ZILLA PARISHAD ELECTIONS IN MAHARASHTRA : A DATA ANALYSIS
(1994-2013)

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Education : An Ennobling Influence

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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. The landmark 73rd and 74th Constitutional Amendments gave constitutional status to local bodies in India. In accordance with the same, Maharashtra 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 Zilla Parishads 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 Zilla Parishads and Panchayat Samitis over all elections is 69 per cent.

ii.   The voter turnout in Zilla Parishad and Panchayat Samiti elections has been falling over successive rounds of elections.

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.   Identification of Zilla Parishads with historically low voter turnout

vi.   Identification of Zilla Parishads 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 "Zilla Parishad 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 Zilla Parishads 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.

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CHAPTER - I

A HISTORICAL PERSPECTIVE ON LOCAL GOVERNANCE

EVOLUTION OF LOCAL SELF GOVERNANCE IN INDIA

In the Indian society, the village has traditionally been the unit of social and economic activity. In the anthropological perspective, the village is termed as "the natural unit of living". Obviously, the villages traditionally enjoyed a kind of self-rule with regard to local affairs that also included judicial functions. In the course of time, the village bodies took the form of Panchayats which then started to oversee the common affairs of the villagers without any interference from outside. Even in the early nineteenth century, Panchayats did exist in some parts of India, leading Sir Charles Metcalfe, the then-provisional Governor General of India (1835-36), to characterize them as 'little republics' (George Mathew, 2004)[1]. After the establishment of direct rule of the Crown in 1858, it was not possible for colonial rulers to turn a blind eye to the innumerable villages in the country, which provided the broad platform for expansion ofBritish trade and commerce. Therefore in 1870, the government adopted a policy to setup local self-government institutions (LSGI) in rural India. It is in this context that Lord Ripon, the then-Viceroy of India, passed the 1882 Resolution that paved the way for the establishment of LSGI in British India. This Resolution, for the first time, put forth a comprehensive theory of local government. Ripon's Resolution led to enactment of new local self-government legislations in various provinces between 1883 and 1885. For a long time thereafter, there was no attempt to change the status quo, even though a Royal Commission on decentralization, in its report submitted in 1909, strongly advocatedthe need to associate local people in the task of local administration. In 1918, while introducing constitutional reforms, the recommendations of Royal Commission were taken seriously. As a result, under the newly amended local self-government acts that were enacted in different provinces following the reforms, various self-governing institutions were established at the district, intermediate and village levels. These institutions lasted not only during the remaining period of the British rule, but also left

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[1]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.

behind their legacy in the post-Independence period, which in fact established three tier decentralized democratic governance at the district level (Ibid).

ZILLA PARISHADS

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/Zilla Parishads in the country during the British era. A Zilla Parishad, in a federal state like India, is an administering local body that oversees the development of an entire district. Zilla Parishad is a body created to oversee the governance and developmental aspects of the entire district which may comprise an equally large number of PanchayatSamitis. Village development through TalukPanchayatSamitis is facilitated by the Zilla Parishad. The first major attempt to institutionalize the Panchayats came from the Report of Balwantrai Mehta Committee which was mainly set up to assess the performance of community development programmes. The Committeeadvocated democratic decentralization and recommended the constitution of a three tier structure of Panchayats with Gram Panchayat at thevillage level, PanchayatSamitis at the block level and Zilla Parishad at the district level (GoI 1957)[2].This was further bolstered by the government enthusiastically adoptingthe proposal for the three-tier Panchayat system in rural India, and re-christened it as Panchayati Raj. By 1959 almost all States in the country had passed Panchayati Raj Acts and by the mid-1960s most of the States, including Maharashtra which emerged in the frorefront to implement the proposal, had in place the three tier Panchayati Raj system,

DEMOCRATIC GOVERNANCE AND ZILLA PARISHADS

The purpose of Zilla Parishad governance and strategic rural planning in a country is to create effective, responsive, democratic and accountable local government framework for about 6.2 lakh villages spread across the nation. Both in India and abroad democracy and decentralization take the place of preponderance in local governance. The idea of local governance continues to

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[2]Balwantrai Mehta (1957), Chairman, Balwantray Mehta, GoI.

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)[3]. Decentralization promotes democracy in myriad ways. Decentralization brings government 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)[4]. Local elections provide citizens with an 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 ZILLA PARISHAD

The Chief Executive Officer (CEO) of Zilla Parishad, who is an IAS officer, heads the administrative machinery.He may also be the district magistrate in some states. The CEO supervises the divisions of the Parishad and executes its development schemes. The pattern of administration can be understood from the following diagram.

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[3]Centre for Democracy and Governance, Decentralization and Democratic Local Governance Handbook, USAID, 20523-3100, PP. 05-06.
[4]Parry, G., Mosley, G. and Day N. (1992), Political Participation and Democracy in Britain. Cambridge: Cambridge University Press.

Figure No. 1.1: Administrative Structure and Decentralisation of Power (73rd and 74th Amendements – 1992)

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                    ┌─────────────────────────┐
                    │    Government of India   │
                    └─────────────────────────┘
                                 ↓
                    ┌─────────────────────────┐
                    │     State Government     │
                    └─────────────────────────┘
                                 ↓
                    ┌─────────────────────────┐
                    │        Division(s)       │
                    └─────────────────────────┘
                                 ↓
                    ┌─────────────────────────┐
                    │ District(s) (Zilla-Parishad) │
                    └─────────────────────────┘
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Block(s) Tehsils → Gram Panchayat

Municipal Corporations → Ward

Municipality

City Council → Ward
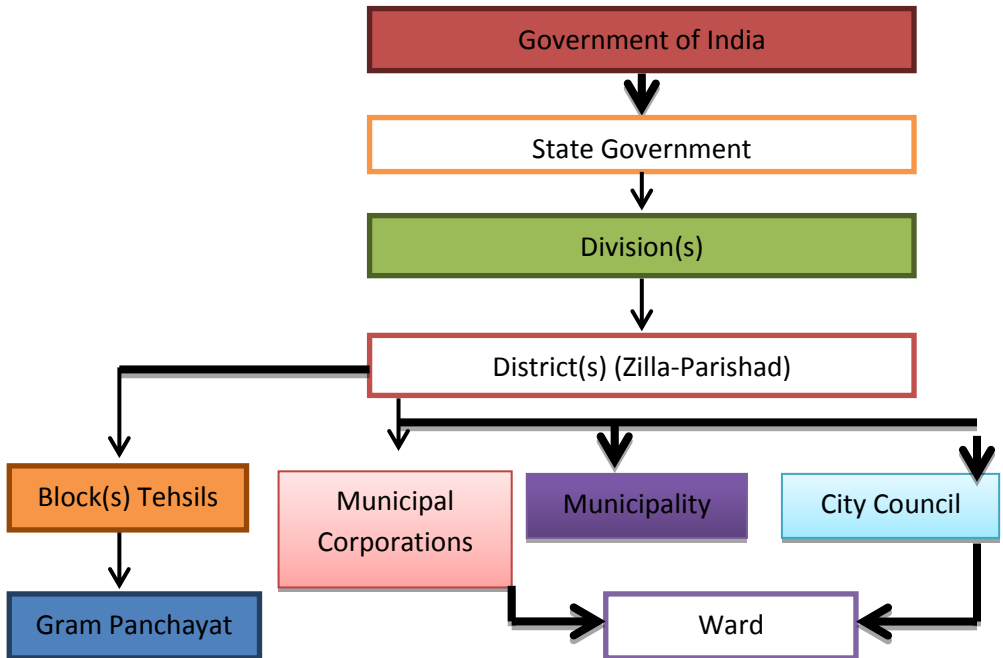
The following diagram elucidates the post 73rd constitutional amendment (1992) decentralization of power through the structure of local self-government in India. This is inclusive of both the democratic and administrative structure of local self-government and decentralization of power.

1.2: Local Self Government
(Decentralization of Power)

73rd Amendment – 1992 (Rural)

Gram Panchayat	Taluk Panchayat	ZillaPanchayat
Sarpanch	Chair person	Chairman
Vice-Sarpanch	Deputy Chairperson	Deputy Chairman
Village Secretary	Block Development Officer	Chief Executive Officer
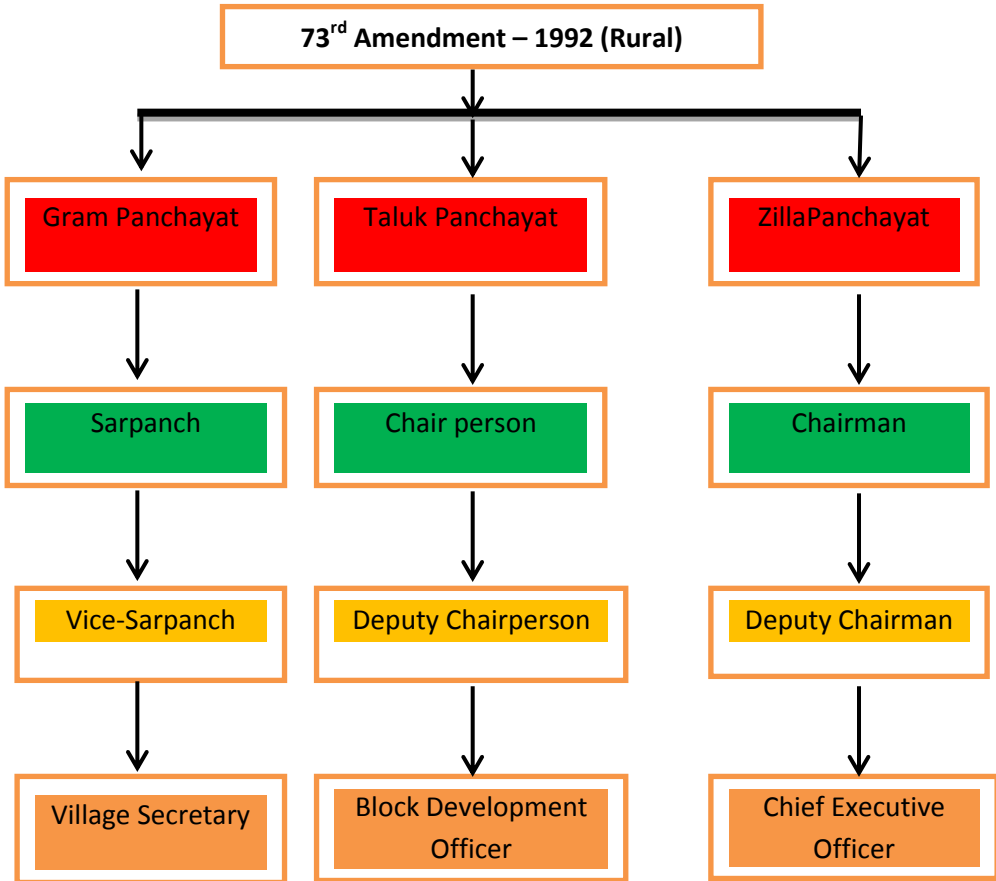
ELECTIONS TO ZILLA PARISHADS

Democratic pattern of governance and elections are by no means new to the modern world. In ancient Greece and Rome, and throughout the medieval period, rulers such as the Holy Roman Emperor and the Pope were elected (Encyclopedia Britannica). In the Vedic period of India, the *raja* of a *gana* was apparently elected by the *gana (tribal group)*. 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 India, elections to local bodies such as Zilla Parhishad are also held every five years. Very often the ruling party or local alliance elected to power at the local district, taluka or panchayat level is in alignment with the party or combine ruling at the State level even though in Zilla Parishad and Panchayat Samiti 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.

In Maharashtra, the State Election Commission conducts elections to the local bodies including Zilla Parishad. Elections to Zilla Parishad and Panchayat Samitis are conducted simultaneously. 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)[5].

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)[6] and(Sidney Verba, Schlozman and Brady 1995)[7]. 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. Texeira, 1992)[8] and(Rosenstone and Hansen, 1993)[9]. In recent decades, a few

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[5] 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.

[6]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

[7]Sidney Verba, Schlozman and Brady 1995), Voice and Equality, Cambridge, Mass: Harvard University Press.

[8] 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.

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)[10], (R. L .Morlan, 1984)[11]and (Ruby Bridges, 1997)[12]. 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)[13] and (Sidney Verba, Schlozman and Brady 1995)[14]. And therefore, with low voter turnout, this bias is likely to become more pronounced(Wattenberg, 1998)[15].

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 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

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[9] 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.

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

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

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

[13] 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

[14] Sidney Verba, Schlozman and Brady 1995), Voice and Equality, Cambridge, Mass: Harvard University Press.

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

realm at the local level (Zoltan Hajnal,P. G. Lewis and Hugh Louch, 2002)[16]. 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)[17].

"Social capital" is believed to play a dominant rolein 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)[18]. 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 (MancurOlson, 1965)[19]. 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)[20]. 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 38per cent (Gerber et al, 2008)[21]. 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 its voice heard. (Diana C. Mutz, 2002)[22]. 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

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

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

[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]MancurOlson (1965), The Logic of Collective Action, HUP.

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

[21] 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.

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

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)[23] and (MariaGratschew and Kate Sullivan, 2002)[24]. 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 79per 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 Europeagainst 56 per cent in neighboringSwitzerland can be attributed to compulsory voting in Liechtenstein. On the contrary, a country like Bahamas where voting is not compulsory, recordsa 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 declinein voter turnout; however during the same period, several other nations where participative democratic processes strengthened, recorded vast increase in turnout, peaking at about 80 per cent (Ibid).

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

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

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) [25] ,(Almond and Verba, 1963) [26] ,(Stein Rokkan, 1970) [27] and(Verba Sidney N, and Norman H. Nie, 1972)[28].The studies also reveal that gender differences were narrowing even in the 1950s in advanced industrialized

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

[26]Almond G. A. and S Verba (19630, The Civic Culture, Political Attitude and Democracy in Five Nations, Princeton, N.J. Princeton University Press.

[27]Stein Rokkan (1970), Citizens, Elections, Parties: Approaches to the Comparative Study of the Processes of Development Oslo: Universitesforiaget.

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

societies such as the Sweden (Martin Lipset, 1960)[29]. In most societies,when it comes to political activity, men are found to be more active than women (Verba, Sidney N, NieLekajcieSieand KimCattreal 1978)[30]. 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)[31].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)[32]. Overall percentage of female voter turnout inthe US outnumbers themale electorate implying that the number of female voters has exceeded the number of male voters in every Presidential election (retain). 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)[33]. 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 femalevoters consistently exceeds male voters. Conscious attempts to bring women into political framework can potentially lead to increase in the voter turnout.

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

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

[30] Verba, 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 Raw.

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

[32] 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

[33]Rafael Lopez Pintor, Maria Gratschew and Kate Sullivan (2002),Compulsory Voting, ARENA, Association of Electoral Administrators, OxonianRewley Press Ltd. United Kingdom.

Belgium (1892), Argentina (1914) and Australia (1924) were among the first countries to introduce compulsory voting laws (Ibid).

ZILLA PARISHAD VOTER TURNOUT IN INDIA AND MAHARASHTRA

Even though the State of Maharashtra is not an exception to low voter turnout at Municipal Corporation elections, the voting behaviour at its closest rural counterpart, i.e., the Zilla Parishad elections is always observed to be higher. The voter turnout at Municipal elections in the State is observed to be lower while the same for Gram Panchayats, Block Panchayat Samitis and Zilla Parishads has been higher. Elections to the Municipal Councils and Municipal Corporations in Maharashtra have recorded a voter turnout of less than 45 per cent;even larger city corporations like Mumbai and Thane have not been an exception (ToI, 2012)[34]. This is an evidence of low engagement of citizens in community affairs (OlsonMancur, 1965)[35]. With this background, the voter turnout at the elections to the Zilla Parishads and Block Panchayat Samitis presents a far better picture of citizen participation. A large number of districts have recorded voter turnout of 70 per cent at Zilla Parishad elections and in many districts it was between 75 and 80 per cent (The Pioneer, 2016)[36]. This phenomenon can be observed across States in India. In Andhra Pradesh the voter turnout at Zilla Parishad elections is often higher than 80 to 85 per cent (Business Standard, 2014)[37], whereas in Mysore it was 75.65 per cent (Deccan Herald, 2016)[38]. In Dakshina Kannada Zilla Parishad 69 per cent voter turnout was recorded (Coastaldigest.com)[39]while other parts of Karnataka such as Sullia, Puttur, Bantwal, Mangaluru and Belthangady have recorded a voter turnout of 74.15, 71.40, 69.48, 65.58 and 64.82 per cent respectively (Ibid).

Though voter turnout in elections to Zilla Parishads in Maharashtra is substantially higher than the turnout at Municipal elections, there is still scope for further increase in the voter turnout. Voter turnout at local elections in Maharashtra poses a classic collective action problem. Only high voter turnout

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[34]Times of India, 16.02.2012: Retrieved: 26.09.2016.
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can ensure a truly participative democracy and serve the larger public interest by designing policies and programmes that are in sync with public aspirations.

In order to formulate policies to increase voter turnout, it is important to analyze the data of preceding elections to understand the trends in voter turnout. Once the trends are understood, it would be possible to target certain areas more intensively for increasing the voter turnout in such areas.

It is with this objective that the study of election data analysis on Zilla Parishad elections held between 1994 and 2013 was commissioned to Gokhale Institute of Politics and Economics, Pune 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 the creation of the State Election Commission of Maharashtra 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 the local bodies to continue with their existence and hold elections in these local bodies as and when a 5-year period of their working came to a close. Thus, in Maharashtra, all local bodies do not go into a state of election at the same time. Different local bodies, urban and rural, go into a state of elections as and when the 5-year period of their existence comes to a close.

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 round was from 2004-08 and the fourth one was 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 had their fifth round of elections since 2014, in nearly 26 out of 36 districts in Maharashtra, all urban and rural bodies will go into a state of elections 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 which will be 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 area governed by the local body

e. Number of seats contested for the 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, referred to as R1, R2, R3 and R4 hereafter. For some of the local bodies, data on Voter Turnout is missing for R1. But, 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
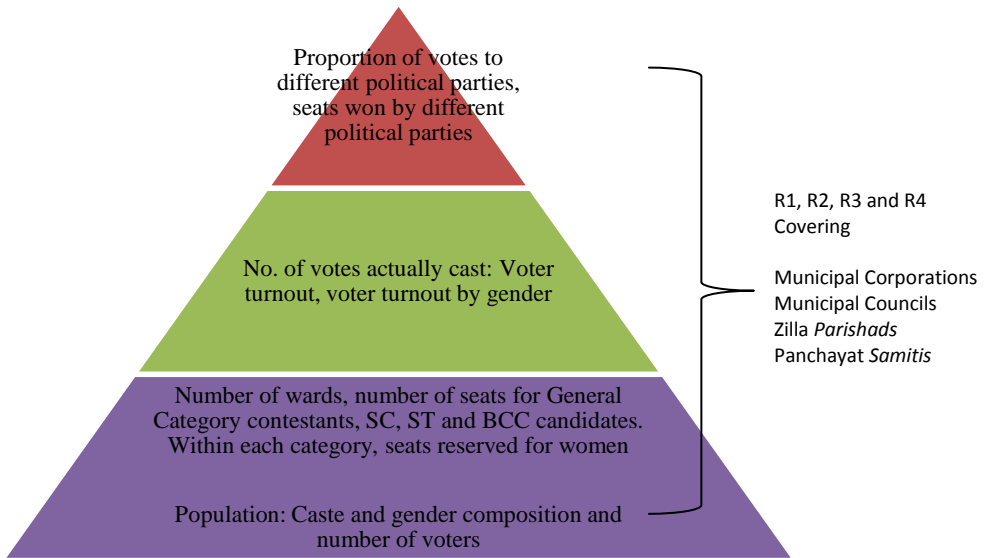
Out of the data available for all the different local bodies, this report is purely based on the analysis of data pertaining to Zilla Parishads (also refered to as ZPs henceforth).

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)

VT henceforth stands for Voter Turnout. The importance of VT from an electoral result perspective cannot be over-emphasized. 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 free election can only be deemed to be held when the VT is nearly 100per cent.

In the report too, VT is treated to be a key variable. Patterns in VT across different Zilla Parishads 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 for 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 Zilla Parishad 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 Zilla Parishad is frozen for a decade as per the Census, reservation of seats in different constituencies of the ZP 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 ZP. 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 Zilla Parishads.

PROPORTION OF SEATS WON BY INDEPENDENT CANDIDATES (IND)

IND henceforth refers to the proportion of votes garnered by independent candidates in a Zilla Parishad. IND is interesting because it identifies those areas wherein the voters are giving higher votes to independent candidates.

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 to the State Government.

PROXY FOR COMPETITION BETWEEN THE 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 the distribution of seats to different political parties. Lesser is the standard deviation in the distribution of seats, it would imply that different parties were in neck to neck competition.

Thus, REVERSE COMP was defined to be the standard deviation of the distribution of seats between political parties. Lower the value of REVERSE COMP, more 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 now 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 residents can signal their approval or disapproval for the party or elected member in power. In fact, in more developed areas, there would be different options (newspapers with an open culture, TV debates and social media) of signaling the issues to the Government and accordingly, the voter turnout could become 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.

The 2011 Census carries data on per capita income at 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 per capita income of all districts (in Maharashtra) together is defined as DEV.

However, 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, the correlations between economic development and political variables have been worked out in a static sense in the study.

The following section highlights the research questions on Zilla Parishads 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 behavior of Voter Turnout in successive rounds of elections in Zilla Parishads? Has the average VT changed across successive rounds?
2. Do certain ZPs have a history of higher VT?
3. Do ZPs with high VTs cluster together geographically?
4. Do Zilla Parishads with higher proportion of seats reserved for SC and ST population proportions show higher VT?

5. Do ZPs of better developed districts show a lower VT?
6. Which Zilla Parishads in Maharashtra are "swing" ZPs i.e. Zilla Parishads in which the elections are closely contested and can potentially swing in favor of any one party?
7. Similarly, which are the ZPs in which the swing is extremely low? That is, which are the ZPs which show single party dominance?
8. Are swing Zilla Parishads also those which exhibit a higher VT level?
9. Is there a correlation in development quotient and the swing behavior?
10. Which are the ZPs that show a high degree of political alignment to the State Government?
11. Has the proportion of seats won by independent candidates in ZPs increased over a period of time?
12. Is it the case that proportion of ZP 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 aid developing crucial insights into the trends in Zilla Parishad 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

Zilla Parishad and Panchayat Samiti elections are held at the same time. Thus, every voter casts two votes on the day of elections, one for the Zilla Parishad representative, and one for the Panchayat Samiti (refered to as ZP and PS respectively hereafter) representative. Thus, the voter turnout rate for ZP and PS is identical. However, trends in other variables such as distribution of reserved category seats in the local body, political alignment of the local bodies, proportion of seats won by independent candidates, etc.could be different in Zilla Parishads and Panchayat Samitis.

This chapter highlights the trends in the different variables as observed in the ZP elections.

3.1 VOTER TURNOUT

As has been mentioned in Chapter 2, Voter Turnout is a crucial variable for the SECM. A higher VT is a policy objective, and indicates that the democratic forces are indeed operative at the grassroots level. A higher VT truly invokes higher competition amongst political parties and independent candidates alike.

Following are the summary statistics for VT across four rounds of ZP Elections.

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

VT	R1	R2	R3	R4
Mean	70.162	69.438	69.236	67.54
Std. Deviation	5.895	5.032	4.429	3.81
Minimum	56.910	56.422	59.300	58.24
Maximum	79.730	79.148	78.600	75.37

There are three worrisome observations about the voter turnout at ZP elections.

1. The overall VT average across all rounds of elections stands at 69.09 per cent.As has been mentioned in the beginning of this chapter, ZP and PS elections are held simultaneously. Hence, the average VT for both ZP as well as PS elections is 69.09 per cent. The average voter turnout for Municipal Corporation elections in Maharashtra is 56 per cent whereas that for Municipal Councils and Nagar Panchayats is 71 per cent.

2.

   It is worrisome to note that the VT in ZP and PS elections is lower as compared to the VT in Municipal Council and Nagar Panchayat elections. This implies that a higher proportion of the population votes at the Municipal Councils and Nagar Panchayats, which govern small urban or sub-urban areas, as compared to the proportion of population which votes for ZPs and PSs, which govern the rural parts of districts and blocks respectively.

   This is truly surprising because it has been a common observation across countries, states and local areas that rural areas have higher VT as compared to urban areas. This is because the urban voter does not exclusively rely on his vote to voice his opinion. He uses social media, newspapers, citizen groups and NGOs to voice his opinion on social issues. However, these options are not available to the rural voter or to the urban voter in small townships. Hence, one would normally expect the average VT to increase as one moves from Municipal Corporations to Municipal Councils and from Councils to ZPs. The average VT for Municipal Corporations in Maharashtra stands at 56.31 per cent;for ZP and PS it stands at 69.09 per cent and for Municipal Councils and Nagar Panchayats it stands at 70.77 per cent. Data trends belie intuition.

   Thus, the average VT in ZP and PS elections has in fact been lower than that in the Municipal Council elections. One of the reasons that could be a contributing factor to this trend could be migration. If the level of migration from rural to urban areas is higher as compared to that from semi-urban areas to urban areas, then it may reflect in lower VT in the rural body elections.

This trend also highlights the fact that urbanization and migration could well become a central policy issue for the SECM over a period of time. More thought will have to be given to how migrating voters may be allowed to cast their vote from distant locations.

3. The second worrisome observation is that the voter turnout has been continually falling over the four rounds of elections held so far. In the Municipal Council as well as Municipal Corporation elections, the voter turnout has increased in R3 i.e. in the elections held during the period 2004-08. However, in the ZP election data, there is almost a linear decrease in the voter turnout with every election. Clearly, the enthusiasm in the urban voters in R3 has not beenobserved in rural voters.

4. There is a rather interesting, but again worrisome story in the variability of the VT. A look at the standard deviations tells us that the standard deviations in the VT are falling across successive rounds of elections. The standard deviation is a measure of variability. It tells us how much variability is there in the data pertaining to VT in different rounds of elections. A reduction in the standard deviation tells us that even though the average VT has been falling, it does seem to be the case that the diversity in the voting patterns across various ZPs is reducing. Thus, in R1, there may be ZPs with extremely high and/or low values; however these extremities are getting replaced by a more uniform pattern of voting across successive rounds of elections. A lower standard deviation and a lower average implies that from R1 to R4, lesser number of voters are casting their votes and this is becoming a more uniform trend across all ZPs. An increasing average with a lower standard deviation is desirable; but a lower VT with more uniformity indicates a rather discouraging trend.

The same point comes across more clearly when one considers the behaviour of the minimum and maximum numbers in different rounds of elections. The minimum VT has increased across time and the maximum has reduced across time; these two put together imply that the standard deviation or variability in data will reduce. However, the increment in minimum is lower as compared to the reduction in maximum; this causes the average VT to fall across successive rounds of election.

Are there certain ZPs which repeatedly show higher or lower VT numbers? The following table shows which ZPs belong to the high VT cluster and which belong to the low VT cluster in every round of elections.

Table 3.2: ZPs Belonging to the high and low VT Cluster in Each Round of Elections

Round of election			Zilla Parishad	VT
R1	Highest	1	Parbhani	79.73
		2	Gadchiroli	78.45
		3	Raigad	77.00
		4	Sangli	76.53
		5	Chandrapur	75.84
	Lowest	1	Thane	56.91
		2	Dhule	57.91
		3	Ratnagiri	61.75
		4	Nandurbar	61.84
		5	Akola	63.00
R2	Highest	1	Buldhana	79.15
		2	Washim	76.32
		3	Sangli	75.80
		4	Bhandara	74.05
		5	Akola	73.48
	Lowest	1	Nandurbar	56.42
		2	Thane	57.84
		3	Ratnagiri	60.20
		4	Sindhudurg	63.96
		5	Nashik	64.94
R3	Highest	1	Kolhapur	78.60
		2	Bhandara	77.40
		3	Gadchiroli	76.40
		4	Gondia	76.10
		5	Hingoli	74.40

Round of election			Zilla Parishad	VT
R4	Lowest	1	Thane	59.30
		2	Nashik	61.90
		3	Dhule	62.70
		4	Ratnagiri	63.90
		5	Jalgaon	64.50
	Highest	1	Gondia	75.37
		2	Kolhapur	75.24
		3	Bhandara	72.96
		4	Hingoli	72.27
		5	Chandrapur	71.46
	Lowest	1	Thane	58.24
		2	Nagpur	62.79
		3	Solapur	63.24
		4	Osmanabad	63.47
		5	Ratnagiri	63.52

The above table shows that certain ZPs such as Bhandara, Gadchiroli, Gondia, Sangli, Kolhapur repeatedly occur in the high VT cluster. A re-arrangement of the ZPs with high VTs into divisional clusters shows some interesting trends.

Table 3.3: Re-arrangement of high VT Zilla Parishads into Divisional Clusters

Divisional Clusters	R1	R2	R3	R4
Amravati		Buldhana		
		Washim		
		Akola		
Aurangabad	Parbhani		Hingoli	Hingoli
Nagpur	Gadchiroli	Bhandara	Bhandara	Bhandara
	Chandrapur		Gadchiroli	Chandrapur
			Gondia	Gondia
Pune	Sangli	Sangli	Kolhapur	Kolhapur
Konkan	Raigad			

There are 5 divisions which repeatedly occur in the high VT cluster, namely Aurangabad, Amravati, Chandrapur, Pune and Konkan. None of the districts in Nashik division show very high VTs. Now, one can easily see how the trends in VT have changed across time.

Districts in Amravati division only exhibit high VTs in R2. It is interesting to note that all three districts namely Akola, Washim and Buldhana score extremely low on the development index variable (DEV) as shown in the report later.

In Aurangabad division, the epicentre of high VTs has moved gently from Parbhani to Hingoli. Again, Parbhani and Hingoli show very low development levels.

Chandrapur and Pune divisions are special because districts in these divisions have been consistently showing high VTs in all 4 rounds of elections. In Chandrapur division, one can see that the epicentre of high VTs has moved from Gadchiroli towards the northern districts of Bhandara and Gondia. In these districts again, development quotients have persistently remained low and hence, these districts may be consistently showing higher VTs. In Pune division too, one finds the epicentre of high VT moving from Sangli towards Kolhapur. However, districts in the Pune division boast of some of the highest development quotients

in Maharashtra. Then how is it that Sangli and Kolhapur show such high levels of VT?

High VT could undoubtedly be a reflection of low development;however, there are some areas with a "culture" of political activism and voting. Kolhapur district is an area wherein VT is high across all local bodies, i.e., Muncipal Corporation of Kolhapur, Muncipal Councils and Nagar Panchayats in the Kolhapur District, as well as the Zilla Parishad of Kolhapur We could thus conclude that Sangli-Kolhapur is that part of Maharashtra wherein the voter is very sensitized to elections and hence, these areas have an interesting and entrenched voting culture and voter awareness.

Only Raigad district in Konkan division shows a high VT in R1. However, one finds that districts in Konkan division get eased out of the high VT cluster in successive rounds of elections. There could be three reasons for this trend. The first could be of course the fact that development has occurred rapidly with Mumbai as an epi-centre of growth and hence, districts in Konkan may not be showing higher VT. Secondly, there is heavy migration from all areas in Konkan to Mumbai; this itself may be contributing to the lower VT. A third angle to this is that there are 3 districts in Maharashtra which are completely urbanized and hence do not have a ZP at all. These are Mumbai, Mumbai sub-urban and Thane and all these districts occur in the Konkan division. Thus, there could be a cultural issue of contagion wherein urban voters, who exhibit urban apathy, indirectly have a cultural impact on the neighboring sub-urban, semi-urban and eventually rural areas, contributing to low VT in the division.

Which are those ZPs which historically show low VTs across successive rounds of elections? Re-arrangement of the ZPs shows some interesting patterns. See table below.

Table 3.4: Re-arrangement of low VT Zilla Parishads into Divisional Clusters

Division	R1	R2	R3	R4
Konkan	Thane	Thane	Thane	Thane
	Ratnagiri	Ratnagiri	Ratnagiri	Ratnagiri
		Sindhudurg		
Nashik	Dhule	Nandurbar	Nashik	Nagpur
	Nandurbar	Nashik	Dhule	
			Jalgaon	

The above table shows that most ZPs with poor VTs are either in the Konkan division or in Nashik division. The epi-centres of low VT in Konkan seem to be Thane and Ratnagiri. The rural part of Thane was separated into a different district "Palghar" in 2014 and hence, in the R5 elections, Thane will not have a ZP at all. Ratnagiri needs to be specially considered for launching an aggressive voter awareness campaign.

If the districts of Gadchiroli and Gondia in Nagpur fare poorly on development and exhibit high VT, the districts of Dhuleand Nandurbar in Nashik division too fare poorly on development (see the section on DEV), but exhibit low VT. Interestingly, all the four districts have a high ratio of tribal populations and low per capita incomes. And yet, one finds the VT in Nagpur division to be higher than that in Nashik. This again points to the presence of voting culture or political activism culture at certain places in the State. The following table shows the VT trends at a divisional aggregation.

Table 3.5: Divisional Aggregates for VT

DIVISION	Average of VT				Mean	Std. Deviation
	R1	R2	R3	R4		
Nagpur	74.88	70.26	73.25	70.24	72.04	3.80
Aurangabad	72.66	71.79	70.04	68.14	70.59	3.25
Pune	72.79	72.21	69.42	67.82	70.56	4.30
Amravati	69.46	72.46	69.62	66.96	69.62	4.34
Nashik	64.22	64.47	65.66	65.95	65.08	3.79
Konkan	64.91	62.46	65.38	64.66	64.35	5.46
Total	70.16	69.44	69.24	67.54	69.08	4.87

Graph No. 3.1:
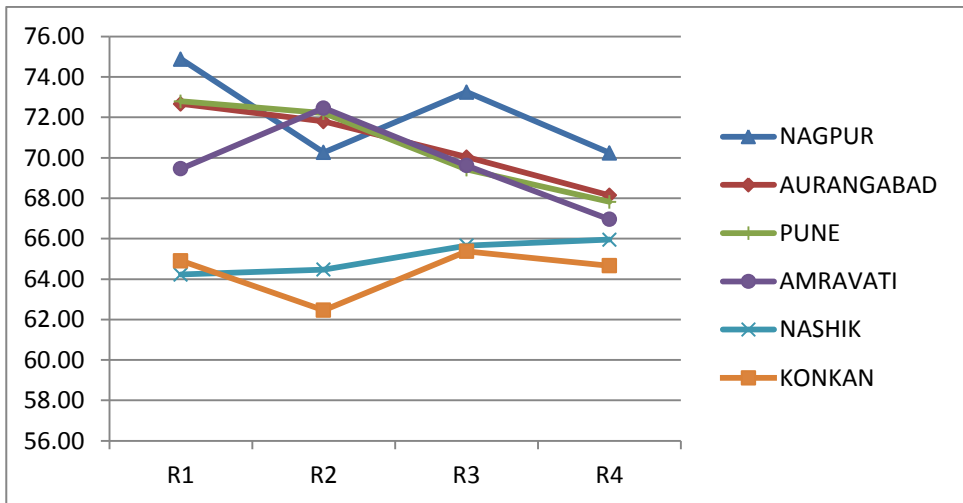
The graph above shows that a gap exists between VT in Nashik and Konkan and the VT in other divisions. Nagpur, Pune and Aurangabad seem to be the high VT divisions in Maharashtra. But the earlier analysis shows that divisional aggregation may not always be a good idea because any kind of aggregation masks the underlying trends. For example, Pune division shows good VT largely because Kolhapur and Sangli ZPs are included in that division.

Thus, it does seem to be the case that there are certain districts, rather than certain divisions, wherein voting is steeped in the culture and community living of the place. In such places, higher VT is observed. If this is indeed the case, then a ZP with high VT in one round of elections ought to also exhibit high VT in the earlier rounds. Similarly, a ZP with low VT in one round of elections ought to also exhibit high VT in the earlier rounds. Statistically speaking, this implies that the correlation co-efficient between VT in two successive rounds would be positive. The next section checks for correlation between VT in successive rounds.

4.1.1   DOES VT DEPEND ON PAST PERIOD VT?

Voter turnout may not only be dependent on the level of propaganda done by candidates, or the amount of hype created during elections or even on 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 witnessed in a Zilla Parishad in a particular round show some level of positive correlation with the VT in the past rounds? If yes, then it would imply that ZPs which show high VT continue to show high numbers for the next elections as well. Similarly, the positive correlation coefficient would imply that ZPs with a low ratio continue to exhibit low ratios in the next rounds too. The following table shows the correlation matrix for VT in the different election rounds.

Table 3.6: Correlation Matrix for VT

	VT_R1	VT_R2	VT_R3	VT_R4
VT_R1	1.000			
VT_R2	0.697**	1.000		
VT_R3	0.665**	0.541**	1.000	
VT_R4	0.553**	0.471**	0.835**	1.000

** indicate significance at 5per centl.o.s.

All correlation co-efficients are positive and significant. This implies that a ZP with a high VT in one round typically tends to exhibit high VT in the next round

too. The last row of the table shows the correlation co-efficients of VTs between R4 and the earlier rounds. It shows that the correlation co-efficient between R4 and R3 is 0.835 and that between R4 and R2 is 0.471. This makes intuitive sense and implies that the VT in the current round is more strongly impacted by the VT in the earlier round; this impact however keeps on weakening as we go backward into time.

3.1.4 CLUSTER ANALYSIS OF VT

A cluster analysis is carried out to identify those areas 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, the cluster analysis of VT data can become a significant input for a meaningful policy to promote voter awareness.

Following are the areas which get classified into a high VT cluster as per the cluster analysis. These areas have a voter turnout of more than 72.32 per cent; the highest VT is in Bhandara ZP in Nagpur division and the lowest in this cluster is in Washim ZP in Amravati division. The average VT for this cluster is 72.67 per cent.

Table No. 3.7: High Voter Turnout Cluster

Zilla Parishad	Average VT
Bhandara	74.92
Buldhana	73.79
Chandrapur	72.25
Gadchiroli	74.27
Gondia	73.53
Hingoli	73.36
Jalna	71.68

Contd….

Zilla Parishad	Average VT
Kolhapur	75.41
Latur	70.41
Nanded	70.18
Parbhani	74.08
Raigad	71.37
Sangli	72.16
Wardha	70.30
Washim	72.32

Medium level of voter turnout i.e. between 64.95 per cent to 69.35 per cent was witnessed in the areas given below. The maximum value within this cluster i.e. 69.35 per cent VT was seen in Solapur ZP, whereas the minimum VT was seen in Nandurbar ZP. The average level of VT for this cluster stands at 67.43 per cent.

Table No. 3.8: Medium Voter Turnout Cluster

Zilla Parishad	Average VT
Ahmadnagar	67.05
Akola	67.58
Amravati	66.20
Aurangabad	68.59

Contd…

Zilla Parishad	Average VT
Beed	67.99
Jalgaon	66.21
Nagpur	67.34
Nandurbar	64.95
Osmanabad	69.14
Pune	66.96
Satara	68.90
Sindhudurg	65.62
Solapur	69.35
Yavatmal	68.22

The following Zilla Parishads show the lowest VT ratios. Thane ZP has the lowest VT at 58.07 per cent. In this cluster, the average VT stands at 61.89 per cent only. Clearly, it is in the ZPs given below that maximum efforts need to be taken to enhance voter turnouts.

Table No. 3.9: Low Voter Turnout Cluster

Zilla Parishad	VT
Dhule	63.36
Nashik	63.81
Ratnagiri	62.34
Thane	58.07

Thus, the high, medium and low VT clusters have average values of 72.67 per cent, 67.43 per cent and 61.89 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 61.89 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 Zilla Parishad 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 ZPs with State Government. The objective of creating this variable is to examine if rural areas of certaindistricts have a relationship with the government at the State. This variable highlights the effect of a change in the State Governments on local goverance 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. 3.10: VT and POL in Select Zilla Parishads

Division	Zilla Parishad	VT_R1	VT_R2	VT_R3	VT_R4	POL1	POL2	POL3	POL_4
Amravati	Buldhana	74.74	79.15	71.60	69.68	0	1	1	1
Amravati	Yavatmal	72.84	68.22	67.10	64.72	0	1	1	1
Amravati	Washim	69.09	76.32	73.90	69.98	0	1	1	1
Amravati	Amravati	67.63	65.12	67.00	65.07	0	1	1	1
Amravati	Akola	63.00	73.48	68.50	65.35	0	0	0	0
Aurangabad	Parbhani	79.73	72.78	72.50	71.32	0	0	1	1
Aurangabad	Latur	74.35	73.31	68.70	65.29	0	1	1	1
Aurangabad	Jalna	73.96	71.93	70.60	70.25	0	0	0	0
Aurangabad	Nanded	73.06	72.09	68.10	67.46	0	1	1	1
Aurangabad	Osmanabad	72.34	71.47	69.30	63.47	0	1	1	1
Aurangabad	Aurangabad	67.82	70.77	67.60	68.17	0	0	0	1
Aurangabad	Beed	67.37	68.59	69.10	66.90	0	1	0	1

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 ZP 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 ZP whose average across all rounds is 0 shows zero alignment to the State Government from 1995 to 2014. A ZP whose average across all rounds is 1 shows maximum influence of State Government over local political forces.

Assume that two Zilla Parishads get an average score of 0.5 which indicates that they've been aligned with the State Government for 2 rounds each. However, the underlying political forces could be very different. One ZP 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 ZP 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 the parties in power at State level will create different alignment patterns in POL.

Table No. 3.11: Trends in POL in Successive Rounds of Election

	Mean	Std. Deviation	Median	Minimum	Maximum
POL1 (R1?)	.06	.250	.000	0	1
POL2	.73	.452	1.000	0	1
POL3	.76	.435	1.000	0	1
POL4	.79	.415	1.000	0	1

While in R1, only 6 per cent Zilla Parishads are aligned, in R4, 79 per cent of the ZPs are aligned. Clearly, alignment of ZPs with the state government has increased over a period of time. What does this indicate? In the first round of elections for Zilla Parishads, Shiv Sena- BJP was in power at the state level. In this round, it is observed that the political alignment with the State is minimal. However, this increases significantly with successive rounds. When the 2nd, 3rd and 4th round of ZP elections were held, INC-NCP government was in power at the State level. The higher political alignment of ZPs with the State in these rounds implies that the ZPs have been mostly dominated by INC and/or NCP in Maharashtra.

Further, it is observed that the jump in alignment is very large from R1 to R2. The State Government changed between R1 and R2. If it is true that the INC-NCP combination dominates the Zilla Parishads, then the jump in political alignment gets explained quite well with a change in the State Government.

The alignment further shows an increase from R2 to R3 and from R3 to R4, but the increase is very soft. This could be indicative of a saturation effect in terms of the INC-NCP domination at ZP level.

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

Some Zilla Parishads exhibit complete non-alignment with State incumbent across time. This implies that POL for these states shows a 0-0-0-0 pattern. The State Government does not seem to exercise a hold over local area politics. In these ZPs, there would be other local level forces that really determine the election outcomes.

It is to be noted that rural local bodies normally do not enjoy the fiscal autonomy that urban local bodies enjoy, since the taxes and duties which they can collect or the finances they can raise is rather restricted. Thus, rural local bodies depend rather heavily on the State Government for their funding requirements. This automatically implies that the development and performance of a rural local body is a function of its political alignment. Obviously, there are very few ZPs exhibiting zero political alignment; these would make interesting case studies in terms of understanding whether alignment truly impacts the fund flow towards these bodies.

Following is a list of ZPs which show zero alignment with the State in the past 4 rounds of elections.

Table No. 3.12: Zilla Parishads Showing Zero Political Alignment with State Government from 1995 to 2014

Zilla Parishad	Division
Akola	Amravati
Jalna	Aurangabad
Ratnagiri	Konkan
Jalgaon	Nashik

Some ZPs exhibit complete alignment with the State Government i.e. the POL in these districts exhibits a 1-1-1-1 pattern. This implies that the State incumbent has a lot of control over local area rural politics in these districts.

It is extremely interesting to note that there are no ZPs showing complete alignment with the State incumbent from R1 to R4.

The following districts show complete alignment with the State incumbent in all four rounds of elections.

Table 3.13: List of ZPs showing complete alignment with State Government from 1995 to 2014

Zilla Parishad	Division
Buldhana	Amravati
Yavatmal	Amravati
Washim	Amravati
Amravati	Amravati
Latur	Aurangabad
Nanded	Aurangabad
Osmanabad	Aurangabad
Thane	Konkan
Gadchiroli	Nagpur
Chandrapur	Nagpur
Wardha	Nagpur
Gondia	Nagpur
Ahmednagar	Nashik
Nashik	Nashik

Contd…

Zilla Parishad	Division
Nandurbar	Nashik
Dhule	Nashik
Sangli	Pune
Kolhapur	Pune
Solapur	Pune
Satara	Pune
Pune	Pune

This table shows that all districts in Pune division are completely aligned with the State incumbent. This shows an interesting contrast vis-a-vis Municipal Councils, wherein Municipal Councils and Nagar Panchayats in Pune division show minimum political alignment with the State Government. Thus, the State incumbent seems to exercise more power over the rural structure i.e. over Zilla Parishads in Pune district, Satara, Sangli, Solapur and Kolhapur, but has not really been effective in terms of influencing local politics at the small town or small city level in Pune.

3.2.3 POL AND MCC IMPLEMENTATION

There are two patterns in POL across different rounds of election for any Zilla Parishad 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 ZPs were not aligned in R1, but became aligned and stayed so from R2 to R4. Thus, these ZPs 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 ZPs would be traditional BJP-SS strongholds.

The other pattern is 0-1-1-1. This indicates that the Zilla Parishad 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 is only one ZP, which is such that it shows alignment with the State only in R1 and shows no alignment in the other rounds. This is the Ratnagiri ZP. We could conclude that this has been a SS- BJP stronghold. By contrast, there are 20 INC-NCP strongholds, showing alignment only in R2, R3 and R4.

If there is a party stronghold with a low VT, the other party has lower chances of breaking that stronghold. However, if there is high VT in party bastions, the other party would campaign fiercely to break the dominance of the opposite party and hence, such ZPs would be likely to witness strong bitter contests among rival parties. Thus, a combination of a party stronghold together with high VT in a ZP would increase chances of political activism from political parties.

Now, if the high VT cluster is matched with the BJP-SS as well as INC-NCP strongholds, it is possible to understand where the maximum competition will happen. It is in these areas that it is really necessary to put extra effort in terms of implementation of Model Code of Conduct (MCC).

There is only one ZP, namely Ratnagiri which shows a pro-BJP alignment POL pattern of 1-0-0-0. As section 3.1.4 shows, Ratnagiri (with a VT of 62.34 per cent) belongs to the low VT cluster. Hence, the chances of Ratnagiri showing very high level of political party competition seem to be low in the upcoming R5 elections. The following table shows the list of INC-NCP strongholds together with the VTs in those areas.

Table No. 3.14: INC-NCP Strongholds with High VT

District	Division	Average VT	POL R1	POL R2	POL R3	POL R4
Thane	Konkan	58.07	0	1	1	1
Dhule	Nashik	63.36	0	1	1	1
Nashik	Nashik	63.81	0	1	1	1
Nandurbar	Nashik	64.95	0	1	1	1

District	Division	Average VT	POL R1	POL R2	POL R3	POL R4
Amravati	Amravati	66.2	0	1	1	1
Pune	Pune	66.96	0	1	1	1
Ahmednagar	Nashik	67.05	0	1	1	1
Yavatmal	Amravati	68.22	0	1	1	1
Satara	Pune	68.9	0	1	1	1
Osmanabad	Aurangabad	69.14	0	1	1	1
Solapur	Pune	69.35	0	1	1	1
Nanded	Aurangabad	70.18	0	1	1	1
Wardha	Nagpur	70.3	0	1	1	1
Latur	Aurangabad	70.41	0	1	1	1
Sangli	Pune	72.16	0	1	1	1
Chandrapur	Nagpur	72.25	0	1	1	1
Washim	Amravati	72.32	0	1	1	1
Buldhana	Amravati	73.79	0	1	1	1
Gadchiroli	Nagpur	74.27	0	1	1	1
Kolhapur	Pune	75.41	0	1	1	1

In the above table, Zilla Parishads of Wardha, Latur, Sangli, Chandrapur, Washim, Buldhana, Gadchiroli and Kolhapur are completely aligned to the INC-NCP State Government and belong to the high VT cluster; these are likely to be fiercely contested and hence are relevant in terms of paying special attention for MCC implementation.

3.3 COMPETITION AMONGST POLITICAL PARTIES (REVERSE COMP) AND IDENTIFICATION OF "SWING" ZILLA PARISHADS

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

The table below depicts Zilla Parishads with low REVERSECOMP quotient, which implies that a high degree of competition will exist between the political parties in the elections in these ZPs.

Table No. 3.15: List of Swing Zilla Parishads(with Low REVERSECOMPValues)

Zilla Parishad	Average VT	Average COMP
Chandrapur	72.25	8.27
Nanded	70.18	8.17
Buldhana	73.79	8.15
Nagpur	67.34	8.13
Aurangabad	68.59	7.84
Hingoli	73.36	7.71
Washim	72.32	6.96
Akola	67.58	6.95
Amravati	66.20	6.52
Jalna	71.68	6.51
Wardha	70.30	6.47
Gadchiroli	74.27	5.73

In the above table, 8 out of 12 ZPs have a Voter Turnout of more than 70 per cent; thus, nearly 67 per cent of the ZPs are high VT ZPs. In fact, higher competition between parties only exists in higher VT areas. Areas with high VT numbers are ripe for witnessing higher level of competition, because it is only with higher VT numbers that a lesser dominant party gets a true chance at breaking the dominant party's stronghold.

The following table shows higher REVERSECOMP quotient, which implies lower degree of political competition.

Table No. 3.16: List of Zilla Parishads with Low Competition Amongst Political Parties (High REVERSECOMP values)

Zilla Parishad	Average VT	Average COMP
Pune	66.96	14.756
Satara	68.90	14.512
Nandurbar	64.95	14.314
Sangli	72.16	14.111
Dhule	63.36	12.801
Ratnagiri	62.34	12.681
Sindhudurg	65.62	12.498
Solapur	69.35	12.496
Ahmadnagar	67.05	12.288
Kolhapur	75.41	12.058
Latur	70.41	11.982
Osmanabad	69.14	11.333

In the above table, it can be seen that only 3 out of 12 ZPs i.e. only 25 per cent have high VT ratios. Most of the ZPs have VT ratios of less than 70 per cent. This again supports the observation made earlier that higher political competition normally seems to happen in areas where the VT is high. Areas with lower voter turnout normally do not show a very high level of competition between political parties; in fact a single party dominance may be observed in areas with lower VT.

In order to check this, the above table with low competition amongst political parties is re-done below, without including Sangli, Kolhapur and Latur, which are the high VT areas. The table shows the political parties that have been in power from 1994 to 2014.

Table No. 3.17: Parties That Have been in Power in low Competition ZPs

Division	Zilla Parishad	R1	R2	R3	R4
Pune	Pune	INC	NCP	NCP	NCP
Pune	Satara	INC	NCP	NCP	NCP
Nashik	Nandurbar	INC	INC	NCP	INC
Nashik	Dhule	INC	INC	INC	INC
Konkan	Ratnagiri	SS	SS	SS	SS
Konkan	Sindhudurg	SS	SS	INC	INC
Pune	Solapur	INC	NCP	NCP	NCP
Nashik	Ahmednagar	INC	NCP	INC	NCP
Aurangabad	Osmanabad	INC	NCP	INC	INC

The table shows a very interesting trend. Except in Sindhudurg and Ahmednagar, the same party has won the majority in at least 3 rounds of elections. This implies that low competition ZPs with low voter turnout are actually perfect areas wherein one gets to witness single- party dominance. Of course, the fact that there is a single party dominance does not imply that the same party dominates in the elections. There is one more observation to be made here, which ties up with the arguments made whilst discussing political alignment. Just by observing this table, it is very easy to see how deeply entrenched the INC-NCP coalition is in the ZPs of Maharashtra. In the section on political alignment, it has been shown that once the State Government changed from SS-BJP in R1 to INC-NCP in R2, the jump in political alignment is huge. Thus, INC-NCP is definitely present in the high competition areas together with other political

parties. But it is also the most dominant party/ coalition in ZPs where single party dominance is observed.

3.4 SEATS WON BY INDEPENDENT CANDIDATES (IND)

The variable IND describes the proportion of seats won by independent candidates in Zilla Parishad elections. Following are the summary statistics for IND across 4 rounds of elections.

Table No. 3.18:Trends in IND across Successive Rounds of Elections

	IND_R1	IND_R2	IND_R3	IND_R4
Mean	9.42	4.40	7.25	4.51
Std. Deviation	9.40	5.70	6.56	4.52
Minimum	0.00	0.00	0.00	0.00
Maximum	36.84	31.37	23.53	19.61
No. of ZPs in which no seats were won by IND Candidate	7.00	7.00	7.00	7.00
No. of ZPs in which all seats were won by IND Candidate	0.00	0.00	0.00	0.00

The above table shows the summary statistics describing the variable IND. The proportion of seats won by independent candidates in ZPs shows a cyclical pattern. It is high in R1 and R3 but lower in R2 and R4. Across all 4 rounds of elections, the average proportion of seats held by independent candidates is around 6.39 per cent. In contrast, the average proportion of seats won by independent candidates in Municipal Councils and Nagar Panchayats is nearly triple and stands at 17 per cent. Thus, thereis a much lesser proportion of independent candidates winning ZP elections as compared to Municipal Council elections.

The table above further indicates that the minimum value of IND is 0 for all four rounds of elections. This implies that in every round, there are constituencies in which not a single seat is won by independents.

Most interestingly, the maximum value in none of the rounds is 100, indicating that there are no ZPs in which all seats are captured by independents.

The following tables give a list of ZPs in every round wherein there are no seats won by independents and wherein all seats are won by independents.

Table No. 3.19:List of Zilla Parishads in R2, R3 and R4 where no Seats were won by Independents

R1	R2	R3	R4
Akola	Beed	Jalna	Chandrapur
Dhule	Gondia	Latur	Jalgaon
Nandurbar	Hingoli	Nandurbar	Kolhapur
Ratnagiri	Nashik	Nashik	Latur
Sangli	Raigad	Raigad	Nandurbar
Sindhudurg	Satara	Satara	Osmanabad
Washim	Sindhudurg	Sindhudurg	Sindhudurg

It is only in Sindhudurg that not even a single seat has been won by independent candidates in any of the 4 rounds of elections.

3.4.1 CLUSTER ANALYSIS OF IND

We apply the cluster analysis on the IND variable in order to identify those Zilla Parishads wherein proportion of independents is high, medium and low. The cluster classification is given below. The tables (3.28 to 3.30) show that there are 17ZPs which fall in the "low" independent representation, 15ZPs which have a medium level of the same and only 1 ZP (Gadchiroli) which has a high proportion of independent candidates winning the elections. Zilla Parishads, in which less than 5.72 per cent of seats have been won by independents, belong to the low IND cluster. It is interesting to note that the average value of IND for Sindhudurg is 0, implying thereby that no independent candidate has won a seat in any of the successive rounds of elections in Sindhudurg. Those ZPs, in which 6 per cent to 11.75 per cent of seats belong to independent candidates, are in the medium IND cluster. Gadchiroli ZP, with 25.6 per cent seats belonging to independent candidates, is the only ZP getting classified as belonging to the high IND cluster.

Is there a relationship between IND and VT values? The following tables show that only 33 per cent of the ZPs belonging to low IND cluster show high VTs. 55per cent of the ZPs belonging to the medium IND cluster show high VTs. Finally, Gadchiroli ZP, which is the only ZP getting classified as having high IND, belongs to the high VT cluster. Thus, 100 per cent of ZPs in high IND cluster also have high VT.

This implies that IND and VT seem to have a direct relationship with each other. As we move from low IND cluster to the high IND cluster, the numbers of ZPs showing high VTs keep on rising.

This goes to indicate a powerful result. It is only in high VT areas that independent candidates have a higher chance of winning. Thus, higher VT is important, not only because it brings out people's choice correctly, but also because it creates a true level playing field between independent candidates and those with party tickets.

Table No. 3.20: Zilla Parishads Belonging to Low IND Cluster

Zilla Parishad	Average VT	Average IND
Sindhudurg	65.62	0.000
Raigad	71.37	1.251
Latur	70.41	1.293
Nandurbar	64.95	1.415
Jalgaon	66.21	1.471
Gondia	73.53	1.923
Sangli	72.16	2.433

Zilla Parishad	Average VT	Average IND
Satara	68.90	3.392
Ratnagiri	62.34	3.509
Osmanabad	69.14	3.704
Hingoli	73.36	4.000
Nashik	63.81	4.187
Thane	58.07	4.479
Aurangabad	68.59	4.655
Dhule	63.36	5.001
Washim	72.32	5.385
Akola	67.58	5.724

Table No. 3.21: Zilla Parishads Belonging to Medium IND Cluster

Zilla Parishad	Average VT	Average IND
Ahmadnagar	67.05	6.036
Chandrapur	72.25	6.125
Jalna	71.68	6.364
Pune	66.96	6.667
Parbhani	74.08	6.891
Buldhana	73.79	7.247
Amravati	66.20	8.087
Bhandara	74.92	8.499
Nanded	70.18	9.576
Yavatmal	68.22	9.744
Solapur	69.35	10.049
Kolhapur	75.41	10.242
Wardha	70.30	10.784
Beed	67.99	11.370
Nagpur	67.34	11.753

Table No. 3.22: Zilla Parishads belonging to high IND Cluster

ZiilaParishad	Average VT	Average IND
Gadchiroli	74.27	24.627

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

The proportion of SC and ST population (SCST) in the relevant areas is given in the Census and hence is taken as a basis for reservation considerations for 10 years, in which typically 2 rounds of elections are held. In areas governed by most Zilla Parishads, SCST does not show much variation across time. The average SC and ST population proportion in Maharashtra for areas governed by ZPs in every round has more or less remained at 25 per cent. The following tables use a cluster analysis to group ZPs into clusters having high, medium and low SCST ratios.

The cluster analysis places only the Nandurbar Zilla Parishad, with SCST at 80.28 per cent, in the cluster with high proportion of SCST.

Table No. 3.23: ZPs with High Proportion of SC and ST Population

Division	Zilla Parishad	SCST_R4
Nashik	Nandurbar	80.28

The medium SCST cluster contains a minimum value of 26.7 per cent and a maximum value of 51.19 per cent. The average SCST value for this cluster is 35.27, which is very distant from the Nandurbar value of 80.28 per cent.

Table No. 3.24: ZPs with Medium Proportion of SC and ST Population

Division	Zilla Parishad	SCST_R4
Amravati	Akola	31.15
Amravati	Amravati	37.53
Amravati	Washim	28.16
Amravati	Yavatmal	32.20
Aurangabad	Nanded	29.16
Konkan	Thane	45.57
Nagpur	Bhandara	26.70
Nagpur	Chandrapur	34.83
Nagpur	Gadchiroli	51.19
Nagpur	Gondia	31.18
Nagpur	Nagpur	31.37
Nagpur	Wardha	26.74
Nashik	Dhule	45.92
Nashik	Nashik	42.13

The low SCST cluster contains a minimum value of 2.59 in Ratnagiri and 23.26 in Jalgaon. The average for the low SCST cluster stands at 15.05 per cent. Thus, the low, medium and high SCST clusters have centroids at 15.05 per cent, 35.27 per cent and 80.28 per cent respectively.

Table No. 3.25: ZPs with Low Proportion of SC and ST Population

Division	Zilla Parishad	SCST_R4
Amravati	Buldhana	17.15
Aurangabad	Aurangabad	16.01
Aurangabad	Beed	13.97
Aurangabad	Hingoli	20.20
Aurangabad	Jalna	13.79
Aurangabad	Latur	23.02
Aurangabad	Osmanabad	18.85
Aurangabad	Parbhani	13.03
Konkan	Raigad	15.68
Konkan	Ratnagiri	2.59
Konkan	Sindhudurg	5.06
Nashik	Ahmadnagar	20.63
Nashik	Jalgaon	23.26
Pune	Kolhapur	14.06
Pune	Pune	14.53
Pune	Sangli	12.57
Pune	Satara	9.20
Pune	Solapur	17.33

This variable is important in that it could be pertinent in terms of affecting voter turnout. However, as section 3.6 elucidates, rather than SCST, the variable RES is more pertinent for understanding the impact on VT.

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

As has been mentioned above, the proportion of SCs and STs in the district 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 one decade, two elections are conducted in any local body. Now, since the reservation of seats is done on a rotation basis, a very interesting pattern emerges. Even if the number of SC and ST population in the district under the governance of the Zilla Parishad is frozen for a decade as per the Census, the reservation of seats in different constituencies undergoes rotation in the same one decade. This reservation pattern is seen to have an impact on VT.

Since data was not available at constituency level, it has not been possible to trace the impact of reservation patterns on VT. However, rather than using SCST, the variable RES seems to be more relevant in terms of understanding the impact on VT.

This is so because VT may not be linked directly to the proportion of SCs and STs in the population; rather, it may be more linked to the proportion of seats reserved for SC and ST candidates.

Table No. 3.26: Comparison of Average of SCST Population Proportion and Reservation Proportion across Different Rounds of Elections of ZPs

	R1	R2	R3	R4	Overall Average
Mean of RES	52.412	52.921	52.568	51.490	52.348
Std. Deviation of RES	14.793	14.860	14.860	14.328	
Mean of SCST	26.043	25.850	24.761	25.608	25.565
Std. Deviation of SCST	15.128	14.884	14.721	15.450	

The above table shows that the average level of SCST population as a proportion of entire district rural population stands at 25.65 per cent across all rounds of elections. The proportion of seats reserved for SC, ST and BCC in ZPs stand at about 52.34 per cent across all rounds of elections.

3.6.1 CLUSTER ANALYSIS ON RES DATA

Which are the Zilla Parishads in which the proportion of reservation of seats is higher? Those ZPs which show higher reservation levels are bound to be those ZPs where the proportion of SC and ST population is also accordingly higher.

The cluster analysis again creates a separate high RES cluster with a single entity i.e. Nandurbar, with 100 per cent seats getting reserved in the ZP**.**

Table No. 3.27: Zilla Parishads belonging to high RES Cluster

Division	Zilla Parishad	Average_RES
Nashik	Nandurbar	100.00

The medium RES cluster contains 12 ZPs, with RES values ranging from 55.88 per cent at Wardha to 80.29 per cent reserved seats at Gadchiroli. The average value for this cluster is 63.77 per cent.

Table No. 3.28: Zilla Parishads Belonging to Medium RES Cluster

Division	Zilla Parishad	Average_RES
Nagpur	Wardha	55.88
Nagpur	Bhandara	56.27
Nagpur	Gondia	58.33

Division	Zilla Parishad	Average_RES
Aurangabad	Nanded	58.35
Nagpur	Nagpur	59.84
Amravati	Yavatmal	60.9
Nagpur	Chandrapur	62.43
Amravati	Amravati	64.68
Nashik	Dhule	67.07
Nashik	Nashik	68.04
Konkan	Thane	73.13
Nagpur	Gadchiroli	80.29

The low RES cluster contains 20 ZPs, with RES values ranging from 30.13 per cent at Ratnagiri to 51.94 per cent reserved seats at Washim. The average value for this cluster is 43.12 per cent. Thus, the three clusters are created around centroid values of 100 per cent, 63.77 per cent and 43.12 per cent.

Table No. 3.29: Zilla Parishads Belonging to Low RES Cluster

Division	Zilla Parishad	Average_RES
Konkan	Ratnagiri	30.13
Konkan	Sindhudurg	33.00
Pune	Satara	36.70
Pune	Sangli	39.03
Pune	Kolhapur	40.51
Aurangabad	Parbhani	40.58
Aurangabad	Jalna	40.91
Pune	Pune	41.67

Division	Zilla Parishad	Average_RES
Konkan	Raigad	41.81
Aurangabad	Beed	42.02
Aurangabad	Aurangabad	43.71
Pune	Solapur	44.45
Amravati	Buldhana	45.53
Aurangabad	Osmanabad	46.30
Aurangabad	Hingoli	48.00
Nashik	Jalgaon	48.16
Nashik	Ahmadnagar	48.84
Aurangabad	Latur	49.14
Amravati	Akola	49.96
Amravati	Washim	51.94

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.

The main limitation of using DEV as a development proxy is that data on per capita income at 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. 3.30: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. 3.31: 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. 3.32: 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 2 defined the variables which would be of interest in terms of analyzing Zilla Parishad elections. Chapter 3 analyzed the trends in each of these variables and also arranged the variables into clusters for better understanding of the same. 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. It also comments on policy implications of these relationships.

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	-0.28[*]	Higher VT is observed in swing districts: Contest will be extreme	Culturally, high VT districts are important for MCC implementation
VT and IND	0.3[*]	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

Variables	Correlation co-efficient	Interpretation	Implication
VT and RES	-0.22[*]	Reservation proportion of seats affects VTnegatively.	There is a perception issue that areas with huge SC or ST pockets will exhibit higher VT and very high political activism. However, data trends show opposite results.
VT and POL	0.054	No relationship observed between voter turnout and political alignment	
VT and DEV	-0.4[**]	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	0.31[*]	ZPs with higher proportion of reserved seats show higher political alignment to the State Government	
POL and DEV	-0.03	Correlation coefficient is insignificant. No relationship is observed between development quotient and political alignment	

Variables	Correlation co-efficient	Interpretation	Implication
REVERSE COMP and RES	-0.21[*]	Higher reservation proportion in seats is likely to attract very high level of competition amongst political parties	In pockets with high SC or ST population, higher VT may not occur i.e. voter activism may not be very high, but political party activism likely to be high. MCC implementation needed.
REVERSE COMP and DEV	0.27[*]	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 at grassroots; MCC implementation should be targeted more actively in districts with lower income levels.
IND and DEV	-0.15	Independents are more likely to win in less developed areas with higher VT; however this result is statistically insignificant and hence cannot be interpreted	Creating more voter awareness and increasing VT is the best way of assuring a level playing field to independent candidates

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

4.1: Interpretation of correlations with VT

4.1.1: VT and the REVERSE COMP

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

A high VT goes hand-in-hand with a low REVERSE COMP. A low value of REVERSECOMP implies lower standard deviation in the distribution of seats won by different political partiesi.e it implies higher competition between political parties. Thus, a high VT is consistent with higher competition between political parties and hence, with a higher swing quotient. When the VT in a ZP is high, the elections can potentially swing either way and hence, all the ZPs which belong to the high VT cluster are potentially important for implementation of Model Code of Conduct. It is here that political activism comes into its own and there is a bitterly fought contest between political rivals.

4.1.2: VT and IND

A high level of VT not only has an implication for political parties, but also for candidates who want to contest independently. The correlation coefficient between VT and IND stands at 0.3, indicating that higher VT is consistent with a higher proportion of seats being won by independent candidates. Thus, it is in the high VT ZPs 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. There are many ways in which candidates contesting on a party ticket have a better chance of winning as compared to independent candidates. 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. A higher voter turnout gives a true chance of winning to the independent candidates.

4.1.3: VT and RES

It is a popular perception that voter turnout would be affected by how the seats get reserved in different constituencies. However, the data shows that proportion of reserved seats within a constituency is negatively correlated to voter turnout at all (Correlation co-efficient between VT and RES is -0.22).

There could be an underlying design issue that causes this correlation to be negative. As has been said earlier, SCST proportion is declared under the Census. In the next two elections, the same proportion is assumed to prevail and reservation is done accordingly. In the first election after the new proportions are declared, suppose there are 5 constituencies where there is a significantly high proportion of SCs and STs. Then the reserved seats are allotted to those 5 constituencies. Suppose that the VT is also quite high in these constituencies, giving a positive correlation between VT and RES.

In the next round of elections, the reserved seats get allotted to the next 5 constituencies due to the rotation system in Maharashtra, where actually the SC and ST population is a little lower. The VT is accordingly lower since the seats get reserved for candidates whose vote bank by caste does not exist in that constituency. Hence, the correlation between VT and RES turns negative. If the negative correlation is higher than the positive correlation in the earlier round of elections, then, the overall correlation co-efficient may show a negative sign.

4.1.4: VT and POL

The correlation co-efficient between VT and POL stands at 0.054, and is statistically insignificant. For all practical purposes, this means that there is no relationship observed between VT and POL. Thus, for the ZP data, there is no relationship observed between voter turnout in areas and the political alignment of the same with the state government.

4.1.5 VT and DEV

Higher is the development of a district, 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 well-developed districts. The correlation co-efficient accordingly exhibits a negative sign (the correlation between VT and DEV is-0.4) and is statistically significant.

Thus, higher voter turnout areas normally exhibit a high level of competition between political parties, a higher swing factor and a higher chance of winning for independents. Voter turnout does not seem to be associated with political

alignment shown by the ZP to the State Government. Higher the proportion of seats reserved for SC, ST or BCC candidates in a ZP, lower seems to be the VT.

4.2: Interpretation of correlations with POL

4.2.1: POL and RES

The data trends reveal that those ZPs in which the proportion of reserved seats to the total number of seats is higher tend to exhibit a higher political alignment to the State Government. It is to be noted that there is again no theoretical construct that helps in understanding why this could be the case; this data trend would have some value when forecasting studies are undertaken to understand which ZPs would be more likely to get State incumbents in power at the local level.

4.2.2 POL and DEV

Political alignment shows a negative correlation with development index. This could be interpreted to mean 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.

Thus, higher political alignment is witnessed in districts with lower development, with higher proportion of SC and ST population.

4.3: Interpretation of correlations with REVERSE COMP

4.3.1: REVERSECOMP and RES

This is an extremely interesting result. The correlation co-efficient between REVERSE COMP and RES stands at -0.21. Thus, when the proportion of reserved seats is high in a constituency, REVERSECOMP tends to be low there i.e. political competition tends to be very high. Through a reserved seat, a political party can gain quick access to a large number of votes based on the simple emotional lure that a reservation offers. Hence, political parties tend to have more bitterly fought contests when the proportion of seats reserved for SC, ST or BCC candidates is higher.

4.3.2. REVERSE COMP AND DEV

REVERSE COMP and DEV show a positive correlation co-efficient (stands at 0.27). REVERSE COMP captures the standard deviation in the distribution of seats won by political parties and hence, 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.

Thus, higher competition amongst political parties will be witnessed in ZPs with higher reservations and with lower development quotients.

4.4 Interpretation of correlations with 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 DEV

Independent candidates win higher proportion of seats in less developed districts with higher VTs. This is the interpretation of a positive correlation coefficient. However, the correlation co-efficient is insignificant, which implies that no relationship exists between these two variables.

Thus, independent candidates stand a higher chance to win elections in ZPs governing less developed districts with high voter turnouts.

The following table summarizes the interpretations of the correlation co-efficients.

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

Variable	Summary of Correlations
VT	Higher voter turnout areas normally exhibit a high level of competition between political parties, a higher swing factor and a higher chance of winning for independents. There is no observed correlation between voter turnout and political alignment. Higher Voter turnout is observed in ZPs with lower proportion of seats reserved for SC, ST or BCC candidates. More the development of a district, lesser is the voter turnout experienced in the ZP elections.
POL	Ditricts with higher proportion of reserved seats are seen to be more politically aligned with the State Government. More well developed a district, lesser is the political alignment with the State Government.
REVERSE COMP	Competition amongst political parties is higher in areas with higher proportion of reservations. Political parties are more active in the grassroots; lesser developed a district; more is the competition amongst political parties to have a presence in that district.
IND	Independent candidates stand a higher chance of winning elections in areas with higher voter turnout.

CHAPTER - 5

CONCLUSION

This report summarizes and analyzes the past data of Zilla Parishad 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 ZP elections. Following are the main findings of the study:

1. Average voter turnout for ZP elections across all rounds of elections stands at about 69 per cent. The voter turnout percentage has kept on decreasing with every successive round of elections; this should be the cause of some worry for the SECM.

2. The average VT in ZP elections at 69 per cent is lower as compared to the average VT in Municipal Councils, which are the closest urban counterparts to ZPs. Average VT in Municipal Councils is 70.7 per cent. This is a surprising result, because it is normally observed that rural local body elections in Indian states normally bring about higher VTs.

3. The lower VT could be a reflection of the huge level of migration that is happening from rural to urban areas. In fact, urbanization and migration could well be the two main issues that SECM will have to focus on in the coming years.

4. High VT is observed in developed and developing districts alike. This implies that VT depends on the voting culture in specific areas.

5. An observation which supports the above point is that the correlation coefficient between VT in a round of elections and the previous round tends to be positive. Thus, a ZP 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.

6. The study uses a cluster approach to identify those ZPs where voter turnout is likely to be low. A list of such ZPs is given in Appendix D.

7. Around 52 per cent of seats are reserved for SC, ST and BCC candidates across all Zilla Parishads. It is a popular perception that voter turnout gets affected by how the seats get reserved in different constituencies. However, the data shows that proportion of reserved seats within a constituency has a very mild impact if at all, and that too negative.

8. However, even if reservation of seats does not bring about political activism from perspective of voters, it does bring about higher levels of political activism from perspective of political parties. Political parties tend to engage in greater level of competition in those ZPs where the reservation of seats for SC, ST and BCC candidates is higher.

9. 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 distribution of seats is higher. Hence, if a political party has a stronghold over a Zilla Parishad, and if the voter turnout in that ZP tends to be low, there is a chance for the competitor party to try and break the stronghold of the former. Hence, it is in such ZPs that there will be bitter contests amongst political parties. The study identifies those ZPs wherein such patterns prevail; it is in these ZPs that implementation of the Model Code of Conduct will be very important.

10. Data also shows that political parties engage in tougher competition over seats in areas with lower development quotients. This implies that political parties try more to connect with the voter to the grassroot level. Thus, high voter turnout areas in less developed areas with higher level of reservations for SC, ST and BCC candidates are the obvious contenders for witnessing bitterly contested elections between political parties. It is here that the MCC machinery should be concentrated.

11. A separate appendix is given to highlight those ZPs where bitter contests will be fought between parties.

12. Around 6.39 per cent of the seats in Zilla Parishads are held by independent candidates.In comparison, 17 per cent of seats are won by independent candidates in the Municipal Council and Nagar Panchayat elections. Independent candidates stand a higher chance of winning elections in ZPs governing less developed districts with high voter turnouts.

Thus, the study creates 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 Zilla Parishads. Separate data analysis reports pertaining to Municipal Councils, Municipal Corporations and Panchayat Samitis have been created too.

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

Division	ZP	VT R1	VT R2	VT R3	VT R4	POL R1	POL R2	POL R3	POL R4	REV COMP R1	REV COMP R2	REV COMP R3	REV COMP R4	IND R1	IND R2	IND R3	IND R4	RES R1	RES R2	RES R3	RES R4
Amravati	Akola	63.00	73.48	68.50	65.35	0	0	0	0	8.70	6.47	6.25	6.37	0.00	1.92	11.54	9.43	56.60	49.02	48.08	46.15
Amravati	Amravati	67.63	65.12	67.00	65.07	0	1	1	1	7.51	6.35	4.93	7.28	8.62	3.39	18.64	1.69	64.41	65.52	64.41	64.41
Amravati	Buldhana	74.74	79.15	71.60	69.68	0	1	1	1	11.06	8.06	6.59	6.91	10.34	3.39	8.47	6.78	45.76	44.83	45.76	45.76
Amravati	Washim	69.09	76.32	73.90	69.98	0	1	1	1	10.79	5.47	6.59	4.98	0.00	8.00	2.00	11.54	55.77	50.00	50.00	52.00
Amravati	Yavatmal	72.84	68.22	67.10	64.72	0	1	1	1	11.53	9.44	10.58	8.59	22.95	8.06	6.35	1.61	59.68	62.30	62.90	58.73
Aurangabad	Aurangabad	67.82	70.77	67.60	68.17	0	0	0	1	9.84	6.60	8.51	6.42	8.62	3.33	1.67	5.00	43.33	44.83	43.33	43.33
Aurangabad	Beed	67.37	68.59	69.10	66.90	0	1	0	1	8.77	11.55	9.06	9.73	27.12	0.00	16.67	1.69	42.37	42.37	41.67	41.67
Aurangabad	Hingoli		73.41	74.40	72.27	N	0	1	0		6.76	8.29	8.08		0.00	4.00	8.00	48.00		48.00	48.00
Aurangabad	Jalna	73.96	71.93	70.60	70.25	0	0	0	0	5.79	6.96	6.63	6.67	12.73	3.64	0.00	9.09	40.00	41.82	41.82	40.00
Aurangabad	Latur	74.35	73.31	68.70	65.29	0	1	1	1	14.91	10.23	12.71	10.07	3.45	1.72	0.00	0.00	50.00	48.28	48.28	50.00
Aurangabad	Nanded	73.06	72.09	68.10	67.46	0	1	1	1	9.40	8.09	7.01	8.18	22.58	4.76	9.38	1.59	57.14	59.68	60.32	56.25
Aurangabad	Osmanabad	72.34	71.47	69.30	63.47	0	1	1	1	19.74	5.93	11.73	7.93	5.56	3.70	5.56	0.00	46.30	46.30	46.30	46.30
Aurangabad	Parbhani	79.73	72.78	72.50	71.32	0	0	1	1	11.58	7.81	9.13	7.44	8.33	5.77	5.77	7.69	38.46	45.00	40.38	38.46
Konkan	Raigad	77.00	67.84	70.90	69.75	0	0	0	1	9.00	9.64	8.23	7.91	3.39	0.00	0.00	1.61	41.94	42.37	40.98	41.94
Konkan	Ratnagiri	61.75	60.20	63.90	63.52	1	0	0	0	14.42	14.34	13.54	8.43	0.00	3.51	5.26	5.26	29.82	31.03	29.82	29.82

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Konkan	Sindhudurg	63.96	63.96	67.40	67.14	1	0	1	1	9.57	11.73	19.12	9.56	0.00	0.00	0.00	0.00	32.00	34.00	34.00	32.00
Konkan	Thane	56.91	57.84	59.30	58.24	0	1	1	1	12.40	5.44	7.32	8.07	1.56	4.55	10.29	1.52	72.73	73.44	75.76	70.59
Nagpur	Bhandara	75.27	74.05	77.40	72.96	0	1	1	0	15.07	7.57	5.39	7.33	3.23	3.85	15.38	11.54	53.85	59.68	57.69	53.85
Nagpur	Chandrapur	75.84	70.31	71.40	71.46	0	1	1	1	7.90	8.36	9.45	7.37	14.04	3.45	7.02	0.00	59.65	64.91	65.52	59.65
Nagpur	Gadchiroli	78.45	72.33	76.40	69.89	0	1	1	1	5.34	5.93	6.61	5.03	24.00	31.37	23.53	19.61	80.39	80.00	80.39	80.39
Nagpur	Gondia		69.12	76.10	75.37	N	1	1	1		10.18	9.61	8.39		0.00	3.85	1.92	57.69		59.62	57.69
Nagpur	Nagpur	71.98	67.20	67.40	62.79	0	1	0	0	8.73	7.63	8.33	7.82	36.84	1.69	5.08	3.39	57.63	61.40	62.71	57.63
Nagpur	Wardha	72.86	68.57	70.80	68.99	0	1	1	1	6.41	6.83	6.19	6.47	3.92	11.76	17.65	9.80	52.94	58.82	58.82	52.94
Nashik	Ahmadnagar	67.35	68.37	67.40	65.09	0	1	1	1	14.52	10.19	13.10	11.35	10.81	2.67	8.00	2.67	48.00	52.70	46.67	48.00
Nashik	Dhule	57.91	65.95	62.70	66.87	0	1	1	1	22.61	12.85	6.82	8.93	0.00	7.41	5.45	7.14	73.21	64.81	64.81	65.45
Nashik	Jalgaon	69.83	66.68	64.50	63.85	0	0	0	0	12.48	9.37	8.91	8.89	1.47	1.47	2.94	0.00	50.00	47.06	47.06	48.53
Nashik	Nandurbar	61.84	56.42	71.80	69.73	0	1	1	1	18.83	14.41	13.50	10.51	0.00	5.66	0.00	0.00	100.00	100.00	100.00	100.00
Nashik	Nashik	64.19	64.94	61.90	64.23	0	1	1	1	11.55	8.61	8.94	8.64	11.27	0.00	0.00	5.48	69.86	67.61	67.12	67.57
Pune	Kolhapur	75.11	72.68	78.60	75.24	0	1	1	1	16.78	12.38	9.15	9.92	13.43	10.14	17.39	0.00	40.58	40.30	40.58	40.58
Pune	Pune	69.23	67.79	65.90	64.91	0	1	1	1	19.11	11.13	16.74	12.05	12.00	5.33	8.00	1.33	41.33	41.33	42.67	41.33
Pune	Sangli	76.53	75.80	67.20	69.13	0	1	1	1	16.96	12.95	15.59	10.94	0.00	3.28	3.23	3.23	38.71	39.34	39.34	38.71
Pune	Satara	70.21	71.95	66.90	66.56	0	1	1	1	18.17	11.27	16.50	12.11	9.09	0.00	0.00	4.48	37.31	36.36	35.82	37.31
Pune	Solapur	72.86	72.82	68.50	63.24	0	1	1	1	14.84	12.94	11.81	10.40	16.67	1.47	16.18	5.88	44.12	45.45	44.12	44.12

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

ZP	Average VT	Average _SCST	Average _RES	Average POL	Average COMP	Average IND
Akola	67.58	22.77	49.96	0.00	6.95	5.72
Amravati	66.20	38.10	64.68	0.75	6.52	8.09
Buldhana	73.79	17.55	45.53	0.75	8.15	7.25
Washim	72.32	24.89	51.94	0.75	6.96	5.38
Yavatmal	68.22	33.45	60.90	0.75	10.04	9.74
Aurangabad	68.59	16.56	43.71	0.25	7.84	4.66
Beed	67.99	14.44	42.02	0.50	9.78	11.37
Hingoli	73.36	20.44	48.00	0.33	7.71	4.00
Jalna	71.68	14.69	40.91	0.00	6.51	6.36
Latur	70.41	22.59	49.14	0.75	11.98	1.29
Nanded	70.18	30.96	58.35	0.75	8.17	9.58
Osmanabad	69.14	18.62	46.30	0.75	11.33	3.70
Parbhani	74.08	14.66	40.58	0.50	8.99	6.89
Raigad	71.37	16.02	41.81	0.25	8.69	1.25
Ratnagiri	62.34	2.75	30.13	0.25	12.68	3.51
Sindhudurg	65.62	5.34	33.00	0.75	12.50	0.00
Thane	58.07	45.93	73.13	0.75	8.31	4.48
Bhandara	74.92	29.08	56.27	0.50	8.84	8.50
Chandrapur	72.25	36.94	62.43	0.75	8.27	6.13
Gadchiroli	74.27	51.82	80.29	0.75	5.73	24.63

ZP	Average VT	Average _SCST	Average _RES	Average POL	Average COMP	Average IND
Gondia	73.53	32.16	58.33	1.00	9.39	1.92
Nagpur	67.34	33.69	59.84	0.25	8.13	11.75
Wardha	70.30	29.34	55.88	0.75	6.47	10.78
Ahmadnagar	67.05	21.93	48.84	0.75	12.29	6.04
Dhule	63.36	40.51	67.07	0.75	12.80	5.00
Jalgaon	66.21	22.25	48.16	0.00	9.91	1.47
Nandurbar	64.95	76.56	100.00	0.75	14.31	1.42
Nashik	63.81	41.29	68.04	0.75	9.44	4.19
Kolhapur	75.41	14.01	40.51	0.75	12.06	10.24
Pune	66.96	14.64	41.67	0.75	14.76	6.67
Sangli	72.16	12.75	39.03	0.75	14.11	2.43
Satara	68.90	9.75	36.70	0.75	14.51	3.39
Solapur	69.35	17.29	44.45	0.75	12.50	10.05

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

ZP	Average VT	ZP	POL	ZP	Average COMP	ZP	Average IND	ZP	Average RES
Bhandara	74.92	Amravati	0.75	Pune	14.756	Gadchiroli	24.62	Nandurbar	100.00
Buldhana	73.79	Buldhana	0.75	Satara	14.512	Nagpur	11.75	Gadchiroli	80.29
Chandrapur	72.25	Washim	0.75	Nandurbar	14.314	Beed	11.37	Thane	73.13
Gadchiroli	74.27	Yavatmal	0.75	Sangli	14.111	Wardha	10.78	Nashik	68.04
Gondia	73.53	Latur	0.75	Dhule	12.801	Kolhapur	10.24	Dhule	67.07
Hingoli	73.36	Nanded	0.75	Ratnagiri	12.681	Solapur	10.05	Amravati	64.68
Jalna	71.68	Osmanabad	0.75	Sindhudurg	12.498	Yavatmal	9.74	Chandrapur	62.43
Kolhapur	75.41	Sindhudurg	0.75	Solapur	12.496	Nanded	9.58	Yavatmal	60.90
Latur	70.41	Thane	0.75	Ahmadnagar	12.288	Bhandara	8.5	Nagpur	59.84

Contd...

ZILLA PRISHAD ELECTIONS IN MAHARASHTRA : A DATA ANALYSIS (1994-2013)

ZP	Average VT	ZP	POL	ZP	Average COMP	ZP	Average IND	ZP	Average RES
Nanded	70.18	Chandrapur	0.75	Kolhapur	12.058	Amravati	8.09	Nanded	58.35
Parbhani	74.08	Gadchiroli	0.75	Latur	11.982	Buldhana	7.25	Gondia	58.33
Raigad	71.37	Wardha	0.75	Osmanabad	11.333	Parbhani	6.89	Bhandara	56.27
Sangli	72.16	Nandurbar	0.75	Yavatmal	10.036	Pune	6.67	Wardha	55.88
Wardha	70.30	Nashik	0.75	Jalgaon	9.912	Jalna	6.36	Washim	51.94
Washim	72.32	Kolhapur	0.75	Beed	9.777	Chandrapur	6.13	Akola	49.96
Solapur	69.35	Pune	0.75	Nashik	9.435	Ahmadnagar	6.04	Latur	49.14
Osmanabad	69.14	Sangli	0.75	Gondia	9.393	Akola	5.72	Ahmadnagar	48.84
Satara	68.90	Satara	0.75	Parbhani	8.989	Washim	5.38	Jalgaon	48.16
Aurangabad	68.59	Akola	0.00	Bhandara	8.839	Dhule	5	Hingoli	48.00
Yavatmal	68.22	Aurangabad	0.25	Raigad	8.692	Aurangabad	4.66	Osmanabad	46.30

ZILLA PRISHAD ELECTIONS IN MAHARASHTRA : A DATA ANALYSIS (1994-2013) 2016

ZP	Average VT	ZP	POL	ZP	Average COMP	ZP	Average IND	ZP	Average RES
Beed	67.99	Beed	0.50	Thane	8.310	Thane	4.48	Buldhana	45.53
Akola	67.58	Hingoli	0.33	Chandrapur	8.273	Nashik	4.19	Solapur	44.45
Nagpur	67.34	Jalna	0.00	Nanded	8.171	Hingoli	4	Aurangabad	43.71
Ahmadnagar	67.05	Parbhani	0.50	Buldhana	8.153	Osmanabad	3.7	Beed	42.02
Pune	66.96	Raigad	0.25	Nagpur	8.128	Ratnagiri	3.51	Raigad	41.81
Jalgaon	66.21	Ratnagiri	0.25	Aurangabad	7.843	Satara	3.39	Pune	41.67
Amravati	66.20	Bhandara	0.50	Hingoli	7.707	Sangli	2.43	Jalna	40.91
Sindhudurg	65.62	Nagpur	0.25	Washim	6.958	Gondia	1.92	Parbhani	40.58
Nandurbar	64.95	Jalgaon	0.00	Akola	6.948	Jalgaon	1.47	Kolhapur	40.51
Dhule	63.36			Amravati	6.517	Nandurbar	1.42	Sangli	39.03
Nashik	63.81			Jalna	6.513	Latur	1.29	Satara	36.70
Ratnagiri	62.34			Wardha	6.475	Raigad	1.25	Sindhudurg	33.00
Thane	58.07			GADCHIROLI	5.728	SINDHUDURG	0	RATNAGIRI	30.13

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

ZP	Average VT
Osmanabad	69.14
Satara	68.90
Aurangabad	68.59
Yavatmal	68.22
Beed	67.99
Akola	67.58
Nagpur	67.34
Ahmadnagar	67.05
Pune	66.96

ZP	Average VT
Jalgaon	66.21
Amravati	66.20
Sindhudurg	65.62
Nandurbar	64.95
Dhule	63.36
Nashik	63.81
Ratnagiri	62.34
Thane	58.07

APPENDIX E

ZILLA PARISHAD WHERE MCC IMPLEMENTATION OUGHT TO BE INTENSIVELY FOCUSSED UPON

A	B	C	D	E
ZP	Average VT	Average REVERSE COMP	Average_RES	No. of attributes promoting fierce competition
Kolhapur	75.41	12.06	40.51	1
Bhandara	74.92	8.84	56.27	2
Gadchiroli	74.27	5.73	80.29	4
Parbhani	74.08	8.99	40.58	2
Buldhana	73.79	8.15	45.53	3
Gondia	73.53	9.39	58.33	3
Hingoli	73.36	7.71	48.00	3
Washim	72.32	6.96	51.94	4
Chandrapur	72.25	8.27	62.43	2
Sangli	72.16	14.11	39.03	1
Jalna	71.68	6.51	40.91	3
Raigad	71.37	8.69	41.81	2
Latur	70.41	11.98	49.14	2
Wardha	70.30	6.47	55.88	3
Nanded	70.18	8.17	58.35	4

How to read the table:

1. The table above shows list of Zilla Parishads that could witness bitterly contested elections. These ZPs 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 ZPs are expected to show high level of political activism, both from the voters as well as political parties.
4. 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.
5. Where the REVERSE COMP is low, the competition between political parties will be high. Such ZPs have been highlighted in Column C.
6. The study shows that political competition tends to be bitter where the proportion of reserved seats is higher. Such Councils, which belong to the high reservation of seats cluster, 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 reservation proportion is high.
8. Columns A to 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 ZPs possessing at least 3 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 ZPs in Gadchiroli, Washim, Nanded, Buldhana, Gondia, Hingoli, Jalna and Wardha.