hereunder:

$$SWC=1.2428+0.188VPP, R2=0.0004, F=0.0125, P=0.912\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..(2)$$

t: (1.3889)   (0.112)

The fit of the regression equation 2 is even worse than the fit of the regression of seats won by INC on GSDPPC. The proportion of change explained by the function is as low as 0.04% of the total variation of seats won by INC party from different states. The coefficients of correlation and the percentage of votes polled are not significant statistically. It may, therefore, be inferred that the percentage of votes polled by Indian National Congress does not significantly affect the number of seats in most of the states. An important reason of VP not being found to be significant factor of seats won in the election is that the percentage of votes polled by INC does not vary sufficiently among the states.

As the Indian National Congress party has been the ruling party in India since independence, most of the other parties used to combine together to contest the elections against the Indian National Congress. This type of cooperation generally prevents division of the anti Congress votes among the opposition parties. Besides, major partners of

Congress in the UPA government split from it to contest the election either on their own or in alliance with other parties. For example, DMK in Tamil Nadu, Trinamul Congress and left front in West Bengal, SP and BSP in U.P., and the Socialist parties in Bihar contested the last parliamentary election on their own. This split in the Muslim and Dalit votes among non-BJP parties and the shifting away of the traditional support base from Indian National Congress adversely affected the performance of Indian National Congress party in last election.

5.7.4. Number of Parties as Determinant of Seats Won by Indian National Congress

OLS estimate of the regression of seats won by INC on the number of parties is reported below:

$$SWc = -1.8784 + 0.4754NP, R2 = 0.20581, F = 8.033, P* = 0.008 \ldots \ldots (3)$$

T: (1.76) (2.88)

Unlike the previous two functions, this function fits the data reasonably well. The coefficients of correlation and number of parties which contested the last parliamentary election are statistically significant. The function explains approximately 21% of total variation in number of seats won by Indian National Congress. It means that the overall variation in the number of seats won among the states is only 21 per cent. However, variation explained by the regression of seats won by congress on number of contesting parties in the election is four times more than the explanation furnished by regression on GSDPPC. It means that the plank of economic development, as measured by per capita GSDP, in case of Indian National Congress does not carry conviction with voters. However, the number of parties matters more for Congress than GSDPPC. Incidentally, intercept of any of these functions is not statistically significant. It means that the variable(s) excluded from each of these functions does not singly exercise substantial influence on the number of seats won by Indian National Congress party.

5.7.5 Multiple Regression Models of Pairs of Two Independent Variables as Determinants of Seats Won by Indian National Congress

As the topic of investigation is democray and economic growth, first pair of variables considered as the determinant of seats won by Indian National Congress is that of GSDPPC and percentage of votes polled by Indian National Congress. The percentage of votes cast by registered voters is an indicator of political awareness, willingness and the

ability of voters to exercise the democratic choice of electing the government of one's own choice.

The results are discussed in the ensuing paragraph.

5.7.6 Regression of Seats Won as Function of GSDPPC and Percentage of Votes Polled by Indian National Congress

OLS estimate of the regression of seats won on SDPPC and VPP is reported nelow:

$SWc = 0.60794 + 0.0003 SDPPC + 0.0101 VPP$, $R2 = 0.05598$, $F = 0.4215$, $P = 0.42$……..(4)

t: (0.6051) (1.33) (0.352)

The function shows that the introduction of GSDPPC as the second explanatory variable in the second regression equation improves the explanatory power of the second function considerably.   But the introduction of VP as an additional explanatory variable in the first function improves explanatory power of the first function only marginally. Thus, the proposition put forward in preceding paragraphs about the joint influence of these two or three variables being more than the influence of one single variable has only limited empirical support. But there are two more functions with two explanatory variables to be examined for the rejecting or accepting the proposition.

5.7.7 Seats Won by Indian National Ongress as Function of GSDPPC and Number Of Parties

OLS estimate of the regression of the seats won by INC on SDPPC and number of parties is reported hereunder.

$SWc = -2.0017 - 7E-05\ NP + 0.50814\ SDPPC$, $R2 = 0.2077$, $F = 3.933$, $P = 0.030$ ……..(5)

t: (-1.558)   (-0.27)   (2.428)

The fit of this function is better than all the earlier functions of the seats won by Indian National Congress. The function explains 20.77 percent of total variation in number of seats won by INC from the states. The coefficients of correlation and SDPPC are statistically significant. But the coefficient of NP turns negative from positive and from not significant to significant in equation 3.   It signals the presence of multicollinearity between the explanatory variables of the function. This substantiates the inference drawn from the results of ANOVA of independent variables of this function. This result implies that the number of parties entering electoral fray is directly related to economic growth of

the states, measured by SDPPPC. It so happens that the policy of reservation for SC, ST and OBC enabled many leaders to emerge among these communities. More often than not, caste/community based leaders have emerged and several of them have made their own parties. Ms Mayawati is an example of this. Though such leaders/persons initially emerged as leaders of their respective caste/community, and minorities, yet the reservation of seats for SC/STs facilitated them to emerge as state and even national leaders. Leaders like Dr B.R. Ambedkar and Babu Jagjivan Ram were the products of the freedom movement.   They cannot be bracketed with these later day leaders. Among the three independent variables, number of parties appears to be more decisive in case of the Indian National Congress than BJP and other parties. This function also lends some credence to the thesis that some variable may display its influence on the dependent variable in combination with other pre-determined variable (s) rather than individually/singly.

5.7.8 Seats Won by Indian National Congress as Function of Percentage of Votes Polled by Indian National Congress and Number of Parties

Third multiple regression equation treats the seats won by INC as the function of percentage of votes polled by INC and number of parties in election fray. OLS estimate of the function are given hereunder.

$SWc = -2.5870 + 5011NP + 0.019VP$, $R2 = 0.1673$, $F = 4.217$, $P = 0.024$……………….(6)

t: (-1.6)   (2.904)   (0,729)

The regression function 6 provides the second best fit to the data among the regression functions of the paired independent variables; the best fit having been yielded by the regression of seats won by Indian National Congress on SDPPC and NP. The coefficient of NP emerges statistically significant in regression function 6. Incidentally, voting percentage has emerged as the weakest determinant of the seats won in all the multiple regression functions tested so far.

5.7.9 Regression Model of Seats Won by Indian National Congress as the Function of GSDPPC, Percentage of Votes Polled and Number of Parties

This is the last multiple regression equation which contains all three pre-determined variables. The OLS estimate of this equation is given below.

SWc=-2.6604-0.5E-05   SDPPC+0.0184   VP+0.5267NP,   R2=0.2206,   F=2.74, P=0.061…..(7)

T: (-1.65)   (-0.214)   (0.69)   (2.474)

This function fits the data best as it explains 22.1% of total variation. This is the greatest explained proportion of variation of the seats won by the Indian National Congress party from different states. But the coefficient of number of parties alone is significant. The coefficients of votes polled and GSDPPC turn negative in the function. It means that the percentage of votes polled and number of parties on the one hand, and SDPPC and number of the parties are multi-collinear on the other. The discussion of results of all 7 functions suggests that all three variables are important determinants of seats won by Indian National Congress to a limited extent.

These results differ quite a bit from those of BJP with the same independent variables used in regression modeling. This is probably explained largely by the negative influence of incumbency and influence of high inflation, slow or no growth, corruption, and policy paralysis of UPA-2.

CHAPTER SIX

CONCLUSION, FINDINGS AND FUTURE RESEARCH POSSIBILITIES

Preview of the Chapter

The chapter recapitulates the findings and conclusions derived from the application of varied methods and models of data analysis. Second chapter focuses on the review of literature and discusses various parameters and indicators of democracy and economic growth. It also captures the negatively weak relation of democracy and economic growth, while Indian studies find positive and significant relation of democracy and economic growth. Chapter three is devoted to the analysis of the performance of other parties while chapters four and five provide a detailed discussion of performance of BJP and Indian National Congress.

6.0 Introduction

Chapter wise conclusions and findings are reported sequentially.

6.1. Findings of Chapter Two

The in-depth review of literature shows that

(i) Democracy is characterized by numerous features and facets which distinguish it from the authoritarian regimes. These distinct features are highlighted as the enabling or debilitating factors of economic growth under the two types of political regimes and their polity.

(ii) Democracy has been measured differently in different studies. Right to ownership of property, conducive business environment, low taxation, low public expenditure and low public consumption, good political and economic governance, and appropriate institutional set up have been differently associated with democracy and economic growth by different scholars.

(iii) Some studies have discarded the narrow concept and hollow measurementof economic growth by real per capita GDP and used other measures of economic growth.

(iv) Economic growth has been considered to be the function of political, social, institutional and economic factors in some studies.

(v) Degree of industrialization rather than real per capita GSDP has been treated as a more important indicator of growth of developing economies like the Indian one and it has been found to be the decisive determinant of seats won by a political party. The reason is that the developing countries focus on changing the structure of their economies

by the programs and projects of industrialization. Therefore, their economic growth occurs through the propulsion of GDP by the development of industries.

(vi) Seats won and the percentage of votes polled by political parties out of the total votes cast are treated as the most relevant factors of political freedoms under democracy. People who cast their votes in an election not only display their political awareness but they also actually use the freedom to elect their own government.

(vii) Caste and community affiliations play an important role in the voting behavior and the votes of the poor of upper caste groups received by right wing party BJP in the areas where the Brahmins constitute the majority.

(viii) The ruling political party gets voted back to power in the states whose development performance has been satisfactory.

(ix) Good-governance, lower inflationary pressures, expectations aroused by the past performance, perception about responsiveness to people's problems, agricultural development for rural voters etc. neutralize anti-incumbency factor which may otherwise act as the negative factor against the erstwhile ruling party.

(x) Economic growth has been found to be weakly related to democracy in statistical and econometric models based empirical studies of cross sections of 90/100 countries panel data.

(xi) High consumption, high public expenditure, secure property rights, economic instability and economic inequality are specified as positive or negative determinants of growth as well as the indicators of economic freedoms while good governance, size of the government and rule of law are specified as political freedoms.

(vii) The chapter of review of literature has found that the Gupta-Prakash study of democracy and economic development of India was the earliest pioneering study based on the relation of the voting behavior with economic development in the context of the regional differentials of growth reflected by the different levels and patterns of development of the states. The use of real per capita gross SDP of states has been replicated by other national and international studies subsequently.

(xiii) Other Indian study, conducted by Virmani, evolved stochastic model for data analysis which has not been replicated by any other study.

6.2. Findings and Conclusions Derived from Statistical Methods and Econometric Models in Chapter Three

Following are the main findings from descriptive statistics:

(i)   Number of seats won by 'Other Parties' is not normally distributed among the states while the distribution of percentages of votes polled is almost normally distributed among the states from which Other Parties contested the election of 2014.

(ii)   Percentages of votes polled by other parties are almost normally distributed among the states from which they contested the elections, but the distribution of seats won by other parties is not normal. It is positively skewed and seats won are concentrated in few states.

(iii)   Number of parties which contested 2014 parliamentary election is normally distributed among the states

(iv)   Average number of seats won by 'Other Parties' and average number of parties in election fray are almost equal. It implies an average of one seat per state per party.

(v)   Results of descriptive statistics confirm the inference that Other Parties are not national and their influence is confined to specific states. This runs counter to the fact that such parties as Communist Party of India (Marxist), BSP and NCP are recognized as national parties by election commission and they do not satisfy the criteria prescribed by election commission any more. Elections of state assemblies of five states-Punjab, Uttrakhand, Goa, U.P., and Manipur have further furnished evidence in support of this thesis.

(vi)   Distribution of per capita real GSDP among the states diverges from normal distribution. It is highly skewed and concentrated. States with high per capita real GSDP are concentrated in the narrow space around the mode.

(vii)   Descriptive statistics of per capita real GSDP show that the states of India are sharply divided into the developed and under developed states.   Economic development and growth gains are spatially unevenly distributed among the states.

(viii) Illiteracy, low level of health, high infant mortality, blind faith and easy sway to caste, religion and other narrow beliefs and exploitation of the same by politicians and political parties are associated with under-development states where other parties generally flourish, especially in assembly and local self-government elections.

The following are the main findings which are derived from 7 econometric models used in the analysis of data relating to the joint electoral performance of the Other Parties excluding BJP and the Indian National Congress parties:

Each of the three pre-determined variables-Percentage of Votes secured by Other Parties, Real Per Capita GSDP of the states and the Number of Political parties which contested the parliamentary election of 2014, individually affects the number of seats won by Other Parties. The results of first three bi-variate regression models empirically validate the choice of the independent variables and specification of the linear form of the models.

An interesting finding of this chapter is that the real per capita GSDP among the three pre-determined variables exercises the greatest influence on the seats won by Other Parties. Influence of GSDPPC on the seats won by the Other Parties is much greater than the influence of the percentage of votes polled and the number of parties in election fray.

This finding is in consonance with the findings of Arvind Virmani, Barrow, and Gupta-Prakash that the economic development and the outcome of the democratic elections are positively and significantly related.

Percentage of votes polled and real per capita GSDP, taken together, significantly affect the number of seats won by Other Parties in 2014 parliamentary election.

Percentage of votes polled and the number of political parties in electoral battles, taken together, significantly affect the number of seats won by Other Parties in 2014 parliamentary election.

But the joint influence of Real Per Capita GSDP and the number of political parties contesting the election of 2014 is found to be diluted by the presence of serious multicollinearity.

(vii) Co-linerar nature of Real Per Capita GSDP and the number of Political Parties contesting the election of 201 also affect econometric model 1.

(viii) Econometric model 1 is accepted as valid despite the statistical non-significance of the coefficient of the number of parties since the non-significance of the coefficient is accounted by multicollinearity. The acceptance of the validity of the model is also based on the theoretical underpinnings of model 1 which stipulates significant positive relation between the number of political parties in election fray and the level of economic

development measured by the per capita GSDP of the states. Acceptance of this finding is also in conformity with the views of Stuart and Kendall.

It is noteworthy that Kendall and Stuart postulate that 'econometrics was developed for the quantification and verification of economic theory. Hence, statistics or econometrics cannot and should not be the substitute of theory' (Quoted from Gujarati, et al., 2006). This is what explains our approval and acceptance of the validity of model 1.

6.3 Inferences Drawn From Results of Application of Descriptive Statistics in Chapter Four

Chapter four discusses the performance of BJP in the parliamentary election of 2014. The following are the main inferences drawn from the results of application of Descriptive Statistics:

6.3.1 Number of Seats Won by BJP

(i) The number of seats won by BJP varies sharply among the states. Thus, the number of seats won by BJP is not evenly distributed over the states. The inter-state differentials of the electoral success of BJP is partly accounted by the differences of the number of parliamentary seats and the number of seats contested by BJP from different states. These differences have been normalized by the consideration of the seats won as a proportion of seats contested.

Large concentration of seats won by BJP both in absolute and relative terms (as proportion of total seats in different states and the number of seats contested by BJP) is observed mostly in North, Central and West India. However, BJP has successfully opened its account in the Eastern states like Odissa and West Bengal. It has also penetrated in the strongholds of Indian National Congress in North East India, especially Assam, Arunachal Pradesh and Nagaland.

(ii) The distribution of seats won by BJP is highly positively skewed and concentrated highly in states like U.P., Rajasthan, M.P., Bihar, Uttarakhand and Jharkhand. The electoral performance of BJP in states like Maharastra, Gujarat, Haryana, H.P. and Assam has been moderately skewed in absolute terms though it has been quite up to the expectations in relative terms.

6.3.2. Number of Political Parties in Electoral Battle of 2014

The following are the main inferences drawn from the results of Descriptive Statistics:

(i) The average number of political parties which contested the parliamentary election of 2014 is approximately six while the maximum number of such parties is 9. Obviously, the range of inter-state variations of political parties in electoral battle of 2014 has been extremely low. This explains the nature of all other inferences drawn from these results.

(ii) Number of Political Parties involved in different states in the last parliamentary election has a value of mean lower than that of the median though generally mean is greater than the median.

(iii) The distribution of the political parties is normal since the value of t of the difference between the mean and median of number of parties is much lower than 1.96 which is not statistically significant at 0.05 value of probability.

(iii) But the greater value of median than the mean makes the distribution mildly nay and nominally negatively skewed. Therefore, there occurs very low degree of concentration of the number of political parties on the negative/left side of the distribution.

(iv)The distribution of number of parties involved in the election of 2014 has a very moderate value of the coefficient of variation.

6.3.3 Percentage of Total Votes Polled by Bjp

Percentage of votes polled is the third important determinant of electoral performance of political parties, including BJP. The following important inferences are drawn from the results of Descriptive Statistics:

(i) Percentage of total votes polled by BJP is not normally distributed. This actually reflects the non-normal distribution of the seats won by BJP from different states which diverges from normal distribution.

(ii) Like the number of seats won, the proportion of valid votes polled by BJP is positively skewed and highly concentrated around the modal value.

(i)   The coefficient of variation is also very high. All these facets are a reflection of the non-normal distribution of the number of seats won by BJP from different states.

6.3.4. Real Per Capita Gross State Domestic Product

The thesis has postulated real per capita GSDP as the most decisive determinant of the electoral performance of all the political parties which contested the parliamentary

election of 2014. Main findings based on the results of application of Decriptive Statistics are reported hereunder.

(i) The Real Per Capita Gross SDP, as expected, is not normally distributed. This expectation is based on the unbalanced regional and unbalanced sectoral growth of the Indian economy.

(ii) The distribution of real GSDPPC is highly positively skewed and concentrated around few modal developed states.

6.3.5 Inferences Drawn from Results of Regression Modeling

The analysis of the results of OLS estimates of 7 linear regression models of the seats won by BJP from different states furnish the following important inferences:

(i) Real GSDPPC, Percentage of votes polled, VP and number of political parties, and NP are postulated individually as well as jointly to be the main determinants of the seats won by BJP in last parliamentary election.

(ii) All bi-variate regression models of three pre-determined variables individually influence the seats won by BJP in the election of 2014.

(iii) All regression models of SWBJP on three pairs of pre-determined variables, except one, are free from multicollinearity.

(iv) All three regression models of SWBJP on three pairs of pre-determined variables furnish acceptable results despite the non-significane of the coefficient of NP.

(ii)   Seventh regression model of SWBJP on all three pre-determined variables furnishes the best results in all respects. It may be surmised that the real GSDPPC, VP and NP are the major determinants of the seats won by BJP in parliamentary election of 2013-14. The results of the model lend empirical support to the thesis that there is positive and significant relation between democracy and economic development of the states/countries. The finding is in conformity to the basic findings of studies of Dani, Barrow, Virmani and Gupta-Prakash though the studies differ in details and specification of the variables that represent democracy and growth respectively.

6.3.6 Conclusions and Findings of Performance of Indian National Congress: Chapter Five

The following are the main conclusions and findings based on the results of Descriptive Statistics of the data analysis relating to the electoral performance of Indian National Congress:

(i) Distribution of the number of parties in election battle of 2014 against INC approximates normal distribution.

(ii) Seats won and the percentage of votes polled by INC is skewedly distributed among the states.

(iii) As a consequence of skewed distribution of the percentage of votes polled by INC, the distribution of the seats diverges from normal distribution and the seats won by INC are greatly concentrated in few states.

6.3.7. Conclusions and Findings of Performance of Indian National Congress Based on Regression Modeling

The following are the main conclusions drawn from the analysis of OLS estimate of 7 regression models of the seats won by INC on Real GSDPPC, VP and NP. Three models are bi-variate which treat the seats won by INC as the function of

   (i)   Real Per Capita GSDP;

   (ii)   Percentage of total valid votes secured by INC; and

   (iii)   Number of Parties contesting election from different states. Three models treat the seats won by INC as the function of

   (iv)   Percentage of total votes secured by INC;

   (v)   Real Per Capita GSDP and number of parties in election fray; and

   (vi)   Percentage of total valid votes secured by INC and number of parties in election fray. The seventh model considers the seats won as the function of Real Per Capita GSDP, number of parties in election fray and percentage of valid votes received by INC taken jointly.

   (vii)   OLS estimate of the three bi-variate regression model shows that though the number of seats won by INC is significantly influenced individually by each of the three pre-determined variables, namely, GSDPPC, VP and NP respectively,

yet the explanatory power of these regression functions for INC is much lower than the corresponding explanatory powers of the same functions for BJP and Other Parties. This seems to be the result of the influence of anti-incumbency factor which operated against INC.

(viii)   Number of parties in election fray has emerged as the more important determinant of the seats won by INC than the influence exercised by this variable in case of BJP and Other parties. This is at variance from the fact that division of anti Congress votes in elections always benefitted INC.

(ix)   Multi Collinearity has affected both the signs and significance of the regression coefficients in the multiple regression equations.

(x)   None of the three explanatory factors used in the data analysis appears to be the redundant or irrelevant determinant of the seats won by INC.

6.4. Future Scope for Research

It is a well recognized fact that no single Ph.D. dissertation can represent all possible aspects of the chosen topic which require in-depth research. This thesis is no exeption to this rule.

An important aspect of this investigation is that it has treated democracy as exogenously given fact. It is assumed to be proxied by holding periodic elections, and the 2014 general election was 18th in the series since 1951-52. However, no country can approximate the democratic state in which all individuals have got absolute social, political and economic freedoms. As far as India is concerned, people belong to different religious groups and castes within religious groups. All such groups are constrained to behave within the bounds of traditions, culture, values, gender disparities and economic inequalities. Therefore, it shall be useful if democracy is measured on the basis of multiplicity of criteria and a composite index may be constructed. Such an attempt was made by Gupta Prakash study in a restricted domain. Similarly, state wise economic growth may be measured on the basis of such multiple parameters as sectoral composition of GSDP, incidence of unemployment and poverty, margial propensity to consume, subsidies, physical and financial infra-structure, and the like.

6.5 Policy Suggestions

A policy suggestion, which of course is not based on the empirical findings of the thesis, is that the government may fund the holding of elections. For this, appropriate criteria for allocation of election funds to political parties may be evolved. This may control corruption and inflation as well. Both these issues along with employment, growth, reduction in the incidence of poverty and adequate supply of potable water, health and education services and other infra-structural facilities like good motorable roads have been the pivotal issues in elections in India.

We may conclude that the main objectives of the thesis, outlined in the first chapter, have been realized.

It gives satisfaction to find that this thesis meets the criterion of development of an academic discipline which, according to Alfred Marshall (1891/1962), states that the evolving of a general theory of a given phenomenon to replace several competing and/or complementary theories is an indicator of the growth of that discipline. From the review of literature, it is inferred that researchers have explained the outcome of an election for different parties in different states in terms of different explanatory factors (For example, See Virmani, 2004, Pavithra Suryanarayan). Unlike these studies, this thesis has found that Real Per Capita GSDP, percentage of votes polled and number of parties together adequately explain the number of seats won by all the parties in all states of India. This may be considered as an important contribution of this thesis.

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