

**MUNICIPAL CORPORATION ELECTIONS IN
MAHARASHTRA : A DATA ANALYSIS**
(1994-2013)

**Rajas K. Parchure
Manasi V. Phadke
Dnyandev C. Talule**



GOKHALE INSTITUTE OF POLITICS AND ECONOMICS
(Deemed to be a University)
Pune (India), 411 001



STUDY TEAM

Rajas K. Parchure

: Team Leader

Manasi V. Phadke

: Project Co-ordinator

Dnyandev C. Talule

Project Co-ordinator

Rajesh R. Bhatikar

: Editorial Desk

Anjali Phadke

: Statistical Assistant

Ashwini Velankar

: Research Assistant

Vaishnavi Dande

Research Assistant

Vilas M. Mankar

: Technical Assistance

TABLE OF CONTENTS

CHAPTER NO.	CONTENT	PAGE NO.
	Foreword	vi
	Acknowledgements	viii
1	A Historical Perspective on Local Governance	1
2	Defining Variables and Research Questions	14
3	Data Analysis: Behaviour of Main Variables Across Different Rounds of Elections	21
4	Data Analysis: Correlations Between Key Variables	48
5	Conclusion	57
	References	60
Appendix – A	Data on VT, POL, SCST and REVERSE COMP Across Rounds of Elections	61
Appendix – B	Average Values of VT, POL, RESERVE COMP and IND	63
Appendix – C	Cluster Analysis of VT, POL, REVERSE COMP, IND and RES	64
Appendix – D	Councils Relevant for Immediate Launch of Voter Awareness Programs	66
Appendix – E	Councils Relevant for MCC Implementation	67

LIST OF TABLES

Tables No.	Content	Page No.
1.1	Population under Governance of Municipal Corporations in Maharashtra	1
3.1	Trends in VT across Successive Rounds of Elections	21
3.2	Correlation Matrix for VT	23
3.3	District level VT	24
3.4	High Voter Turnout Cluster	25
3.5	Medium Voter Turnout Cluster	26
3.6	Low Voter Turnout Cluster	27
3.7	VT and POL in select Municipal Corporations	28
3.8	Trends in POL in Successive Rounds of Election	29
3.9	Corporations Showing Zero Political Alignment with State Government from 1995 to 2014	30
3.10	Corporations Showing Complete Political Alignment with State Government from 1995 to 2013	31
3.11	Party bastion Corporations with high VT	33
3.12	List of Swing Corporations (with Low REVERSE COMP values)	34
3.13	List of Corporations with low competition (High REVERSE COMP values)	35
3.14	Parties in power at Corporations with low political competition	35
3.15	Trends in IND across Successive Rounds of Elections	36

3.16	List of Corporations in R2, R3 and R4 where no Seats were won by Independents	37
3.17	Corporations belonging to Low IND Cluster	38
3.18	Corporations belonging to Medium IND Cluster	39
3.19	Corporations belonging to High IND Cluster	39
3.20	Corporations with High Proportion of SC and ST Population	40
3.21	Corporations with Medium Proportion of SC and ST Population	41
3.22	Corporations with Low Proportion of SC and ST Population	42
3.23	Comparison of SCST Population Proportion and Reservation Proportion across Different Rounds of Election	43
3.24	Corporations Belonging to Low RES Cluster	44
3.25	Corporations Belonging to Medium RES Cluster	44
3.26	Corporations Belonging to High RES Cluster	45
3.27	Low Income Cluster in the Districts in Maharashtra	46
3.28	Medium Income Cluster in the Districts in Maharashtra	47
3.29	High Income Cluster in the Districts in Maharashtra	47
4.1	Correlation Co-Efficients between Key Electoral Variables and Implications for Electoral Policy	48
4.2	Summary of Correlations in key Election Variables	55

LIST OF FIGURES

Figure No.	Content	Page No.
1.1	Local Self Government and Decentralization of Power (73 rd and 74 th Amendment-1992/Rural +Urban)	3
1.2	Local Self Government (Decentralization of Power)	4
2.1	Data available with SECM	16

ABBREVIATIONS

AV	Average
AvVT	Average Voter Turnout
BCC	Backward Category of Citizens
BJP	Bharatiya Janata Party
REVERSE COMP	Proxy measure for Level of Competition Between Different Political Parties
DEV	Development quotient of a district
GDP	Gross Domestic Product
INC	Indian National Congress
IND	Proportion of Votes Garnered by Independent Candidates
MCC	Model Code of Conduct
NCP	Nationalist Congress Party
POL	Political Alignment
R1	Round One of Elections
R2	Round Two of Elections
R3	Round Three of Elections
R4	Round Four of Elections
RES	Proportion of Seats Reserved in a Council
SC	Scheduled Castes
SECM	State Election Commission of Maharashtra
SS	Shiv Sena
ST	Scheduled Tribes
VT	Voter Turnout

FOREWORD

1. Maharashtra, which is one of the most urbanized States of the country, has worked assiduously towards restoring the rightful place of the local bodies in the political governance. This is evident from the conduct of free, fair and transparent elections by the State Election Commission since its inception in 1994 following the amendments to the Constitution of nearly 28,000 local bodies (26 Municipal Corporations, 340 Municipal Councils and Nagar Panchayats, 34 Zilla Parishads, 351 Panchayat Samitis and approx. 27,781 Gram Panchayats).
2. Collection and preservation of data of all the elections is necessary not only for understanding the dynamics of politics and but also for making improvements in the subsequent elections. It is unfortunate that very little data has been preserved of previous elections. Only data pertaining to number of reserved seats, voter turnout and seats won by different political parties is available and that too for Zilla Parishads, Panchayat Samitis, Municipal Councils and Municipal Corporations only.
3. State Election Commission, Maharashtra proposes to collect and preserve relevant data of all the elections from now onwards pertaining to the following broad categories:
 - i. Arrangements done e.g. number of wards (with reservation), polling stations, polling personnel, vehicles etc.
 - ii. Details given by candidates in nomination papers and affidavit e.g. Age, educational qualification, assets and liabilities, criminal background etc.
 - iii. Activities during elections: e.g. violation of Model Code of Conduct, incidents of violence, re-poll etc.
 - iv. Post elections e.g. expenditure incurred by the local bodies / candidates / political parties, profile of winning candidates etc.

4. I am happy that Gokhale Institute of Politics and Economics, Pune has done analysis as directed by State Election Commission, Maharashtra of all the elections of Municipal Corporations held in the State between 1994-2013 with the available, scanty data. A team of 7 researchers led by Smt. Manasi Phadke and Prof. Dnyandev Talule of YASHADA analyzed the data over a period of four months from July to October 2016, the main findings of which are as below:
 - i. Average voter turnout in Municipal Corporations over all elections is 56 per cent
 - ii. The voter turnout tends to be lower in the Municipal Corporations governing more developed areas
 - iii. Higher voter turnout is linked to higher political competition amongst different parties
 - iv. Higher the voter turnout, higher is the proportion of seats won by independent candidates
 - v. The study identifies Municipal Corporations with historically low voter turnout
 - vi. It also identifies those Municipal Corporations where fierce competition between political parties is expected

Above findings have great implications for undertaking various programs like voter awareness program and effective implementation of Model code of Conduct.

5. I take this opportunity to congratulate Smt. Manasi Phadke and Dr. Rajas Parchure of Gokhale Institute of Politics and Economics, Prof. Dnyandev Talule and Director General of YASHADA and Department of Rural Development, Government of Maharashtra for making this analytical study possible.
6. I am further pleased to learn that Gokhale Institute is publishing this analysis in a book form, elucidating the methodology, analysis, suggestions and recommendations for future elections. I am sure that this will greatly help all the stakeholders in ensuring maximum peoples' participation in a free, fair and transparent manner.

Shri. J. Saharia
State Election Commission
Maharashtra

ACKNOWLEDGMENT

I am very pleased to present this report titled “Municipal Corporation Elections in Maharashtra: A Data Analysis (1994-2013)” to the readers and scholars of decentralization. As the discerning reader must be aware, the State Election Commission of Maharashtra has been conducting local body elections in Maharashtra from 1994. Data pertaining to 4 rounds of elections held so far has been maintained by the SECM. This data contains a mine of information, the analysis of which would yield important insights for the SECM, especially from a policy making perspective. For example, voter awareness programs have to be given priority in the conduct of elections. This is an important issue for the SECM. However, should voter awareness programs be run with equal intensity across all parts of Maharashtra? Are there zones where voter turnout rates tend to be low? Can we identify these? If we can, then special attention can be given to these zones whilst planning the voter awareness drive. Careful analysis of data helps us to create these insights which would be relevant for policy making.

Gokhale Institute of Politics and Economics was given the task of analyzing the data available with the SECM in order to bring out important insights that may aid the direction of electoral policy. The data pertains to elections held in Municipal Councils, Municipal Corporations, Zilla Parishads as well as Panchayat Samitis. This publication brings out the analysis pertaining to election data of Municipal Corporations only. The analysis of data of the other local bodies is presented in other reports. Our team at the Institute has worked hard in terms of cleaning up the database, enhancing it with other variables to draw insights and reporting the observable trends contained in the data with accuracy. The report carries interesting insights on all variables important for electoral policy direction.

Let me express my gratitude to Shri Jageshwar Saharia, State Election Commissioner, Maharashtra, for granting this interesting study project to the Gokhale Institute of Politics and Economics. Shri K. Suryarishnamurty, Assistant Commissioner, State Election Commission, Maharashtra, was a mentor for our team and guided and supported us at every stage of the project right from the data analysis to writing the report.

I am thankful to the Rural Development Department, Government of Maharashtra which funded the project completely. We are especially thankful to the Yashada officials, who were not only involved in the project as funding agency officials, but guided us through the entire timeline of the project. I must express special gratitude towards Prof. Dnyandeo Talule, Yashada, who generously lent a lot of time and effort to this project, and enriched our insights.

Mrs. Manasi Phadke has been the chief co-ordinator of this project and has been driving the processes right from data management to writing the report meticulously. I congratulate her as well as Prof. Talule for coming out with a timely and insightful publication. Mrs. Anjali Phadke was instrumental in helping us with the statistical part of the analysis. Together with her, I also acknowledge the sincere effort put into the project by Ms. Ashwini Velankar and Ms. Vaishnavi Dande, our young and enthusiastic research assistants. Mr. Vilas Mankar gave us all the technical assistance needed for this project extremely sincerely.

This project helped us to gain deep insights into the dynamics of local body elections of Municipal Corporations, all of which have been duly presented in the report. I am sure that the report will serve as a useful addition to the existing literature on the subject.

Prof. Rajas Parchure
RBI Professor and Offg. Director
Gokhale Institute of Politics and Economics
Pune

CHAPTER - 1

A HISTORICAL PERSPECTIVE ON LOCAL GOVERNANCE

The roots of local governance in ancient India date back to the period of *Rig-Veda* (1700 BC). However, local governance in contemporary India owes its genesis to the establishment of various Municipal Corporations in the country during the British era. A Municipal Council or a Municipal Corporation, in a federal State like India, is an administering local body that oversees city development and makes the provision of public amenities for its citizens. Municipal Corporations are created to look into the governance of bigger cities whereas Municipal Councils look after the governance issues of large towns. In India, the Municipal Corporations have been classified into A+, A, B, C and D categories which is as per the population and Per Capita Income (PCI) of the towns/cities as shown in the table below.

Table No. 1.1: Population under Governance of Municipal Corporations in Maharashtra

Sr No.	Type of Corporation	Parameter	
		Population Size	PCI* (Rs)
1	Grade - A+	Above 01 Crore	Above 50000
2	Grade - A	25 Lakh To 01 Crore	Above 8000
3	Grade -B	15 To 25 Lakh	Above 5000
4	Grade -C	10 To 15 Lakh	Above 3000
5	Grade - D	03 To 10 Lakh	Not Applicable

Source: GoM Resolution-UDD No. MCO 2014/CR153/UD14/Dtd: 01.09.2014.

Note: * = Per Capita Income.

The norm of population across India is determined by the central government of the country. A Municipal Corporation is established independently or sometimes by elevating the Municipal Council to the level of Corporation.

The establishment of Madras (Chennai) Municipal Corporation on 29 September 1688 marked the beginning of Municipal governance in India. It was established by the British East India Company via a Royal Charter of King James II. The

Municipal Corporation of Hyderabad was established in 1869 by the Nizam of Hyderabad who had the governing independence in British India. Subsequently, the Corporations of Calcutta and Bombay were established respectively in 1876 and 1888. The Bombay Municipal Corporation was established by the Bombay Municipal Corporation Act while the Delhi Municipal Council came into being in 1911 when Delhi was proclaimed to be the new Capital of India. Later, by an Act of Parliament, it was elevated to the level of Municipal Corporation on 7 April 1958.

In different States of India, the Municipal Corporation may be known by different nomenclatures. For instance, in Delhi, Uttar Pradesh, Madhya Pradesh, Bihar and Haryana, it is known as *Nagar Nigam* while it is known as *Mahanagar Palika* in Maharashtra, Goa and Karnataka, *Pouro Nigom* in West Bengal, *Pur Porishod* in Tripura.

DEMOCRATIC GOVERNANCE AND MUNICIPAL CORPORATIONS

The purpose of Municipal governance and strategic urban planning in a country is to create effective, responsive, democratic and accountable local governance framework. Both in India and abroad, democracy and decentralization are the focal points of local governance. The idea of local governance continues to quietly sweep the world. From Bolivia to Bulgaria and from West Africa to South Asia, several countries have been strengthening their local governments and working to make them more responsive and effective (USAID 2000)¹. Decentralization promotes democracy in myriad ways. Decentralization brings governments closer to citizens and allows people to participate more effectively in local issues concerning development by identifying community priorities (Ibid). This also facilitates the gain of democratic experience of people and elected representatives. Therefore, for the last twenty five years, the concept of ‘participation’ has been widely used in the development discourse. Democratic governance implies participation in the process of formulation, passage and implementation of public policies (Perry Mosley and Day, 1992)². It is by no means always a positive experience. Local elections provide citizens with an

¹Centre for Democracy and Governance, Decentralization and Democratic Local Governance Handbook, USAID, 20523-3100, PP. 05-06.

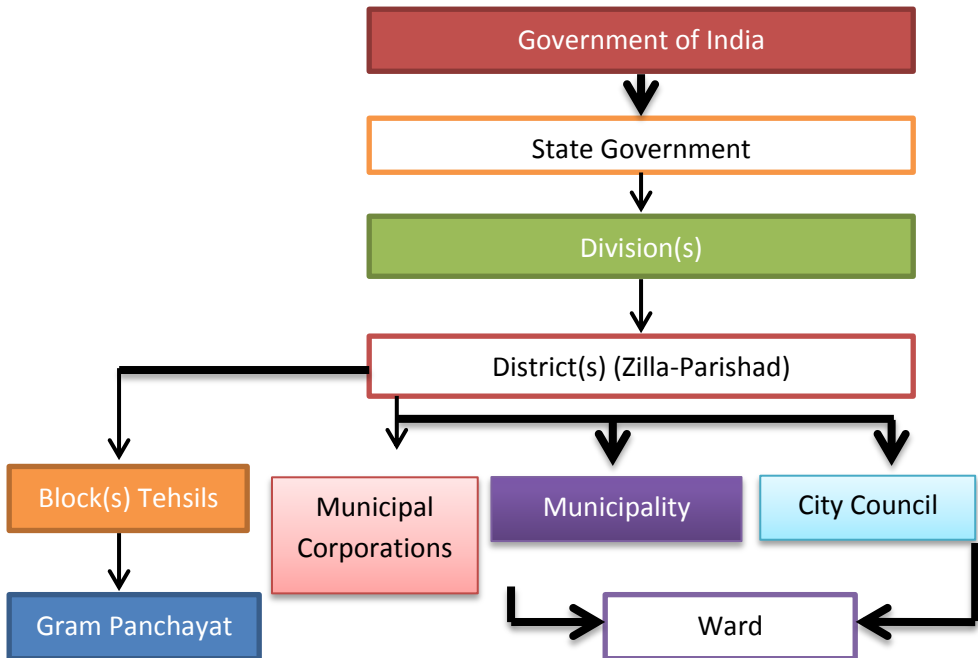
²Parry, G., Mosley, G. and Day N. (1992), Political Participation and Democracy in Britain. Cambridge: Cambridge University Press.

opportunity to vote in or vote out parties from power, thereby making local bodies vibrant and democracy, stronger.

ADMINISTRATIVE STRUCTURE AND DECENTRALIZATION OF POWER AT MUNICIPAL CORPORATION

The Chief Executive Officer (CEO) both of the Municipal Corporation and Zilla Parishad, who is an IAS officer, heads the administrative machinery and may also be the District Magistrate in some States. The CEO supervises the divisions of the Parishad and the wards of the Corporation and executes its development schemes. The pattern of administration can better be understood from the following diagram.

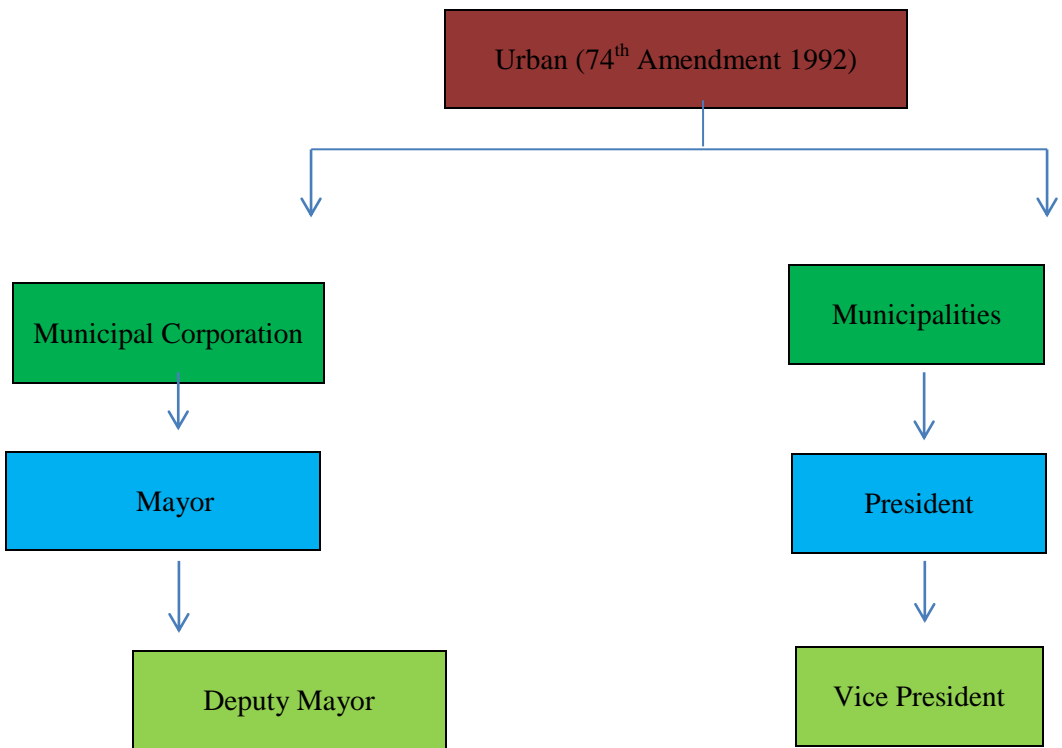
Figure No. 1.1: Local Self Government and Decentralization of Power (73rd and 74th Amendment-1992/Rural +Urban)



The following diagram elucidates the post 73rd constitutional amendment (1992) structure of decentralization of power through local self-government in India. This is inclusive of both the administrative pattern of Municipal Corporations

and the Councils which is indicative of local self-governance and decentralization of power.

**Figure No. 1.2: Local Self Government
 (Decentralization of Power)**



MUNICIPAL CORPORATION ELECTIONS

In ancient Greece and Rome, and throughout the medieval period, rulers such as the Holy Roman Emperor and the Pope were elected (Encyclopedia Britannica).³ In the Vedic period of India, the *raja* of a *gana* (*tribal group*) was apparently elected by the *gana*. The *gana* members had the final say in his election.

In modern democracy, an election is a formal process by which citizens choose their representative to hold public office. Elections have been the fulcrum of modern democracy since the 17th century. Like the Parliamentary elections in

³Election (Political Science), Encyclopedia Britannica Online. Retrieved Sep. 2016.

India, elections to local bodies are also held every five years. Very often the ruling party or local alliance elected to power at the local urban level is in alignment with the party or combine ruling at the State level even though in Municipal elections local issues are likely to be more dominant than the party philosophy or policies and programmes that the party may adopt at the broader State level.

Post 73rd and 74th Constitutional Amendments 1992 the State Election Commission of Maharashtra was set up in 1994. Since then it conducts the elections to the local bodies including Zilla Parishads, Panchayat Samitis and village Gram Panchayats for rural democratic setup and the elections to the Municipal Councils and Corporations in urban power structure. Elections to Zilla Parishad and Panchayat Samitis are conducted simultaneously while for Corporations and Councils the elections take place at the regular interval of every five years. Since its inception in 1994 the State Election Commission of Maharashtra has been electing approximately 2.5 lakh “people representatives” in nearly 28,000 local bodies which comprise 26 Municipal Corporations, 340 Municipal Councils and Nagar Panchayats, 34 Zilla Parishads, 351 Panchayat Samitis and approximately 27, 781 Gram Panchayats respectively (J. Saharia, 2016)⁴.

THEORETICAL PERSPECTIVE AND THE GLOBAL EXPERIENCE OF VOTER TURNOUT AT THE LOCAL ELECTIONS

Low voter turnout in elections is not the concern of Indian democracy alone. Even American democracy has repeatedly experienced the concern of low voter participation in federal elections (Bannett and Resnick, 1990)⁵ and (Sidney Verba, Schlozman and Brady 1995)⁶. Almost half of the eligible voters of America do not exercise their franchise in Presidential elections, which can broadly be termed as an “evidence of crises in country’s democracy” (Ruy A.

⁴ J. Saharia (2016), Data Based Analysis of Municipal Elections in Maharashtra-1994-2013 (Foreword), R. K. Parchure, Manasi Phadke and Dnyandeve Talule, GIPE, Pune, A Study for the State Election Commission of Maharashtra.

⁵ Bennett and Resnick (1990), The Implications of Nonvoting for Democracy in the United States, American Journal of Political Science 34:771-802; Verba, Schlozman and Brady (1995), Voice and Equity: Civic Voluntarism in American Politics, Cambridge, MA: Harvard Uni. Press

⁶ Sidney Verba, Schlozman and Brady (1995), Voice and Equality, Cambridge, Mass: Harvard University Press.

Teixeira, 1992)⁷, (Rosenstone and Hansen, 1993)⁸. In recent decades, a few studies have attempted to look comprehensively at Municipal level voter turnout in the US. These studies suggest that voter turnout in Municipal elections may average half that of national elections, with turnout in some cities falling below a quarter of the voting age population (Alford and Lee, 1968)⁹, (R. L. Morlan, 1984)¹⁰ and (Ruby Bridges, 1997)¹¹. However, the voter turnout at elections to rural local bodies like Zilla Parishads in different states of India is often observed to be higher than the turnout at Parliamentary elections. Low voter turnout in Municipal elections raises a number of concerns, the most serious being that the voice of the people in Municipal elections is likely to be severely distorted. Disadvantaged segments of the society, racial and ethnic minorities, the poor, illiterates tend to vote significantly less regularly than others in democratic contests (Rosenstone and Hansen, 1993)¹², (Sidney Verba, Schlozman and Brady 1995)¹³. And therefore, with low voter turnout, this bias is likely to become more pronounced (Wattenberg, 1998)¹⁴.

At the local level then, there is a risk that non-participation in the democratic process and consequent low voter turnout may actually distort people's representation. Therefore, increase in turnout in local urban or rural elections is a challenge for strengthening democracy and designing and implementing people-oriented policies and programmes at the local level. Voting in local elections in fact provides citizens with an opportunity to learn about and engage in a

⁷ Ruy A. Teixeira (1992), *The Disappearing American Voter*, Washington DC: Brookings Institutions; Rosenstone S. J. and J. M. Hansen (1993), *Mobilization, Participation and Democracy in America*, New York: Macmillan.

⁸ Rosenstone S. J. and J. M Hansen (1993), *Mobilization, Participation and Democracy in America*, New York: Macmillan; Verba, Schlozman and Brady (1995), *Voice and Equity: Civic Voluntarism in American Politics*, Cambridge, MA: Harvard Uni. Press.

⁹ Alford R. R. and E. C. Lee (1968), *Voting Turnout in American Cities*, *American Political Science Review* 62:796-813

¹⁰ Morlan R. L. (1984), *Municipal Versus National Election Voter Turnout: Europe and the United States*, *Political Science Quarterly* 99:457-70.

¹¹ Ruby Bridges A. (1997), *Morning Glories: Municipal Reform in the Southwest*, Princeton, NJ: Princeton Uni. Press

¹² Rosenstone S. J. and J. M Hansen (1993), *Mobilization, Participation and Democracy in America*, New York: Macmillan; Verba, Schlozman and Brady (1995), *Voice and Equity: Civic Voluntarism in American Politics*, Cambridge, MA: Harvard Uni. Press

¹³ Sidney Verba, Schlozman and Brady (1995), *Voice and Equality*, Cambridge, Mass: Harvard University Press.

¹⁴ Wattenberg M. P. (1998), *Turnout Decline in the US and Other Advanced Industrial Democracies*. Irvine, CA: Centre for the Study of Democracy.

democratic process beginning with the grassroots level. Given the proximity of the local government and its relatively small size, it is in many ways easier for citizens to acquire crucial democratic skills and become familiar with the public realm at the local level (Zoltan Hajnal, P. G. Lewis and Hugh Louch, 2002)¹⁵. Election timing is also observed as a vital determinant of voter turnout which matters the most. This is because voter turnout is observed to be much lower in off-cycle than in on-cycle elections. Looking at California, for example, it was found that average voter turnout in an off-cycle election is 35 per cent lower than turnout when city elections are held at the same time as Presidential elections (Sarah F. Anzia 2014)¹⁶.

“Social capital” is believed to play a dominant role in increasing voter turnout, which in turn improves political representation both at the national and local levels of governance (Mathew D. Atkinson and Anthony Fowler, 2012)¹⁷. Voting requires time and information and there is little chance that one vote will change the election outcome; hence the turnout poses a classic collective action problem (Mancur Olson, 1965)¹⁸. It is argued that social capital may provide a solution to the collective action problem of voter turnout which is defined as “Citizen Engagement in Community Affairs” (Robert Putnam, 1995, P.664)¹⁹. Social capital can increase voter turnout by increasing the flow of political information through a community. Recent field experiences demonstrate that societal pressure could lead to an increase in voter turnout to the extent of 30 to 38 per cent (Gerber et al, 2008)²⁰. However, a contrary view points out that social connectedness may actually lead to decrease in voter turnout in cases where an individual social network creates a force which does not rely on voting to make

¹⁵ZoltaHajnal, Paul George Lewis and Hugh Louch (2002), *Municipal Elections in California: Turnout, Timing and Competition*, Public Policy Institute of California.

¹⁶ Sarah F. Anzia (2014), *Timing and Turnout: How Off-Cycle Elections Favor Organized Groups*, University of Chicago Press.

¹⁷Mathew D. Atkinson and Anthony Fowler (2012), *The Effect of Social Capital on Voter Turnout: Evidence from Saint’s Day Fiestas in Mexico*, University of California, Los Angeles and Harvard University.

¹⁸MancurOlson (1965), *The Logic of Collective Action*, HUP.

¹⁹Robert Putnam (1995, *Tuning In, Tuning Out; The Strange Disappearances of Social Capital in America*. PS: Political Science and Politics 28(4): 664-683.

²⁰ Gerber, Alan, Donald Green and C. Larimer (2008), *Social Pressure and Voter Turnout: Evidence from a Large-Scale Field Experiment*: *American Political Science Review*, 102(1): 33-48.

its voice heard. (Diana C. Mutz, 2002)²¹. Also an increase in social capital in heterogeneous communities leads to uncertainty about political views and reduces the voter turnout (Ibid). In a nutshell, there are good reasons to believe that social capital may have positive or negative effects on voter turnout at every level of democracy, irrespective of rural or urban.

Voter turnout, which refers to the percentage of voters who exercise their franchise at an election, out of the total number of eligible voters, is one significant measure of citizen participation in democratic politics. Worldwide, voter turnout during the period 1945–2001 shows a notable decline, with major decline taking place since the mid-1980s (Rafael Lopez Pintor, 2002)²² and (Maria Gratschew and Kate Sullivan, 2002)²³. Africa witnessed a pronounced increase in democratic participation during the 1980s when several African nations were riding the wave of democratization. Turnout in North and South American countries during the same period was observed to be stable, as was that of Oceania and Western Europe. During the same period, the Middle East recorded varied turnout while Asia witnessed the most pronounced variations in democratic participation (Ibid). Average turnout from 1990 to 2001 peaked at 79 per cent in Oceania which was just ahead of Western Europe with turnout proportion of 78 per cent. Both Asia and Central and Eastern European region for the same period had an average voter turnout of 72 per cent while the average in Central and South America was 69 per cent, North America and the Caribbean – 65 per cent. Africa's average turnout was the lowest at 64 per cent which, by all standards, is higher than the voter turnout at most of India's Parliamentary elections (Ibid). The comparison of voter turnout across nations further elucidates a wide range of variations. For example 93 per cent voter turnout in a country like Liechtenstein in Western Europe against 56 per cent in neighboring Switzerland can be attributed to compulsory voting in Liechtenstein. On the contrary, a country like Bahamas where voting is not compulsory, records a turnout of 92 per cent compared with the Haitian average of 47 per cent (Ibid). Since the 1970s established democracies of the world have recorded a slow but steady decline in voter turnout; however during the same period, several other

²¹Diana C. Mutz (2002), The Consequences of Cross-Cutting Networks for Political Participation, *American Journal of Political Science*, 46(4):838-855.

²²Rafael Lopez Pintor (2002), *Voter Turnout Since 1945: A Global Report*, Stockholm, Sweden: International Institute of Democracy and Electoral Assistance.

²³Maria Gratschew and Kate Sullivan (2002), *Compulsory Voting*, ARENA, Association of Electoral Administrators, OxonianRewley Press Ltd. United Kingdom.

nations where participative democratic processes strengthened, recorded vast increase in turnout, peaking at about 80 per cent (Ibid).

There is no doubt that the capacity to read and write, female literacy ratio (FLR), Per Capita Income (PCI), etc. do not necessarily translate into an ability to make coherent and informed political decisions. In fact, it is observed that while voter turnout does increase initially with increase in literacy, it tends to decline in societies where literacy exceeds 90 per cent (Ibid).

There are 9 major electoral systems within parliamentary elections used around the world. Alternative vote used in Australia, Fiji and Nauru demonstrate an average turnout of 91 per cent while Jordan and Vanuatu with single non-transferable vote system have an average turnout of 43 per cent. The other systems do not have such a large deviation, with single transferable vote at 80 per cent and two round system at 63 per cent. An interesting result is the relatively small difference between the two most widely used systems.

Very often the reason cited for low voter turnout is that for many people today democracy has become synonymous with elections and political parties; (other than voting once every five years, ordinary citizens are more likely to remain detached from the issues of governance. It is a fact that voter participation has decreased and the established democracies of the world have experienced what is termed as crises of political parties.

The United Nations General Assembly Convention 1979, which seeks to eliminate all forms of discrimination against women, also emphasizes the importance of equal participation of women in public life. However, the question remains as to whether women participation in the overall voter turnout has actually increased. Various studies on voting pattern in Western Europe and North America establish the fact that gender, along with age, education and social class, was one of the standard demographic and social characteristics used to predict levels of civic engagement, political activism and electoral turnout (Tingsten, 1937)²⁴, (Almond and Verba, 1963)²⁵, (Stein Rokkan, 1970)²⁶ and

²⁴Tingsten H.L.G. (1937), Political Behaviour, Studies in Election Statistics: London: P.S. King.

²⁵Almond G. A. and S Verba (1963), The Civic Culture, Political Attitude and Democracy in Five Nations, Princeton, N.J. Princeton University Press.

²⁶Stein Rokkan (1970), Citizens, Elections, Parties: Approaches to the Comparative Study of the Processes of Development Oslo: Universitetsforlaget.

(Verba Sidney N, and Norman H. Nie, 1972)²⁷. The studies also reveal that gender differences were narrowing even in the 1950s in advanced industrialized societies such as the Sweden (Martin Lipset, 1960)²⁸. In most societies, when it comes to political activity, men are found to be more active than women (Verba, Sidney N, NieLekajcieSie and Kim Cattreal 1978)²⁹. Such gender differences have persisted in spite of significant advances in the levels of education. Usually women are found to be less involved in unconventional forms of democratic participation such as strikes and protest movements, thereby leading to lower participation of women also in conventional democratic processes (Barnes and Kaase, 1979)³⁰. However, this finding has been visibly challenged by the female voting pattern in recent times. In the US for example, in the Presidential elections held post 1980, the proportion of eligible female adults who exercised their franchise exceeded the proportion of eligible male adults. The same phenomenon was evident in non-presidential mid-term elections since 1986 (CAWP, 2000)³¹. Overall percentage of female voter turnout in the US outnumbers the male electorate implying that the number of female voters has exceeded the number of male voters in every Presidential election. Similar trends are evident in Britain where the gender gap in turnout reversed in 1979 so that by 1997 elections, an estimated 17.79 million women voted compared with about 15.8 million men (Rafael Lopez Pintor, Maria Gratschew and Kate Sullivan, 2002)³². This indicates that the patterns of voter turnout can be influenced by a legal framework that draws citizens towards meaningful political activity (Ibid). In nations like Barbados and Sweden it is observed that the number of female voters consistently exceeds male voters. Conscious attempts to bring women into political framework can potentially lead to increase in the voter turnout.

²⁷Verba Sidney N, and Norman H. Nie (1972), *Participation and Social Equality*, Cambridge, Mass: Harvard University Press.

²⁸Martin Lipset (1960), *Political Man: the Social Bases of Politics*, Garden City, New York, Doubleday.

²⁹Verba, Sidney N, NieLekajcieSieandKimCattreal (1978), *Participation and Social Equality*, Cambridge, Mass: Harvard University Press and Verba SK and N, Nie (1972), *Politicization in America, Political Democracy and Social Equity*, New York, Harper and Row.

³⁰Barnes S and Kaase M (1979), *Political Action, Mass Participation in Few Western Democracies*, Beverly Hills, Calif: Sage.

³¹CAWP (2000), *Women in State Legislature*, Center for American Women and Politics, Eagleton Institute of Politics, Rutgers, The State University of New Jersey, 919, Ryders Lane, New Brunswick, NJ 08901 (732) 932-9384: www.cawp.rutgers.edu

³²Rafael Lopez Pintor, Maria Gratschew and Kate Sullivan (2002), *Compulsory Voting, ARENA, Association of Electoral Administrators*, OxonianRwley Press Ltd. United Kingdom.

Other important factors that may influence voter turnout include the proportion of youth voters to total voters, internet voting, extended polling, and perhaps even compulsory voting. Compulsory voting is not a new idea; countries like Belgium (1892), Argentina (1914) and Australia (1924) were among the first countries to introduce compulsory voting laws (Ibid).

MUNICIPAL CORPORATION ELECTIONS AND VOTER TURNOUT: THE GLOBAL EXPERIENCE

As observed in the foregoing, low voter turnout in elections is not only the concern of Indian democracy alone. Even American democracy has repeatedly experienced the concern of low voter participation in federal elections (Bennett and Resnick, 1990; Verba, Schlozman and Brady, 1995).³³ Almost half of the eligible voters in America do not turn out at polling booth in Presidential elections, which is an “evidence of crisis in country’s democracy” (Teixeira 1992; Rosenstone and Hansen 1993).³⁴ In the recent past the voter turnout at Municipal Corporation elections suggests that in city elections it may average half that of national elections, with turnout in some American cities such as California falling below a quarter of the voting age population (Alford and Lee 1968; Morlan 1984; Bridges 1997).³⁵

Such a low degree of turnout in local Corporation elections raises a number of concerns. Most serious concern of low voter turnout at Corporation elections is that the voice of the people in Municipal elections is likely to be severely distorted. Disadvantaged segments of the society, racial and ethnic minorities, the poor, illiterates tend to vote significantly less regularly than others in democratic contests (Rosenstone and Hanson 1993)³⁶; Verba, Schlozman and

³³Bennett and Resnick (1990), *The Implications of Nonvoting for Democracy in the United States*, *American Journal of Political Science* 34:771-802; Verba, Schlozman and Brady (1995), *Voice and Equity: Civic Voluntarism in American Politics*, Cambridge, MA: Harvard Uni. Press.

³⁴ Teixeira R. A. (1992), *The Disappearing American Voter*, Washington DC: Brooking Institutions; Rosenstone S. J. and J. M. Hansen (1993), *Mobilization, Participation and Democracy in America*, New York: Macmillan.

³⁵ Alford R. R. and E. C. Lee (1968), *Voting Turnout in American Cities*, *American Political Science Review* 62:796-813; Morlan R. L. (1984), *Municipal Versus National Election Voter Turnout: Europe and the United States*, *Political Science Quarterly* 99:457-70; Bridges A. (1997), *Morning Glories: Municipal Reform in the Southwest*, Princeton, NJ: Princeton Uni. Press.

³⁶Verba Sidney, Schlozman and Brady (1995),

Brady 1995)³⁷. And therefore, when turnout falls, this bias is likely to become more severe (Wattenberg 1998).³⁸

At the Corporation level then, non-participation may play a more critical role in policy making. Therefore, increase in turnout in Corporation elections is a challenge for strengthening democracy and designing and implementing pro-people policies at the urban local level. Participation at the local level brings for citizens a relatively easy opportunity to learn about and become engaged in democracy. Given the proximity of local government and the relatively small size, it is in many ways easier for citizens to acquire crucial democratic skills and become familiar with the public realm at the local level (Hajnal and Lewis 2001).³⁹ Election timing is also observed as a vital determinant of voter turnout which matters the most. This is because turnout is observed to be much lower in off-cycle than in on-cycle elections. Looking at California, for example, it was found that average voter turnout in off-cycle election is 35 per cent lower than turnout when city elections are held at the same time as presidential elections (Sarah F. Anzia 2014).⁴⁰

MUNICIPAL CORPORATION VOTER TURNOUT IN MAHARASHTRA

The State of Maharashtra is not an exception to low voter turnout at Municipal elections. Across the time period, voter turnout at Municipal elections in the State is observed to be on the lower side, which is highly unsatisfactory. Most of the Municipal Councils and Corporations which went to polls in 2012 experienced a low voter turnout. In 2012 the voter turnout at Corporations like Mumbai and Thane could not exceed 45 per cent (ToI)⁴¹. This is evidence of “low engagement of citizens in community affairs” (Mancur Olson 1965)⁴². Voter turnout at Municipal elections in Maharashtra thus poses a classic

³⁷ Rosenstone S. J. and J. M Hansen (1993), *Mobilization, Participation and Democracy in America*, New York: Macmillan; Verba, Schlozman and Brady (1995), *Voice and Equity: Civic Voluntarism in American Politics*, Cambridge, MA: Harvard Uni. Press.

³⁸ Wattenberg M. P. (1998), *Turnout Decline in the US and Other Advanced Industrial Democracies*. Irvine, CA: Centre for the Study of Democracy.

³⁹ Zoltan L Hajnal and Paul G. Lewis (2001), *Municipal Elections and Voter Turnout in Local Elections*, University of California.

⁴⁰ Sarah F. Anzia (2014), *Timing and Turnout: How Off-Cycle Elections Favor Organized Groups*, University of Chicago Press.

⁴¹ Times of India, 16.02.2012: Retrieved 26.09.2016.

⁴² Mancur Olson (1965), *The Logic of Collective Action*, HUP.

collective action problem. Only high turnout can serve the common public interest in designing policy.

In order to create a policy to increase the voter turnout, it is important that existing data be analyzed to understand the trends in the turnout. Once the trends are understood, it could be possible to target certain areas more intensively for increasing the turnout level.

It is with this vision that a study of election data analysis was commissioned to the Gokhale Institute of Politics and Economics at the initiative of the State Election Commission of Maharashtra.

CHAPTER- 2

DEFINING VARIABLES AND RESEARCH QUESTIONS

INTRODUCTION

The 73rd Amendment to the Constitution, which gave constitutional status to the Panchyat Raj Institutions (PRI), was passed in 1992. The same Amendment provided for creation of the State Election Commission of Maharashtra (SECM) for conduct of elections in urban and rural local self-governance bodies. All urban and rural local body elections in Maharashtra since 1994 have been conducted by the SECM. While urban bodies include Municipal Corporations, Municipal Councils and Nagar Panchayats, rural bodies encompass Zilla Parishads, Panchayat Samitis and Gram Panchayats.

In Maharashtra State, at the time of establishment of the SECM, some of the local bodies, rural as well as urban, were already in existence and were functioning with elected members. It was decided to allow such local bodies to continue and hold elections to these local bodies as and when they completed their 5-year term. Thus, in Maharashtra, all local bodies do not go to polls at the same time. Different local bodies, urban and rural, go to polls as and when their 5-year term ends.

Since its establishment, the SECM has conducted 4 rounds of elections in all the local bodies. The first round was from 1994-98, the second round was from 1999-2003, the third from 2004-08 and the fourth from 2009-13. From 2014 onwards, the fifth round of elections is being conducted by the SECM across all rural and urban local bodies in Maharashtra. Whilst some bodies have already conducted the fifth round of elections, in nearly 26 out of 36 districts in Maharashtra, all urban and rural bodies will go to polls from November 2016 to March 2017.

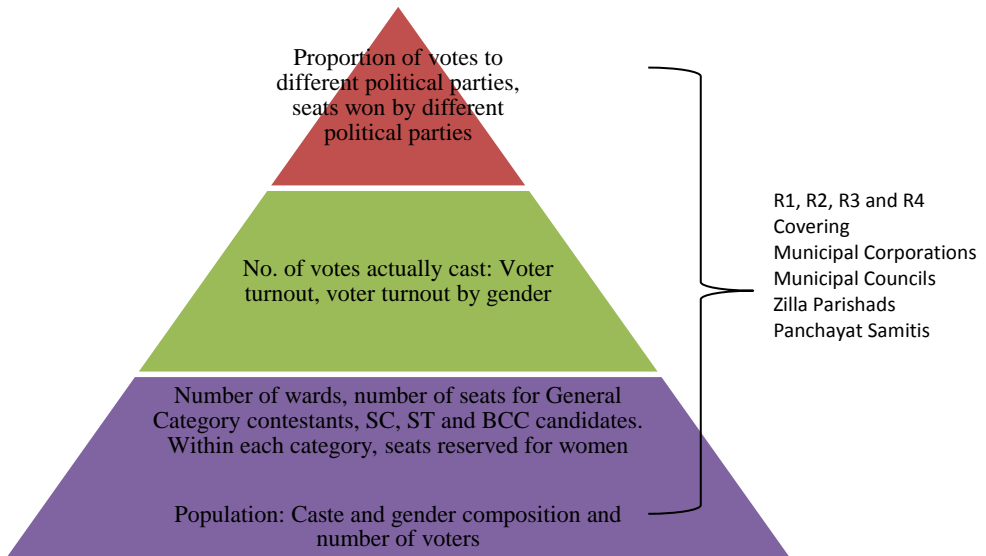
The SECM has maintained some basic data on a few electoral variables for each round of elections held since 1994. This data is on the following variables:

- a. Population governed by the local body
- b. Proportion of SC population within the total population
- c. Proportion of ST population within the total population
- d. Total number of wards created within the governed area governed by the local body
- e. Number of seats contested in each local body.
- f. Number of seats reserved for SC, ST, BCC categories
- g. Number of seats that fall under General Category
- h. Number of seats reserved for women under General, SC, ST, BCC categories
- i. Number of voters within the population
- j. Number of male and female voters
- k. Number of votes cast
- l. Number of valid votes cast
- m. Voter Turnout Ratio (defined as number of valid votes/ number of eligible voters in the population)
- n. Proportion of votes received by different political parties, coalitions and independent candidates
- o. Distribution of seats won by different political parties, coalitions and independent candidates

The following graph shows a pictorial representation of the data available with the SECM across four rounds of elections, hereafter referred to as R1, R2, R3 and R4. For some of the local bodies, data on Voter Turnout is missing for R1. However, data on all variables is definitely available for R2, R3 and R4. This data is available for Municipal Corporations, Municipal Councils, Nagar Pachayats, Zilla Parishads and Panchayat Samitis. Data has not been maintained for Gram Panchayats.

1. DATA AVAILABLE WITH SECM

Figure No. 2.1: Data available with SECM



Out of the data available for all the different local bodies, this report is purely based on analysis of the data pertaining to Municipal Corporations.

2. FORMATTING AND ENHANCING THE DATASET

Section 1 gives details of the variables on which data has been maintained by the SECM. Following variables were constructed from the existing database so as to understand the key patterns in the dataset.

VOTER TURNOUT (VT)

Voter Turnout is hereafter referred to as VT. The importance of VT from the perspective of electoral results cannot be underestimated. The ratio of VT can swing results of the election either way and hence VT is one of the most watched variables by candidates, political parties as well as the SECM. Indeed, for the SECM, increasing the VT has been a key issue because a truly fair election can only be deemed to be held when the VT is nearly 100 per cent.

This report treats VT as a key variable. Patterns in VT across various Municipal Corporations as well as across different rounds of elections have been highlighted. Correlations between VT and various other variables have been explored so as to draw meaningful conclusions that could be relevant to the SECM in the conduct of future elections.

PROPORTION OF SCST (SCST)

The proportion of SC and ST population to the total population of the area governed by the local body is hereafter referred to as SCST. SCST can have an impact on VT and hence it is important to analyze this variable.

The proportion of SC and ST population to the total population as declared by the Census for the particular area is taken as a reference while deciding the number of seats to be reserved within a Corporation by the SECM. The reservation of seats too impacts VT. In fact, rather than use SCST as a causal variable to explain the trends in VT, it would be more pertinent to look at the patterns in reservations. Patterns in the reservations are captured in the variable RES, which is described next.

PROPORTION OF SEATS RESERVED (RES)

As has been mentioned above, the proportion of SC and ST in the population is declared in the Census report; since the Census is released every decade, the proportion of SC/ST to total population within Corporation limits is considered as fixed for one decade. However, in the same decade, two elections are conducted to any local body. Now, since the seats are reserved on a rotation basis, a very interesting pattern emerges. Even if the SC/ST population for the Corporation is frozen for a decade as per the Census, reservation of seats in different constituencies of the Corporation undergoes rotation in the same decade. And this change in reservation affects voter behavior.

RES is defined to be the proportion of reserved seats to the total number of seats in any Corporation. This has been used as a causal variable to check whether changes in the proportion of seats under reservation bring about a change in the VT ratios in different Corporations.

PROPORTION OF SEATS WON BY INDEPENDENT CANDIDATES (IND)

The proportion of votes garnered by independent candidates in a Corporation is hereafter referred to as IND. IND is interesting because it identifies those areas wherein independent candidates garner highest number of votes.

Apart from these variables which have been created out of the existing dataset, some additional variables were created in order to explore the data patterns more deeply. Thus, the existing data has not only been used to identify certain key variables, but it has also been enhanced by introducing new variables. Following were the new variables added to the dataset.

POLITICAL ALIGNMENT (POL)

POL is a dummy variable which stands for “Political Alignment.” If the party winning maximum number of seats at the local level is the same as the party in power at the State level, then the dummy variable POL takes value 1, otherwise 0. This variable was added to identify clusters of areas that normally show higher alignment with the State Government.

PROXY FOR COMPETITION BETWEEN PARTIES (REVERSE COMP)

REVERSE COMP is a variable that helps to understand the level of competition between different political parties. The dataset contained data on distribution of seats to different political parties. Lower standard deviation in the distribution of seats would imply that different parties were in neck to neck competition.

Thus, REVERSE COMP is defined as the standard deviation of distribution of seats between political parties. Lower the value of REVERSE COMP, higher would be the level of competition between the parties. Areas with high degree of competition between political parties show a high level of “swing” i.e. the elections can swing the outcome in favour of any one party. Hence, those areas with low REVERSE COMP values could be identified as areas wherein the swing quotient would be quite high and the contest would be close.

DEVELOPMENT INDEX (DEV)

Political outcomes show distinct patterns vis-à-vis development ratios. Normally, in more developed areas, casting a vote is normally not the only way in which the electorate can signal their approval or disapproval for the party or the elected member in power. In fact, in more developed areas, where alternative options (such print media and television, social media, etc.) are available to the electorate to convey their sentiments to the elected representatives or to the Government, the voter turnout could be lower. Similarly, in more developed areas, one may witness higher participation of women both as voters as well as contestants. Thus, the level of development of an area (DEV) could be a key factor in determining voter behavior in general and voter turnout in particular. It would be thus necessary to develop a proxy for DEV, without which VT may not be explained satisfactorily. Defining DEV at a disaggregated level for areas governed by Municipal Corporations would require disaggregated levels of economic indicators, which are not available below district level.

The 2011 Census carries data on per capita income at the district level, which can be used as a district level development indicator. DEV is constructed in the following fashion: The proportion of per capita income of a particular district to the combined per capita income of all districts (in Maharashtra) is defined as DEV. Since this data is only available at a district level and not at taluka level, the effect of development on other electoral variables has only been explored at district or divisional aggregate levels. Secondly, since this data is only available in the 2011 Census, it is not possible to trace the effect that economic development has on political dynamics across time. However, in this study, the correlations between economic development and political variables have been worked out in a static sense.

The following section highlights the research questions on Municipal Corporations that were handled using the enhanced data sets.

3. IDENTIFYING THE RESEARCH QUESTIONS

Following is a list of the research questions around which the data analysis is structured.

1. What is the trend of Voter Turnout (VT) in successive rounds of elections in Municipal Corporations? Has the average VT changed across successive rounds?
2. Do certain Corporations have a history of higher VT?
3. Do Corporations with high VT cluster together geographically?
4. Do Corporations with higher proportion of seats reserved for SC and ST population show higher VT?
5. Do Corporations of better developed regions show a lower VT?
6. Which Corporations in Maharashtra are “swing” Corporations i.e. Corporations in which elections are closely contested and can potentially swing in favor of any one party?
7. Similarly, which are the Corporations in which the swing is extremely low? That is, which are the Corporations which show single party dominance?
8. Are swing Corporations also those which exhibit a higher VT?
9. Is there a correlation in development quotient and the swing behavior?
10. Which are the Municipal Corporations that show a high degree of political alignment to the State Government?
11. Has the proportion of seats won by independent candidates in Municipal Corporations increased over a period of time?
12. Is it the case that proportion of seats won by independent candidates is higher in more well-developed areas?

These are the main research questions around which the data analysis has been designed. A focal point of data analysis is to develop crucial insights into the trends in Corporation elections so that some strategies can be designed for the upcoming elections.

CHAPTER - 3

DATA ANALYSIS: BEHAVIOUR OF MAIN VARIABLES ACROSS
DIFFERENT ROUNDS OF ELECTIONS

Chapter 2 defines the electoral variables on which analysis has been carried out. This chapter highlights the trends in the different variables mentioned in Chapter 2.

3.1 VOTER TURNOUT

Following are the summary statistics for VT across three rounds of elections. In the data maintained by the SECM, VT in R1 is not available.

Table No. 3.1: Trends in VT across Successive Rounds of Elections

VT	R2	R3	R4
Mean	55.77	58.51	55.00
Std. Deviation	11.66	10.05	7.46
Minimum	30.00	41.31	42.00
Maximum	76.00	87.81	73.00

It can be observed from the above table that the VT in R2 (1999-2003) was 55.77 per cent; it then increased in the next round (2004-08) to 58.51 per cent and fell again in R3 (2009-13) to 55 per cent. Thus, VT is seen to be maximum in R3 i.e. in the elections held between 2004-08. This trend is also true of Municipal Council elections; in the Council elections too it has been observed that the voter turnout increased in the 2004-08 elections.

However, the trends in standard deviations tell a different story. The standard deviation keeps falling across successive rounds of elections. Standard deviation is a measure of variability in the given dataset. Thus, the reduction in standard deviation indicates that the variability in voter turnout has kept on reducing across successive rounds of elections. Thus, some Corporations may have showed extremely high or low VTs in R2, but the extreme points become more moderate as one moves from R3 to R4.

This trend is supported by the observations on minimum and maximum VT values. It can be seen that the minimum VT increases sharply from 30 per cent in R2 to 41.31 per cent in R3. However, the maximum too increases sharply from 76 per cent to 87.81 per cent. Thus, even though the minimum and maximum levels in R3 are higher, the range is roughly the same. This is reflected in a higher mean with a slightly lower standard deviation. However, in R4, the minimum value rises only slightly, whereas the maximum value registers an extremely sharp fall, thereby reducing the range or variability in the dataset. Thus, in R4, there is a sharply lower mean together with a sharply lower standard deviation as well.

The overall VT for election rounds R2, R3 and R4 together stands at 56 per cent. A comparison to Municipal Council and Zilla Parishad VT is interesting. Municipal Council VT across all rounds of elections stands at 70.7 per cent, whereas Zilla Parishad VT across all rounds of elections stands at 69.1 per cent. This implies that in the context of Maharashtra, voter turnout is the least in highly urbanized areas, higher in the rural areas and highest in the semi-urban areas or in small townships.

3.1.1 DOES VT DEPEND ON PAST PERIOD VT?

Voter turnout may not be dependent only on the level of propaganda done by candidates, or the amount of hype created during elections or even on the expenditure incurred by the Government on voter awareness programs. It could simply be the case that there is a history or culture of voting associated with certain areas.

Does the VT in a Municipal Corporation election in a particular round show some level of positive correlation with the VT in the past rounds? If yes, then it would imply that Corporations with high VT may continue to record high VT during the next elections as well. Similarly, the positive correlation would imply that Corporations with a low VT may continue to record low VT in the next rounds too. The following table shows the correlation matrix for VT in the different election rounds.

Table No. 3.2: Correlation Matrix for VT

	<i>VT_R2</i>	<i>VT_R3</i>	<i>VT_R4</i>
<i>VT_R2</i>	1		
<i>VT_R3</i>	0.59 ^{***}	1	
<i>VT_R4</i>	0.78 ^{***}	0.69 ^{***}	1

Note: *** indicate significance of correlation co-efficients at 1 per cent I.o.s.

It can be seen that the VT in R4 has a correlation co-efficient of 0.69 and 0.78 with VT in R3 and R2 respectively. Similarly, the VT in R3 has a correlation co-efficient of 0.59 with the VT in R2. The presence of positive and significant correlations proves that a Corporation with a high VT in the past is likely to continue to witness higher VT in the future too. Similarly, and rather alarmingly, it also indicates the presence of Corporations that could have low VTs and could well continue to have low VTs in the future, unless policy action is taken.

The correlation matrix thus offers two main insights. Firstly, it suggests the presence of a voting “culture”, which can lead to a difference in the VTs witnessed in different Corporations in any round of election. Secondly, and more importantly, the trend offers a rationale for policy intervention. Voter awareness programs would be needed to enhance voter turnouts in those Corporations, which have been culturally showing depressed turnout levels.

3.1.2 TRENDS IN VT ACROSS DISTRICTS AND DIVISIONS

Aggregation of VT across Corporations in the same district yields district-level VT ratios. Similarly, aggregation of VT across districts yields division-level VT ratios.

Table No. 3.3: District level VT

District	VT_R2	VT_R3	VT_R4	Average VT
Mumbai	43	46.05	45	45
Thane	44.17	49.65	47.29	46.57
Nagpur	49	56.28	52	52
Pune	55	54.47	53	54.5
Latur			57	57
Solapur	60	58.11	52	57
Amravati	58	60.53	54	58
Chandrapur			58	58
Parbhani			58	58
Akola	60	62.65	56	60
Nanded	61	62.38	57	60
Jalgaon	65	61.04	56	61
Nashik	59	63.94	60	61
Dhule	68	57.42	61	62
Ahmednagar	67	60.61	73	67
Aurangabad	57	87.81	58	68
Sangli	76	68.71	63	69
Kolhapur	70	71.09	68	70

The minimum VT is witnessed in the most well developed districts of Maharashtra viz. Mumbai, Thane and Pune. However, it is extremely interesting to note that the maximum VT is also witnessed in the some of the more

developed districts of Sangli and Kolhapur. This supports the earlier observations regarding voting culture. Even though Sangli and Kolhapur are well developed areas, both these districts are known for voter awareness and political activism. In fact, Kolhapur not only has the highest VT in Municipal Corporation elections, but also in the Municipal Council and Zilla Parishad elections.

A similar observation can be made about Nagpur. Nagpur does not show a very high rank on development quotient, but has a very poor voter turnout. This is again observed in the other local body elections too, indicating a cultural bias that works against elections to any local body within the district.

3.1.3 CLUSTER ANALYSIS OF VT

We next carry out a cluster analysis to identify Corporations which have exhibited a higher VT and those which have exhibited a lower VT. This analysis is important because it helps to understand where intensive voter awareness programs need to be launched. Thus, cluster analysis of VT data can be a significant input for a meaningful policy to promote voter awareness.

Following are the areas which are classified as high VT clusters as per the cluster analysis. These areas have a voter turnout of more than 65.11 per cent; the highest VT is in Kolhapur Municipal Corporation and the lowest in this cluster is in Malegaon Municipal Corporation. The average VT for this cluster is 67.75 per cent.

Table No. 3.4: High Voter Turnout Cluster

Corporation	Average VT
Kolhapur	69.59
Sangli-Miraj-Kupwad	69.43
Aurangabad	67.67
Ahmednagar	66.97
Malegaon	65.11

Medium level of voter turnout i.e. between 51 per cent and 62.22 per cent was witnessed in the areas given below. The maximum value within this cluster i.e. 62.22 per cent VT was seen in Dhule Municipal Corporation, whereas the minimum VT was seen in Thane Corporation. The average VT for this cluster stands at 56.9 per cent.

Table No. 3.5: Medium Voter Turnout Cluster

Corporation	Average VT
Dhule	62.22
Jalgaon	60.67
Nandedwaghala	60.01
Akola	59.67
Parbhani	57.91
Chandrapur	57.71
Amravati	57.66
Latur	57.02
Solapur	56.95
Nashik	56.93
Pimpri-Chinchwad	56.8
Navi-Mumbai	56.02
Nagpur	52.45
Pune	51.52
Thane	51.02

The following Municipal Corporations show the lowest VT ratios. Ulhasnagar Municipal Corporation records a low of 40.3 per cent. The maximum VT within this cluster is seen at Kalyan Dombivli Municipal Corporation, which records 47.54 per cent voter turnout. The average VT for the low VT cluster stands at 43.9 per cent only. Clearly, it is in the Corporations given below that maximum efforts need to be taken to enhance voter turnouts.

Table No. 3.6: Low Voter Turnout Cluster

Corporation	Average VT
Kalyan-Dombivili	47.54
Bhiwandi-Nizampur	46.31
Brihan-Mumbai	44.68
Mira-Bhaindar	42.85
vasai-Virar	41.87
Ulhasnagar	40.3

All Corporations in the low VT cluster belong to Mumbai and Thane districts. Data clearly underscores the urban apathy phenomenon here. It is in the most well developed cities that voter turnout is the lowest.

Thus, the high, medium and low VT clusters have average values of 67.7 per cent, 56.9 per cent and 43.9 per cent respectively. These average values, around which the cluster is arranged, are called as centroids of the cluster. Thus, there are three distinct centroids for the VT cluster process; the high and medium centroids are closer to each other, but the low VT centroid at 43.9 per cent is farther off. It is here that voter awareness programs can make a true difference.

3.2 POLITICAL ALIGNMENT

As mentioned in Chapter 2, the variable ‘Political Alignment’ (POL) has been created to enhance the data-set.

If a Municipal Corporation has the same party in power as the party in the State Government, political alignment i.e. POL takes value 1, otherwise 0. Political alignment helps to show alignment patterns of Corporations with State Government. The objective of creating this variable is to examine if certain pockets have a relationship with the government at the State. This variable highlights the effect of a change in the State Governments on local governance tiers. One may well look at it as a “*political trickle down*” effect.

Following is a snapshot of how the data looks once POL is constructed.

Table No. 3.7: VT and POL in select Municipal Corporations

Division	District	Corp	VT_ R2	VT_ R3	VT_ R4	PO L2	PO L3	PO L4
Nashik	Ahmednagar	Ahmednagar	67.18	60.61	73.12	1	0	1
Aurangabad	Akola	Akola	60.29	62.65	56.08	1	1	0
Aurangabad	Amravati	Amravati	58.04	60.53	54.42	1	1	1
Aurangabad	Aurangabad	Aurangabad	57	87.81	58.21	0	0	1
Konkan	Thane	Bhiwandi- nizampur	39.67	49.64	49.61	1	0	1
Konkan	Mumbai	Brihan-mumbai	43.25	46.05	44.75	0	0	0
Nashik	Dhule	Dhule	67.76	57.42	61.49	1	1	1
Nashik	Jalgaon	Jalgaon	64.68	61.04	56.29	1	0	0
Konkan	Thane	Kalyan-dombivili	51	45.14	46.49	1	0	0
Pune	Kolhapur	Kolhapur	70	71.09	67.69	0	0	1
Nashik	Nashik	Malegaon	62.54	69.68	63.11	1	1	1
Konkan	Thane	Mira-bhaingar	30.31	51.26	46.99	1	1	1
Nagpur	Nagpur	Nagpur	49.07	56.28	52	0	0	0

The various patterns in POL such as 1-0-0-0, 1-1-1-0, 1-0-1-0, 0-1-0-1, 0-1-1-1 etc. are extremely interesting and reveal different political dynamics. If a Corporation exhibits a pattern such as 0-1-0-1 or 1-0-1-0, it indicates that there have been a lot of fluctuations in the political alignment. A pattern such as 0-0-1-1 indicates a recent move towards alignment. If an average of political alignment is considered, the average number will obviously lie between 0 and 1. A Corporation whose average across all rounds is 0 shows minimum influence of the State Government from 1995 to 2014. A Corporation whose average across all rounds is 1 shows maximum influence of State Government over local political forces.

Assume that two Corporations get an average score of 0.5 which indicates that they have been aligned with the State Government for 2 rounds each. However, the underlying political forces could be very different. One Corporation could be showing a pattern of 1-1-0-0 which means that it was aligned with the SS-BJP State Government in R1 and with the INC-NCP State Government in R2, but in the recent two elections, it does not show any alignment with the INC-NCP government. Another Corporation may show a pattern of 0-0-1-1 which means that it was not aligned with the SS-BJP Government in R1 and with the INC-NCP State Government in R2, but recently has become aligned with INC-NCP State Government in R3 and R4.

Thus, different political equations with parties in power at the State level will create different alignment patterns in POL.

Table No. 3.8: Trends in POL in Successive Rounds of Election

	Mean	Std. Deviation	Median	Minimum	Maximum
POL2	.65	.487	1.00	0	1
POL3	.57	.507	1.00	0	1
POL4	.65	.487	1.00	0	1

In R2, 65 per cent of the Corporations show an alignment with the State incumbent (INC-NCP was the ruling party at State level between 1999-2003). The level of alignment reduces in R3; only 57 per cent Corporations show a political alignment with the State incumbent. It is interesting to remember here that R3 is the round in which the voter turnout increased as well. Thus, an increment in voter turnout from R2 to R3 is observed together with a reduction in the number of Corporations aligned with the State incumbent. The relationship between the variables continues into R4 as well. That the VT reduced in R4 has been stated in Section 3.1. The political alignment with the State Government increases from R3 to R4, even as the VT reduces. Thus, informally, it does seem to be the case that voter turnout and political alignment have an inverse relationship. Political alignment of the Corporations with the State Government increases in those rounds of elections when the voter turnout is lower. Interestingly, the very same result has been observed in the data pertaining to Municipal Councils as well.

3.2.1 LIST OF CORPORATIONS EXHIBITING COMPLETE ALIGNMENT AND NON-ALIGNMENT WITH THE STATE GOVERNMENT

There are only three Corporations which exhibit complete non-alignment with the State Government; their pattern of political alignment would be 0-0-0-0. This means that the State Government does not seem to exercise a hold over local area politics. In these Corporations, there would be other local level forces that really determine the election outcomes. Following is a list of Corporations which show zero alignment with the State Government in the past 4 rounds of elections.

Table No. 3.9: Corporations Showing Zero Political Alignment with State Government from 1995 to 2014

Division	District	Corporation
Konkan	Mumbai	Brihan-Mumbai
Nagpur	Nagpur	Nagpur
Konkan	Thane	Thane

Interestingly, Brihan-Mumbai Corporation and the Thane Municipal Corporation which are Corporations governing some of the largest and most well-developed areas in the State have never been aligned with the State incumbent.

There are also a few Corporations which exhibit a 1-1-1-1 pattern; this implies that the incumbent State Government seems to exercise a lot of control over what happens at the local level vis-a-vis these Corporations.

Table No. 3.10: Corporations Showing Complete Political Alignment with State Government from 1995 to 2013

Division	District	Corporation
Aurangabad	Amravati	Amravati
Nashik	Dhule	Dhule
Nashik	Nashik	Malegaon
Konkan	Thane	Mira-Bhaindar
Aurangabad	Nanded	Nandedwaghala
Konkan	Thane	Navi-Mumbai
Pune	Pune	Pimpri-Chinchwad
Pune	Pune	Pune
Pune	Sangli	Sangli-Miraj-Kupwad
Pune	Solapur	Solapur

If the party or coalition ruling at the State level enjoys control over the local elections, it is likely that VT in these areas would be low. That is because in areas with high VT, it is difficult for any single party, incumbent or otherwise, to control electoral outcomes.

It is interesting to note that except for Malegaon, Nanded and Sangli Municipal Corporations, the VT in most of the above Corporations has been less than 56 per cent, which is the overall average VT for all Corporations together. This indicates that a lower VT actually creates conditions in which single party dominance can truly prevail.

3.2.2 POL AND MCC IMPLEMENTATION

There are two patterns in POL across different rounds of election for any Corporation which are particularly interesting to analyze. One pattern is the 1-0-0-0 and the other is 0-1-1-1. The first pattern indicates that the Corporations were not aligned in R1, but became aligned and stayed so from R2 to R4. Thus, these Corporations were aligned when the SS-BJP Government was in power but were non-aligned when the INC-NCP came to power. One could conclude that these Corporations would be traditional BJP-SS strongholds.

The other pattern is 0-1-1-1. This indicates that the Corporation was not aligned when the SS-BJP Government was in power but became aligned and remained so once the INC-NCP came to power at the State level. Thus, these could be traditional INC-NCP strongholds.

There are 3 Corporations, namely Brihan Mumbai Corporation, Thane Municipal Corporation and Nagpur Municipal Corporation which show alignment with the State Government only in R1 and show no alignment in the other rounds. Thus, the POL pattern that they exhibit is 1-0-0-0. We could conclude that these are SS-BJP strongholds. By the same logic, there are 6 INC-NCP strongholds, showing alignment only in R2, R3 and R4. These are the Municipal Corporations of Dhule, Pune, Pimpri-Chinchwad, Sangli-Miraj-Kupwad, Solapur and Nanded-Waghela.

As has been mentioned earlier, if low VT (as compared to the average VT for Corporations) is recorded in a party stronghold, then other parties have lower chances of breaking that stronghold. However, if there is high VT in party bastions, it is likely that the other parties have been campaigning fiercely to break the dominance of the incumbent party. Such Corporations are likely to witness strong and bitter contest among rival parties and heightened political activism.

It has been mentioned in Section 3.1.1 that the average VT for all election rounds together is 56 per cent. Now, if any of the Corporations in the BJP-SS or INC-NCP strongholds has a voter turnout of more than 56 per cent, there is a higher probability of fierce competition amongst political parties happening in these Corporations. It is in these areas that it is really necessary to put extra effort in terms of implementation of Model Code of Conduct (MCC). Following table gives a list of such Corporations.

Table No. 3.11: Party bastion Corporations with high VT

Corporation	Party bastion Corporations				
	R1	R2	R3	R4	VT
Pimpri-Chinchwad	0	1	1	1	56.80
Solapur	0	1	1	1	56.95
Nanded Waghela	0	1	1	1	60.01
Dhule	--	1	1	1	62.22
Sangli-Miraj-Kupwad	0	1	1	1	69.43

3.3 COMPETITION AMONGST POLITICAL PARTIES (REVERSE COMP) AND IDENTIFICATION OF “SWING” CORPORATIONS

REVERSE COMP is a variable that helps to understand the level of competition between different political parties. It is computed as the standard deviation of the distribution of seats won across political parties, coalitions and independent candidates. If the standard deviation is very low, it would be observed that the number of seats is more evenly distributed across different political parties. Thus, lesser the standard deviation, lesser is REVERSE COMP and higher is the level of competition between political parties.

In such Corporations, elections can “swing” the outcome in favour of any one party. Elections of this type can go either way and the Corporations are classified as “swing” Corporations. Hence, Corporations with tough competition between political parties show a high level of swing. Just as the earlier section identifies party strongholds with high VT to be potential Corporations for fierce political competition, this section identifies swing Corporations where too the contest is likely to be bitter. Swing Corporations would also need more attention in terms of MCC implementation.

The table below depicts Corporations with low REVERSE COMP quotient, which implies that a high degree of competition will exist between the political parties in the elections in these Corporations.

Table No. 3.12: List of Swing Corporations (with Low REVERSE COMP values)

Corporation	Average Vt	Average Reverse Comp
Ahmednagar	66.97	6.54
Akola	59.67	6.83
Bhiwandi-Nizampur	46.31	8.23
Chandrapur	57.71	8.43
Aurangabad	67.67	8.48
Amravati	57.66	8.66
Ulhasnagar	40.30	8.93
Kalyan-Dombivili	47.54	9.53
Dhule	62.22	9.54
Malegaon	65.11	9.63
Parbhani	57.91	10.22
Nandedwaghala	60.01	10.28
Mira-Bhaindar	42.85	10.89
Nashik	56.93	11.51
Sangli-Miraj-Kupwad	69.44	12.68
Jalgaon	60.67	13.73
Navi-Mumbai	56.02	13.86
Solapur	56.95	13.93
Latur	57.02	14.15
Thane	51.02	16.05

The following table shows higher REVERSE COMP quotient, which implies lower degree of political competition. This may well result in a single party dominance within the Corporation.

Table No. 3.13: List of Corporations with low competition (High REVERSE COMP values)

Corporation	Average Vt	Average Comp
Pune	51.52	16.98
Nagpur	52.45	18.91
Pimpri-Chinchwad	56.80	19.67
Vasai-Virar	41.87	21.09
Kolhapur	69.59	22.65
Brihan-Mumbai	44.68	29.57

It is interesting to note that in the Corporations given above, which witness lower levels of competition, the VT also tends to be rather low. Only Kolhapur and Pimpri-Chinchwad show higher-than-average VTs of 69.5 per cent and 56.8 per cent respectively. All other Corporations have a VT lower than 56 per cent, which is the average for all VTs across all election rounds. Thus, Corporations with low competition between parties are those wherein VT is normally low. It is here that one could find the emergence of a single party dominance.

Do the above Corporations really show single party dominance?

Table No. 3.14: Parties in power at Corporations with low political competition

Corporation	R2	R3	R4
Pune	INC	INC	NCP
Nagpur	BJP	BJP	BJP
Pimpri-Chinchwad	NCP	NCP	NCP
Kolhapur	O/A/F	Other	INC
Brihan-Mumbai	SS	SS	SS

It can be seen that in all Corporations except Kolhapur, there is a single party dominance. Kolhapur Corporation is in fact the only Corporation with a very high level of VT. Thus, the table shows that low competition Corporations with low VT support single party domination.

3.4 SEATS WON BY INDEPENDENT CANDIDATES (IND)

The variable IND describes the proportion of seats won by independent candidates in Municipal Corporation elections. Following are the summary statistics for IND across 3 rounds of elections. In the data maintained by the SECM, IND in R1 is not available.

Table No. 3.15: Trends in IND across Successive Rounds of Elections

	IND_R2	IND_R3	IND_R4
Mean	5.65	14.72	7.37
Std. Deviation	6.65	16.59	4.88
Minimum	0.00	3.96	0.00
Maximum	27.38	83.12	16.16
No. of Municipal Corporations in which no seats were won by IND Candidate	9	0	1

The above table indicates that the trends in IND mirror the trends in VT. The proportion of seats won by independent candidates increases drastically in R3 (more than doubles), but falls again in R4. This may be indicative of the fact that a higher voter turnout not only reduces the dominance of a single party within a constituency, but it also increases the chances of independent candidates winning a higher proportion of seats.

The table indicates that the minimum value of IND is 0 for R2 and R4. Thus, in these two rounds, there were constituencies in which not a single seat is won by independents. Again, the R3 magic is evident. In R3, the minimum value of IND is 3.96, implying that at least 3.97 per cent of the total seats were minimally won by independents in R3 Corporation elections.

The maximum values of IND in R2, R3 and R4 are 27.38 per cent, 83.12 per cent and 16.16 per cent respectively. Thus, the maximum proportion of independent candidates winning nearly triples from 27.38 per cent to 83.12 per cent. The increase in minimum as well as maximum values of IND indicates that R3 elections were particularly favourable to independent candidates. In fact, this indicates that independent candidates normally tend to win more proportion of seats in elections when the voter turnout is high.

The overall average proportion of seats captured by independent candidates across all three rounds of elections is 9.24 per cent.

The following table gives a list of Corporations in R2 and R4 wherein there are no seats won by independents.

Table No. 3.16: List of Corporations in R2, R3 and R4 where no Seats were won by Independents

R2			R4		
Division	District	Corp'n	Division	District	Corp'n
Aurangabad	Aurangabad	Aurangabad	Aurangabad	Latur	Latur
Nashik	Jalgaon	Jalgaon			
Konkan	Thane	Kalyan-Dombivili			
Pune	Kolhapur	Kolhapur			
Nashik	Nashik	Malegaon			
Konkan	Thane	Navi-Mumbai			
Pune	Sangli	Sangli-Miraj-Kupwad			
Pune	Solapur	Solapur			

3.4.1 CLUSTER ANALYSIS OF IND

We apply the cluster analysis on the IND variable in order to identify those Corporations wherein proportion of seats won by Independent candidates is high, medium and low. The cluster classification is given below. The tables (3.28 to 3.30) show that there are 21 Corporations which fall in the “low” independent representation and 4 Corporations which have a medium proportion of independent candidates winning the elections. Only 1 Corporation i.e. the Kolhapur Municipal Corporation gets included in the high IND cluster.

Corporations in which less than 10.44 per cent of seats have been won by independents belong to the low IND cluster. Those in which 13.6 per cent to 20 per cent of seats belong to independent candidates are in the medium IND cluster.

The average value of IND is 9% for Municipal Corporations.

Table No. 3.17: Corporations belonging to Low IND Cluster

Corporation	IND
Latur ⁺	0.00
Jalgaon	1.89
Parbhani	3.08
Solapur	3.73
Brihan-Mumbai	4.85
Navi-Mumbai	4.91
Pune	5.74
Mira-Bhaingar	6.26
Nagpur	6.47
Ulhasnagar	6.51

Contd...

Corporation	IND
Nashik	6.58
Thane	6.97
Malegaon	6.99
Nandedwaghala	7.26
Amravati	8.00
Kalyan-Dombivili	8.41
Sangli-Miraj-Kupwad	8.80
Vasal-Virar	8.99
Akola	9.25
Pimpri-Chinchwad	9.65
Aurangabad	10.44

+ Data for Latur Municipal Corporation is available only for R4.

Table No. 3.18: Corporations belonging to Medium IND Cluster

Corporation	IND
Ahmednagar	13.64
Chandrapur	15.15
Dhule	16.27
Bhiwandi-Nizampur	20.05

Table No. 3.19: Corporations belonging to High IND Cluster

Corporation	IND
Kolhapur	31.60

Cluster analysis on the IND data actually provides an extremely interesting insight. It classifies only the Kolhapur Municipal Corporation as a Corporation with high IND. The cluster analysis on VT also shows the Kolhapur Municipal Corporation to belong to the high VT cluster. In fact, this Corporation has witnessed the highest average VT across all rounds of elections at 69.59 per cent. Thus, putting the results of the two cluster analyses together brings out a powerful result that a higher VT is extremely important in terms of getting a higher proportion of independent candidates to win.

3.5 PROPORTION OF SC AND ST IN THE POPULATION (SCST)

The proportion of SC and ST population (SCST) within Corporation limits is given in the Census and hence is taken as a basis for reservation for 10 years in which typically 2 rounds of elections are held. Even across Census reports, SCST does not show much of variation in most Municipal Corporations. The average SC and ST population proportion in Corporation limits in Maharashtra has more or less remained at 13 per cent. The following tables use a cluster analysis to group Corporations into clusters having high, medium and low SCST ratios.

Table No. 3.20: Corporations with High Proportion of SC and ST Population

Corporation	Average VT	Average SCST
Chandrapur	57.71	25.38
Nagpur	52.45	27.24

Table No. 3.21: Corporations with Medium Proportion of SC and ST Population

Corporation	Average VT	Average SCST
Jalgaon	60.67	10.79
Akola	59.67	11.37
Dhule	62.22	11.56
Kolhapur	69.59	12.43
Ulhasnagar	40.30	12.46
Ahmednagar	66.97	12.97
Pune	51.52	13.49
Sangli-Miraj-Kupwad	69.44	14.01
Nandedwaghala	60.01	15.20
Solapur	56.95	15.81
Pimpri-Chinchwad	56.80	16.52
Latur	57.02	17.30
Amravati	57.66	18.51
Aurangabad	67.67	18.77
Nashik	56.93	19.30

Table No. 3.22: Corporations with Low Proportion of SC and ST Population

Corporation	Average VT	Average SCST
Bhiwandi-Nizampur	46.31	2.76
Mira-Bhaindar	42.85	3.08
Malegaon	65.11	4.49
Brihan-Mumbai	44.68	6.28
Thane	51.02	7.84
Kalyan-Dombivili	47.54	8.14
Vasal-Virar	41.87	8.61
Navi-Mumbai	56.02	9.06
Parbhani	57.91	10.21

This variable is important in that it could be pertinent in terms of affecting voter turnout. In fact, one can observe that as one goes from the low SCST cluster to the medium SCST cluster, the VT also rises. But, from medium to high SCST cluster, VT however does not rise proportionately. It is here that statistical analysis on correlation co-efficients is required to make a claim about the relationship between SCST and VT.

However, rather than VT being incidental upon the proportion of SC and ST within the Corporation, it is more likely that VT could be incidental on the proportion of seats reserved for SCST. Hence, rather than use SCST in the analysis, it makes more sense to use proportion of reserved seats in the Corporations for statistical analysis.

3.6 PROPORTION OF RESERVED SEATS IN THE TOTAL SEATS (RES)

The average level of SCST population as a proportion of entire population within Corporation limits stands at 12.53 per cent across all rounds of elections of Municipal Corporations. As the table below shows, the proportion of seats reserved for SC, ST and BCC within Municipal Corporations stands at about 40 per cent across all rounds of elections.

Table No. 3.23: Comparison of SCST Population Proportion and Reservation Proportion across Different Rounds of Election

	R2	R3	R4	Overall Average
Mean SCST	13.137	11.905	12.571	12.537
Std. Deviation SCST	6.039	5.819	6.148	
Mean RES	40.058	38.936	39.780	39.592
Std. Deviation RES	6.183	5.939	6.067	

Now, the proportion of SC and ST in the population is declared in the Census reports; since the Census is released every decade, these proportions are treated to be fixed for one decade. However, in the same decade, two elections are conducted to any local body. Now, since the reservation of seats within a Corporation is done on a rotation basis, a very interesting pattern emerges. Even if the total proportion of SC and ST population in the Corporation limits is frozen for a decade as per the Census, the reservation of seats in different constituencies within a Corporation undergoes rotation in the same decade. And this can bring about sharp changes in the VT.

Hence, rather than SCST, it may be RES which has a greater impact on VT.

3.6.1 CLUSTER ANALYSIS ON RES DATA

Which are the Corporations in which the proportion of reservation of seats is higher? Those Corporations which show higher reservation levels are bound to be those where the proportion of SC and ST population is also accordingly higher. A look at the tables reveals that the clusters of high SCST and high RES, medium SCST and medium RES as well as low SCST and low RES are identical. However, the rankings within the clusters for RES could be slightly different from the rankings for SCST.

Table No. 3.24: Corporations Belonging to Low RES Cluster

Corporation	Average VT	Average RES
Bhiwandi-Nizampur	46.31	29.87
Mira-Bhaindar	42.85	30.08
Malegaon	65.11	31.62
Brihan-Mumbai	44.68	33.19
Thane	51.02	34.56
Kalyan-Dombivili	47.54	34.86
Vasai-Virar	41.87	35.96
Navi-Mumbai	56.02	36.35

Table No. 3.25: Corporations Belonging to Medium RES Cluster

Corporation	Average VT	Average RES
Jalgaon	60.67	37.53
Dhule	62.22	38.23
Parbhani	57.91	38.46
Akola	59.67	38.61
Kolhapur	69.59	38.94
Pune	51.52	40.28
Ahmednagar	66.97	40.39
Ulhasnagar	40.30	40.44
Sangli-Miraj-Kupwad	69.44	40.70

Contd...

Corporation	Average VT	Average RES
Nandedwaghala	60.01	42.53
Solapur	56.95	42.61
Pimpri-Chinchwad	56.80	43.79
Latur	57.02	44.29
Nashik	56.93	45.86
Aurangabad	67.67	45.97
Amravati	57.66	46.19

Table No. 3.26: Corporations Belonging to High RES Cluster

Corporation	Average VT	Average RES
Chandrapur	57.71	53.03
Nagpur	52.45	54.24

3.7 DEVELOPMENT SCORE (DEV)

DEV refers to the development quotient of an area. It is calculated as the proportion of the per capita income of a district to the total per capita income of all districts in Maharashtra. There are two main limitations in defining DEV in this manner. The first is that per capita income is only available at district level and not at taluka or block level and hence any analysis pertaining to the effect of DEV on electoral variables can only be carried out at district or divisional aggregate.

The second major issue is that data on per capita income at the district level is only available in Census 2011, and hence there is no way in which the effect of economic development on political or electoral variables can be captured across time. Thus, the analysis of DEV in this study has a static interpretation.

Cluster analysis tools have been applied to group districts of Maharashtra into high, medium and low income groups. Following tables show the clustering.

Table No. 3.27: Low Income Cluster in the Districts in Maharashtra

District	DEV
Washim	0.01
Gadchiroli	0.01
Latur	0.02
Nanded	0.02
Hingoli	0.02
Osmanabad	0.02
Buldhana	0.02
Nandurbar	0.02
Dhule	0.02
Beed	0.02
Jalna	0.02
Amravati	0.02
Parbhani	0.02
Akola	0.02
Yeotmal	0.02
Gondia	0.02

Table No. 3.28: Medium Income Cluster in the Districts in Maharashtra

District	DEV
Wardha	0.03
Bhandara	0.03
Jalgaon	0.03
Chandrapur	0.03
Solapur	0.03
Ratnagiri	0.03
Sangli	0.03
Satara	0.03
Sindhudurg	0.03
Ahmednagar	0.03
Aurangabad	0.03

Table No. 3.29: High Income Cluster in the Districts in Maharashtra

District	DEV
Nashik	0.04
Kolhapur	0.04
Raigad	0.04
Nagpur	0.04
Thane	0.05
Pune	0.05

Based on the clusters of high, medium and low income districts, it will now be pertinent and interesting to examine whether these clusters correspond to a particular type of VT. Similarly, does development have an effect on political alignment? Or can it affect the proportion of seats which independent candidates can win? These and other correlations are explored in the next chapter.

CHAPTER - 4

DATA ANALYSIS: CORRELATIONS BETWEEN KEY
VARIABLES

Chapter 3 defined the variables which would be of interest in terms of analyzing Municipal Corporation elections. In the present chapter, correlations between these key variables have been worked out. Thus, this chapter brings out the effects that different political variables are bound to exert on one another.

The following table shows the correlation co-efficients between the main electoral variables defined and analyzed in Chapter 3.

Table No. 4.1: Correlation Co-Efficients between Key Electoral Variables and Implications for Electoral Policy

Variables	Correlation co-efficient	Interpretation	Implication
VT and REVERSE COMP	-0.226*	Higher VT is observed in swing Corporations: Contest will be extreme	Culturally, high VT Corporations are important for MCC implementation
VT and IND	0.294*	Independents win more when VT is high	Creating more voter awareness and increasing VT is the best way of assuring a level playing field to independent candidates
VT and RES	0.316*	Higher VT is observed in Corporations where proportion of seats reserved is higher	Corporations with lower proportion of reserved seats may have lower voter interest and are important in terms of launching voter awareness campaigns.

Contd...

Variables	Correlation co-efficient	Interpretation	Implication
VT and POL	0.26*	Higher VT Corporations vote more for the State incumbent	
VT and DEV	-0.34*	Higher the development of a district, lesser is the Voter Turnout witnessed at a district aggregate	Those districts with higher per capita income have to be addressed more urgently and intensely for increasing voter awareness so as to enhance VT.
POL and RES	0.879***	Corporations with higher proportion of reserved seats show higher political alignment to the State Government	
POL and DEV	-0.55***	Districts which are economically well developed show lesser political alignment vis-a-vis State Government.	
REVERSE COMP and IND	0.914***	Independent candidates win more where political competition between political parties is low.	

Contd...

Variables	Correlation co-efficient	Interpretation	Implication
REVERSE COMP and DEV	0.67 ^{***}	Higher the development of a district, higher is REVERSE COMP i.e. lower is the competition between political parties.	Political parties are more active in creating votebanks in districts with lower development; MCC implementation should be targeted more actively in districts with lower income levels.

Note: *, **, *** denote significance at 15 per cent, 5 per cent and 1 per cent l.o.s respectively

4.1: INTERPRETATION OF CORRELATIONS PERTAINING TO VT

4.1.1: VT and the REVERSE COMP

VT and REVERSE COMP show a negative correlation (-0.226) to one another. What is the interpretation of this correlation co-efficient?

A high Voter Turnout (VT) is indicative of high competition among political parties and a closely fought election. Corporations with a history of high VT generally witness high degree of political activism and a close - and often bitter - contest between political rivals. There is, therefore, a very strong case for effective implementation of the Model Code of Conduct in such Corporations with higher VT.

4.1.2: VT and IND

A high level of VT not only has an implication for political parties, but also for Independent candidates. The correlation coefficient between VT and IND stands at 0.294, indicating that higher VT is consistent with a higher proportion of seats being won by Independent candidates. Thus, it is in the high VT Corporations that Independent candidates truly stand a chance of winning.

One of the chief concerns of the SECM has been to create a level playing field between Independent candidates and those contesting on a party ticket. Candidates contesting on a party ticket are generally believed to have a better chance of winning as compared to Independent candidates since such candidates are backed by the party organization and have the party ‘machinery’ at their disposal. The best intervention that the SECM can offer to truly create a level playing field is take big strides in terms of enhancing voter turnout. As the data suggests, Independent candidates are likely to have better prospects of winning when the voter turnout is high.

4.1.3: VT and RES

It is a popular perception that voter turnout is affected by how the seats are reserved in different constituencies. This perception appears to be ratified by the data. Correlation co-efficient between VT and RES is 0.316. Higher the proportion of seats reserved for SC, ST and BCC candidates, higher is the VT. Thus, voter participation in Corporation elections seems to be correlated to the proportion of seats reserved in that Corporation. This implies that voter awareness programs should be more focused in those Corporations, where lesser proportion of seats are reserved. Section 3.6.1, which comments on the cluster analysis of RES, shows that the Corporations of Mumbai and Thane district are in the low RES cluster. Thus, voter awareness programs will have to be intensively undertaken in these areas.

4.1.4: VT and POL

The correlation co-efficient between VT and POL stands at 0.26; thus, higher the VT, higher tends to be the political alignment in that Corporation. There is no theoretical interpretation that lends itself to this correlation co-efficient. However, it seems to be the case that anti-incumbency effect, wherein the voters in an area would vote against the State incumbent, seems to be more of a case in areas where voter turnouts are low.

4.1.5 VT and DEV

The higher the development of an area, more are the ways in which voters express their “voice” and hence lesser is the importance given to elections as a mode of expression. Hence, voters’ apathy is typically an issue that is relevant

for urban local bodies. The correlation co-efficient accordingly exhibits a negative sign and stands at -0.34. This again has a big implication in terms of electoral policy; voter awareness programs need to be launched in the more developed districts of the State.

Thus, higher voter turnout areas normally exhibit a high level of competition between political parties, a higher swing factor, a higher chance of winning for Independents and higher political alignment. Voter turnout is observed to be higher in Corporations where the proportion of reserved seats is high; it seems to be the case that the emotional connect with the reserved category candidate boosts voter activism. Further, voter turnout is also seen to be higher in the lesser developed districts of Maharashtra. Thus, voter awareness programs are needed in Corporations in the developed districts, which are also incidentally districts that have fewer reservations for SC, ST and BCC candidates.

4.2: Interpretation of Correlations pertaining to POL

4.2.1: POL and VT

As has been mentioned above, areas with higher VT are seen to be more politically aligned with the State Government.

4.2.2: POL and RES

The data trends reveal that those constituencies in which the proportion of reserved seats to the total number of seats is higher tend to exhibit a higher political alignment with the State Government. These are typically Corporations belonging to the lesser developed districts of Maharashtra. In these Corporations, voter turnout is high and the winning party mostly tends to be aligned with the State Government. Conversely, in the Corporations belonging to the more developed districts, one finds a lower voter turnout and lesser political alignment.

4.2.3 POL and DEV

Political alignment shows a negative correlation with the development index. This implies that the State incumbent plays a more active role in influencing local politics of the less developed areas as compared to the more well-developed areas. In the interpretation of this result, there is also the aspect of financial connection between local bodies and the State Government. Typically, in the lesser developed areas, the Municipal Corporations would have access to a smaller tax base, whereas the development needs of the area would be higher. This creates some level of fiscal dependency of the local body on the State Government and eventually also manifests itself in terms of political alignment with the State Government.

Thus, political alignment with the State Government is normally seen to be high in Municipal Corporations belonging to lesser developed districts with high voter turnouts and a higher proportion of seat reservations. It is in the more developed districts of the State that the voter turnout is low and the voters vote into power parties that are typically not aligned with the party in power at the State Government.

4.3: Interpretation of Correlations pertaining to Political Activism among Parties.

4.3.1: REVERSE COMP and IND

Where REVERSE COMP value is low i.e. the competition between political parties is high, proportion of seats won by Independent candidates tends to be low.

4.3.3. REVERSE COMP AND DEV

REVERSE COMP and DEV show a positive correlation co-efficient. REVERSE COMP captures the standard deviation in the distribution of seats won by political parties and hence, the higher the REVERSE COMP, lesser is the

competition between different political parties. This result implies that districts with higher development quotients typically exhibit lower competition between political parties. Political parties vie more to get to the votebank at the grassroots and thus, the real “swing” districts, where there will be bitter contests amongst political parties, will be seen more in the districts with a lower development quotient. Thus, from a perspective of MCC implementation, more scrutiny has to be done on the districts with lower development characteristics.

Competition between political parties is normally very high in the lesser developed districts. Political parties appear to be more active near the grassroots level. Finally, Independent candidates normally win more seats in those Corporations where the competition from political parties is low.

4.4 Interpretation of Correlations pertaining to IND

4.4.1: IND and VT

This is already discussed above. Independent candidates stand a higher chance of winning elections in areas with higher voter turnout.

4.4.2: IND and REVERSE COMP

In areas where there is a lot of competition between political parties and a lot of political activism, Independent candidates have won a lower proportion of seats.

Thus, the data shows that Independent candidates tend to win a higher proportion of seats when the voter turnout is higher. Thus, higher VT is not only important from the perspective of participatory democracy, but also supports creation of a level playing field between Independent candidates and those contesting on a party ticket. Further, in those Corporations where there is bitter contest between political parties, Independent candidates tend to win a lower proportion of votes.

The following table summarizes the interpretations of the correlation coefficients.

Table No. 4.2: Summary of Correlations in key Election Variables

Variable	Summary of Correlations
VT	<p>Higher voter turnout areas normally exhibit a high level of competition between political parties, a higher swing factor, a higher chance of winning for independents and higher political alignment.</p> <p>Voter turnout is observed to be higher in Corporations where the proportion of reserved seats is high; it seems to be the case that the emotional connect with the reserved category candidate boosts voter activism.</p> <p>VT is also seen to be higher in the lesser developed districts of Maharashtra. Thus, voter awareness programs are needed in Corporations in the developed districts, which are also incidentally districts that have fewer reservations for SC, ST and BCC candidates.</p>
POL	<p>Political alignment with the State Government is normally seen to be high in Municipal Corporations belonging to lesser developed districts with high voter turnout and a higher proportion of seat reservations.</p> <p>It is in the more developed districts of the State that the voter turnout is low and the voters vote into power parties that are typically not aligned with the party in power at the State Government.</p>

Contd...

Variable	Summary of Correlations
<p>REVERSE COMP</p>	<p>Competition between political parties is normally very high in the lesser developed districts. Thus, political parties seem to be more active near the grassroots level.</p> <p>Independent candidates normally win more seats in those Corporations where the competition from political parties is low.</p>
<p>IND</p>	<p>Independent candidates tend to win a higher proportion of seats when the voter turnout is higher.</p> <p>Thus, higher VTs not only are important from the perspective of participatory democracy, but also support creation of a level playing field between Independent candidates and those contesting on a party ticket.</p> <p>Further, in those Corporations where there is bitter contest between political parties, Independent candidates tend to win a lower proportion of votes.</p>

CHAPTER - 5

CONCLUSION

This report summarizes and analyzes the past data of Municipal Corporation elections in Maharashtra to bring out important insights into the behavior of several variables. This not only helps in understanding the patterns in key electoral variables better, but also has immense value in terms of planning relevant policies for the upcoming Municipal Corporation elections.

Following are the main findings of the study:

1. Voter turnout for Municipal Corporation elections across all rounds of elections stands at 56 per cent. The voter turnout percentage increases in the elections held in 2004-08, but drops again in the 2009-13 elections.
2. Voter turnout in a Corporation in any round of elections significantly depends on the voter turnout in that Corporation in the past round. Thus, a Corporation with a high turnout in the last round of elections is likely to show higher turnouts in the next round too. Thus, in influencing voter turnouts, it is important to acknowledge the role of the “voting culture” of that area.
3. The study uses a cluster approach to identify those Corporations where voter turnout is likely to be low. A list of such Corporations is given in the Appendix.
4. In the Corporation limits, proportion of SC and ST population across all rounds of elections has been around 13 per cent. Around 40 per cent of seats are reserved for SC, ST and BCC candidates across all Corporations.
5. Voter turnout is significantly affected by reservations. Data shows that Corporations with higher proportion of seats for reserved candidates tend to have higher voter turnouts. Such Corporations are mostly found in less developed districts of the State.

6. Political parties also engage in more tightly fought contests when the voter turnout is high. With a lower voter turnout, chances of a single party dominating the Corporation are higher. Hence, if a political party has a stronghold over a Municipal Corporation, and if the voter turnout in that Corporation tends to be low, then there is a chance for the competitor party to try and break the stronghold of the former. Hence, it is in such Corporations that there will be bitter contests amongst political parties. The study identifies those Corporations wherein such patterns prevail; it is in these Corporations that effective implementation of the Model Code of Conduct will be very important.
7. Competition between political parties is normally very high in the lesser developed districts. Thus, political parties seem to be more active near the grassroots level. It is here that the MCC machinery ought to be focused.
8. Political alignment with the State Government is normally seen to be high in Municipal Corporations belonging to lesser developed districts with high voter turnout and a higher proportion of seat reservations.
9. It is in the more developed districts of the State that the voter turnout is low and the voters vote into power parties which are typically not aligned with the party in power at the State Government.
10. Only 9.24 per cent of the seats in Municipal Corporations are won by Independent candidates. In contrast, around 17 per cent of the seats in Municipal Councils are held by Independent candidates. A lower proportion of Independent candidates winning at the Corporation level could be a manifestation of higher money power required to contest Corporation elections as compared to Council elections.
11. Independents tend to win more with higher voter turnout. An interesting observation is that the proportion of Independent candidates winning Corporation elections is normally higher in the lesser developed districts of Maharashtra. This again could be a manifestation of the fact that the

money power required to contest independently from developed districts such as Mumbai or Thane is enormous.

This study provides numerous insights pertaining to voter turnout, political alignment, competition amongst political parties, dynamics of reservation of seats for SC, ST and BCC candidates, dynamics of seats won by Independent candidates etc. While this analysis is definitely relevant for posterity, it aims to fill in the gaps of information so that the SECM is aided in crafting electoral policies. This report only presents the findings of the study on Municipal Corporations. Data analysis and reports pertaining to Municipal Councils, Zilla Parishads and Panchayat Samitis will be released separately.

REFERENCES

1. Alford R. R. and E. C. Lee (1968), Voting Turnout in American Cities, *American Political Science Review* 62:796-813
2. Almond G. A. and S Verba (1963), *The Civic Culture, Political Attitude and Democracy in Five Nations*, Princeton, N.J. Princeton University Press.
3. Balwantray Mehta (1957), *Chairman, Balwantray Mehta, GoI.*
4. Barnes S and Kaase M (1979), *Political Action, Mass Participation in Few Western Democracies*, Beverly Hills, Calif: Sage.
5. Bennett and Resnick (1990), The Implications of Nonvoting for Democracy in the United States, *American Journal of Political Science* 34:771-802; Verba, Schlozman and Brady (1995), *Voice and Equity: Civic Voluntarism in American Politics*, Cambridge, MA: Harvard Uni. Press
6. Business Standard, 11.04.2016, Retrieved: 07.10.2016.
7. CAWP (2000), *Women in State Legislature*, Center for American Women and Politics, Eagleton Institute of Politics, Rutgers, The State University of New Jersey, 919, Ryders Lane, New Brunswick, NJ 08901 (732) 932-9384: www.cawp.rutgers.edu
8. Centre for Democracy and Governance, *Decentralization and Democratic Local Governance Handbook*, USAID, 20523-3100, PP. 05-06.
9. Coastaldigest.com: Retrieved: 07.10.2016.
10. Deccan Herald, 07.10.2016 Retrieved: 07.10.2016.
11. Diana C. Mutz (2002), The Consequences of Cross-Cutting Networks for Political Participation, *American Journal of Political Science*, 46(4):838-855.
12. George Mathew (2004), *Local Democracy and Empowerment of the Underprivileged-An Analysis of Democratic Decentralization in India*, Institute of Social Sciences, A Case Study-30826, Ministry of Rural Development, GoI, New Delhi.
13. Gerber, Alan, Donald Green and C. Larimer (2008), Social Pressure and Voter Turnout: Evidence from a Large-Scale Field Experiment: *American Political Science Review*, 102(1): 33-48.

14. J.Saharia (2016), Data Based Analysis of Municipal Elections in Maharashtra-1994-2013 (Foreword), R. K. Parchure, ManasiPhadke and Dnyandev Talule, GIPE, Pune, A Study for the State Election Commission of Maharashtra.
15. MancurOlson (1965), The Logic of Collective Action, HUP.
16. Maria Gratschew and Kate Sullivan (2002), Compulsory Voting, ARENA, Association of Electoral Administrators, OxonianRewley Press Ltd. United Kingdom.
17. Martin Lipset (1960), Political Man: the Social Bases of Politics, Garden City, New York, Doubleday.
18. Mathew D. Atkinson and Anthony Fowler (2012), The Effect of Social Capital on Voter Turnout: Evidence from Saint's Day Fiestas in Mexico, University of California, Los Angeles and Harvard University.
19. Morlan R. L. (1984), Municipal Versus National Election Voter Turnout: Europe and the United States, Political Science Quarterly 99:457-70.
20. Olson Mancur (1965), The Logic of Collective Action, Harvard University Press, US.
21. Parry, G., Mosley, G. and Day N. (1992), Political Participation and Democracy in Britain. Cambridge: Cambridge University Press.
22. Rafael Lopez Pintor (2002), Voter Turnout Since 1945: A Global Report, Stockholm, Sweden: International Institute of Democracy and Electoral Assistance.
23. Rafael Lopez Pintor, Maria Gratschew and Kate Sullivan (2002),Compulsory Voting, ARENA, Association of Electoral Administrators, OxonianRewley Press Ltd. United Kingdom.
24. Robert Putnam (1995, Tuning In, Tuning Out; The Strange Disappearances of Social Capital in America. PS: Political Science and Politics 28(4): 664-683.
25. Rosenstone S. J. and J. M Hansen (1993), Mobilization, Participation and Democracy in America, New York: Macmillan; Verba, Schlozman and Brady (1995), Voice and Equity: Civic Voluntarism in American Politics, Cambridge, MA: Harvard Uni. Press.
26. Rosenstone S. J. and J. M Hansen (1993), Mobilization, Participation and Democracy in America, New York: Macmillan; Verba, Schlozman and Brady (1995), Voice and Equity: Civic Voluntarism in American Politics, Cambridge, MA: Harvard Uni. Press

27. Ruby Bridges A. (1997), *Morning Glories: Municipal Reform in the Southwest*, Princeton, NJ: Princeton Uni. Press
28. Ruy A. Teixeira (1992), *The Disappearing American Voter*, Washington DC: Brooking Institutions; Rosenstone S. J. and J. M. Hansen (1993), *Mobilization, Participation and Democracy in America*, New York: Macmillan.
29. Sarah F. Anzia (2014), *Timing and Turnout: How Off-Cycle Elections Favor Organized Groups*, University of Chicago Press.
30. Sidney Verba, Schlozman and Brady 1995), *Voice and Equality*, Cambridge, Mass: Harvard University Press.
31. Sidney Verba, Schlozman and Brady 1995), *Voice and Equality*, Cambridge, Mass: Harvard University Press.
32. Stein Rokkan (1970), *Citizens, Elections, Parties: Approaches to the Comparative Study of the Processes of Development* Oslo: Universitetsforlaget.
33. The Pioneer, 07.10.2016, Retrieved: 07.10.2016.
34. Times of India, 16.02.2012: Retrieved: 26.09.2016.
35. Tingsten H.L.G. (1937), *Political Behaviour, Studies in Election Statistics*: London: P.S. King.
36. Verba Sidney N, and Norman H. Nie(1972), *Participation and Social Equality*, Cambridge, Mass: Harvard University Press.
37. Verba, Sidney N, NieLekajcieSieand Kim Cattreal (1978), *Participation and Social Equality*, Cambridge, Mass: Harvard University Press and Verba SK and N, Nie (1972), *Politicization in America, Political Democracy and Social Equity*, New York, Harper and Raw.
38. Wattenberg M. P. (1998), *Turnout Decline in the US and Other Advanced Industrial Democracies*. Irvine, CA: Centre for the Study of Democracy.
39. ZoltaHajnal, Paul George Lewis and Hugh Louch (2002), *Municipal Elections in California: Turnout, Timing and Competition*, Public Policy Institute of California.

APPENDIX A
DATA ON VT, POL, SCST AND REVERSE COMP ACROSS ROUNDS OF ELECTIONS

CORPN	VT		VT		VT		POL		POL		REV COMP		REV COMP		IND		IND		RES		RES	
	R2	R3	R4	R2	R3	R4	R2	R3	R4	R2	R3	R4	R2	R3	R4	R2	R3	R4	R2	R3	R4	
AHMEDNAGAR	67.18	60.61	73.12	1	0	1	6.31	6.40	6.92	15.38	12.31	13.24	40.00	40.00	41.18	40.00	40.00	41.18	40.00	40.00	41.18	
AKOLA	60.29	62.65	56.08	1	1	0	8.17	5.56	6.78	5.63	7.04	15.07	39.44	38.03	38.36	39.44	38.03	38.36	39.44	38.03	38.36	
AMRAVATI	58.04	60.53	54.42	1	1	1	10.44	7.57	7.99	6.17	8.64	9.20	45.68	46.91	45.98	45.68	46.91	45.98	45.68	46.91	45.98	
AURANGABAD	57.00	87.81	58.21	0	0	1	5.81	9.72	9.92	0.00	15.15	16.16	46.99	45.45	45.45	46.99	45.45	45.45	46.99	45.45	45.45	
BHIWANDI-NIZAMPUR	39.67	49.64	49.61	1	0	1	9.07	7.23	8.37	27.38	25.00	7.78	30.95	29.76	28.89	30.95	29.76	28.89	30.95	29.76	28.89	
BRIHAN-MUMBAI	43.25	46.05	44.75	0	0	0	34.78	30.06	23.88	3.96	3.96	6.61	34.36	32.60	32.60	34.36	32.60	32.60	34.36	32.60	32.60	
DHULE	67.76	57.42	61.49	1	1	1	8.95	9.95	9.71	5.97	32.84	10.00	37.31	38.81	38.57	37.31	38.81	38.57	37.31	38.81	38.57	
JALGAON	64.68	61.04	56.29	1	0	0	15.59	14.66	10.95	0.00	4.35	1.33	36.23	37.68	38.67	36.23	37.68	38.67	36.23	37.68	38.67	
KALYAN-DOMBIVILI	51.00	45.14	46.49	1	0	0	6.76	10.72	11.11	0.00	14.95	10.28	35.42	34.58	34.58	35.42	34.58	34.58	35.42	34.58	34.58	
KOLHAPUR	70.00	71.09	67.69	0	0	1	30.08	27.32	10.54	0.00	83.12	11.69	38.89	38.96	38.96	38.89	38.96	38.96	38.89	38.96	38.96	
MALEGAON	62.54	69.68	63.11	1	1	1	11.93	8.49	8.46	0.00	9.72	11.25	30.56	30.56	33.75	30.56	30.56	33.75	30.56	30.56	33.75	
MIRA-BHAINDAR	30.31	51.26	46.99	1	1	1	10.52	10.87	11.29	11.39	6.33	1.05	31.65	29.11	29.47	31.65	29.11	29.47	31.65	29.11	29.47	
NAGPUR	49.07	56.28	52.00	0	0	0	20.68	16.67	19.37	3.68	8.82	6.90	57.35	52.94	52.41	57.35	52.94	52.41	57.35	52.94	52.41	

Contd...

MUNICIPAL CORPORATION ELECTIONS IN MAHARASHTRA : A DATA ANALYSIS (1994-2013)

2016

CORPN	VT		VT		POL		POL		REV		REV		IND		RES		RES	
	R2	R3	R4	R3	R2	R3	R4	R2	R3	R2	R3	R4	R2	R3	R4	R2	R3	R4
NANDEDWAGHALA	61.03	62.38	56.62	1	1	1	1	7.39	11.37	12.08	10.96	9.59	1.23	43.84	41.77	41.98		
NASHIK	55.40	58.20	57.19	0	1	0	0	13.61	8.80	12.10	5.56	9.26	4.92	46.30	45.37	45.90		
NAVI-MUMBAI	63.53	53.88	50.66	1	1	1	1	7.19	18.41	15.97	0.00	10.23	4.49	39.39	34.83	34.83		
PIMPRI-CHINCHWAD	59.44	56.11	54.84	1	1	1	1	13.78	21.82	23.40	11.43	10.48	7.03	44.76	42.86	43.75		
PUNE	50.81	52.82	50.92	1	1	1	1	21.17	12.70	17.07	6.85	9.72	0.66	41.78	39.58	39.47		
SANGLI-MIRAJ-KUPWAD	76.19	68.71	63.41	1	1	1	1	12.16	13.50	12.36	0.00	14.86	11.54	40.54	40.54	41.03		
SOLAPUR	60.38	58.11	52.36	1	1	1	1	15.85	12.05	13.89	0.00	10.20	0.98	42.86	41.84	43.14		
THANE	43.13	56.66	53.26	0	0	0	0	16.20	15.31	16.65	6.03	9.48	5.38	36.21	33.62	33.85		
ULHASNAGAR	37.40	41.31	42.19	0	0	0	1	14.21	5.18	7.39	3.95	7.89	7.69	40.79	40.79	39.74		
VASAL-VIRAR	NA	NA	41.87	0	1	0	0	NA	NA	21.09	NA	NA	8.99	NA	NA	35.96		
CHANDRAPUR	NA	NA	57.71	NA	NA	1	1	NA	NA	8.43	NA	NA	15.15	NA	NA	53.03		
LATUR	NA	NA	57.02	NA	NA	1	1	NA	NA	14.15	NA	NA	0.00	NA	NA	44.29		
PARBHANI	NA	NA	57.91	NA	NA	1	1	NA	NA	10.22	NA	NA	3.08	NA	NA	38.46		

APPENDIX B
AVERAGE VALUES OF VT, POL, RESERVE COMP AND IND

District	Corpn	Average VT	Average POL	Average REV COMP	Average IND	Average RES
Kolhapur	Kolhapur	69.59	0.33	22.65	31.60	38.94
Sangli	Sangli-Miraj-Kupwad	69.44	1.00	12.68	8.80	40.70
Aurangabad	Aurangabad	67.67	0.33	8.48	10.44	45.97
Ahmednagar	Ahmednagar	66.97	0.67	6.54	13.64	40.39
Nashik	Malegaon	65.11	1.00	9.63	6.99	31.62
Dhule	Dhule	62.22	1.00	9.54	16.27	38.23
Jalgaon	Jalgaon	60.67	0.33	13.73	1.89	37.53
Nanded	Nandedwaghala	60.01	1.00	10.28	7.26	42.53
Akola	Akola	59.67	0.67	6.83	9.25	38.61
Parbhani	Parbhani	57.91	1.00	10.22	3.08	38.46
Chandrapur	Chandrapur	57.71	1.00	8.43	15.15	53.03
Amravati	Amravati	57.66	1.00	8.66	8.00	46.19
Latur	Latur	57.02	1.00	14.15	0.00	44.29
Solapur	Solapur	56.95	1.00	13.93	3.73	42.61
Nashik	Nashik	56.93	0.33	11.51	6.58	45.86
Pune	Pimpri-Chinchwad	56.80	1.00	19.67	9.65	43.79
Thane	Navi-Mumbai	56.02	1.00	13.86	4.91	36.35
Nagpur	Nagpur	52.45	0.00	18.91	6.47	54.24
Pune	Pune	51.52	1.00	16.98	5.74	40.28
Thane	Thane	51.02	0.00	16.05	6.97	34.56
Thane	Kalyan-Dombivili	47.54	0.33	9.53	8.41	34.86
Thane	Bhiwandi-Nizampur	46.31	0.67	8.23	20.05	29.87
Mumbai	Brihan-Mumbai	44.68	0.00	29.57	4.85	33.19
Thane	Mira-Bhaindar	42.85	1.00	10.89	6.26	30.08
Thane	Vasal-Virar	41.87	0.33	21.09	8.99	35.96
Thane	Ulhasnagar	40.30	0.33	8.93	6.51	40.44

APPENDIX C
CLUSTER ANALYSIS OF VT, POL, REVERSE COMP, IND AND RES

Corpn	Average VT
Kolhapur	69.59
Sangli-Miraj-Kupwad	69.44
Aurangabad	67.67
Ahmednagar	66.97
Malegaon	65.11
Dhule	62.22
Jalgaon	60.67
Nandedwaghala	60.01
Akola	59.67
Parbhani	57.91
Chandrapur	57.71
Amravati	57.66

Corpn	Average POL
Sangli-Miraj-Kupwad	1.00
Malegaon	1.00
Dhule	1.00
Nandedwaghala	1.00
Parbhani	1.00
Chandrapur	1.00
Amravati	1.00
Latur	1.00
Solapur	1.00
Pimpri-Chinchwad	1.00
Navi-Mumbai	1.00
Pune	1.00

Corpn	Average REV COMP
Ahmednagar	6.54
Akola	6.83
Bhiwandi-Nizampur	8.23
Chandrapur	8.43
Aurangabad	8.48
Amravati	8.66
Ulhasnagar	8.93
Kalyan-Dombivili	9.53
Dhule	9.54
Malegaon	9.63
Parbhani	10.22
Nandedwaghala	10.28

Corpn	IND
Latur	0
Jalgaon	1.89
Parbhani	3.08
Solapur	3.73
Brihan-Mumbai	4.85
Navi-Mumbai	4.91
Pune	5.74
Mira-Bhaindar	6.26
Nagpur	6.47
Ulhasnagar	6.51
Nashik	6.58
Thane	6.97

Corpn	Average RES
Bhiwandi-Nizampur	29.87
Mira-Bhaindar	30.08
Malegaon	31.62
Brihan-Mumbai	33.19
Thane	34.56
Kalyan-Dombivili	34.86
Vasai-Virar	35.96
Navi-Mumbai	36.35
Jalgaon	37.53
Dhule	38.23
Parbhani	38.46
Akola	38.61

Contd...

Corpn	Average VT
Latur	57.02
Solapur	56.95
Nashik	56.93
Pimpri-Chinchwad	56.80
Navi-Mumbai	56.02
Nagpur	52.45
Pune	51.52
Thane	51.02
Kalyan-Dombivili	47.54
Bhiwandi-Nizampur	46.31
Brihan-Mumbai	44.68
Mira-Bhaindar	42.85
Vasai-Virar	41.87
Ulhasnagar	40.30

Corpn	Average POL
Mira-Bhaindar	1.00
Ahmednagar	0.67
Akola	0.67
Bhiwandi-Nizampur	0.67
Kolhapur	0.33
Aurangabad	0.33
Jalgaon	0.33
Nashik	0.33
Kalyan-Dombivili	0.33
Vasai-Virar	0.33
Ulhasnagar	0.33
Nagpur	0.00
Thane	0.00
Brihan-Mumbai	0.00

Corpn	Average REV COMP
Mira-Bhaindar	10.89
Nashik	11.51
Sangli-Miraj-Kupwad	12.68
Jalgaon	13.73
Navi-Mumbai	13.86
Solapur	13.93
Latur	14.15
Thane	16.05
Pune	16.98
Nagpur	18.91
Pimpri-Chinchwad	19.67
Vasai-Virar	21.09
Kolhapur	22.65
Brihan-Mumbai	29.57

Corpn	IND
Malegaon	6.99
Nandedwaghala	7.26
Amravati	8
Kalyan-Dombivili	8.41
Sangli-Miraj-Kupwad	8.8
Vasai-Virar	8.99
Akola	9.25
Pimpri-Chinchwad	9.65
Aurangabad	10.44
Ahmednagar	13.64
Chandrapur	15.15
Dhule	16.27
Bhiwandi-Nizampur	20.05
Kolhapur	31.60

Corpn	Average RES
Kolhapur	38.94
Pune	40.28
Ahmednagar	40.39
Ulhasnagar	40.44
Sangli-Miraj-Kupwad	40.70
Nandedwaghala	42.53
Solapur	42.61
Pimpri-Chinchwad	43.79
Latur	44.29
Nashik	45.86
Aurangabad	45.97
Amravati	46.19
Chandrapur	53.03
Nagpur	54.24

Indicates high value of the variable

Indicates medium value of the variable

Indicates low value of the variable

APPENDIX D
CORPORATION RELEVANT FOR IMMEDIATE LAUNCH OF VOTER AWARENESS PROGRAMS

Corpn	Average VT
Kalyan-Dombivili	47.54
Bhiwandi-Nizampur	46.31
Brihan-Mumbai	44.68
Mira-Bhaindar	42.85
Vasal-Virar	41.87
Ulhasnagar	40.30

APPENDIX E

MUNICIPAL CORPORATIONS WHERE MCC
IMPLEMENTATION OUGHT TO BE INTENSIVELY FOCUSED
UPON

District	Corp'n	Average VT	Average REVERSE COMP	No. of attributes promoting fierce competition
Kolhapur	Kolhapur	69.59	22.65	1
Sangli	Sangli-Miraj-Kupwad	69.44	12.68	1
Aurangabad	Aurangabad	67.67	8.48	2
Ahmednagar	Ahmednagar	66.97	6.54	2
Nashik	Malegaon	65.11	9.63	2
Dhule	Dhule	62.22	9.54	3
Jalgaon	Jalgaon	60.67	13.73	1
Nanded	Nandedwaghala	60.01	10.28	3
Akola	Akola	59.67	6.83	3
Parbhani	Parbhani	57.91	10.22	3
Chandrapur	Chandrapur	57.71	8.43	2
Amravati	Amravati	57.66	8.66	3
Latur	Latur	57.02	14.15	2
Solapur	Solapur	56.95	13.93	1
Nashik	Nashik	56.93	11.51	2
Pune	Pimpri-Chinchwad	56.80	19.67	1

How to read the table:

1. The table above shows the list of Municipal Corporations that could witness bitterly contested elections. These Corporations are basically those which show more than average voter turnout. Thus, voter activism is high in these areas.
2. The study shows that VT is positively correlated with competition and hence, there will be a tough contest amongst political parties in these areas.
3. Thus, these Corporations are expected to show high level of political activism, both from the voters as well as political parties.
4. Corporations belonging to the high VT cluster have been highlighted in Column C.
5. High VT normally occurs in lesser developed districts. Political parties try to connect to the voter at the grassroot level and hence, it is in these districts that fierce competition will be witnessed. Those districts belonging to the low development cluster are highlighted in column A.
6. Where the REVERSE COMP is low, the competition between political parties will be high. Such Corporations have been highlighted in Column D.
7. Thus, elections will be fiercely contested when the VT is high, development quotient is low, and where the competition amongst parties is high.
8. Columns A, C and D actually highlight the different attributes that promote fierce competition amongst political parties. In Column E, one can see how many of these attributes are possessed by the chosen ZPs.
9. Those Corporations possessing at least 2 attributes should be the ones targeted for better management, vigilance, scrutiny and MCC implementation from a policy perspective.
10. Thus, more focus on MCC implementation should be kept whilst conducting elections of Corporations in Dhule, Nanded, Akola, Parbhani and Amravati. Fierce competition could also be witnessed at Aurangabad, Ahmednagar, Malegaon, Chandrapur, Latur and Nashik.