



**ISSUES IN APPLYING DATA FROM INDEPENDENT  
SOURCES FOR POLICY ANALYSIS**

LESSONS FROM THE 2011 CENSUS AND ELECTION IN TAMIL NADU, INDIA

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This document represents part of the author's study programme while at the Institute of Social Studies. The views stated therein are those of the author and not necessarily those of the Institute.

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## List of Acronyms

ADR	Association for Democratic Reforms
CSDS	Centre for the Study of Developing Societies
EB	Census Enumeration Block
ECI	Election Commission of India
HL	House Listing operations of Census
LCS	Location Code Statement
MP	Member of Parliament
NGO	Non-Governmental Organization
PCA	Primary Census Abstract
PE	Population Enumeration in Census
PR	Proportional Representation
RGCCI	Registrar General & Census Commissioner, India
SEC	State Election Commission
TN	Tamil Nadu, state in India

## **Abstract**

The Elections and Censuses are significant events that reaffirm and reflect the democratic polity in India. While the Elections to the National Parliament and state assemblies are conducted by a constitutional body the Election Commission of India, the decennial Censuses are coordinated by the Registrar General and Census Commissioner of India. The two events differ widely in their influence, political/official/media interest and people's participation/expectation. While the Census throws up a lot of data even at village levels, little is available at constituency level that can be compared with electoral data. Academics have felt the need for comparable data from the two exercises. The two have been conducted almost without any link. Reliable demographic and socio-economic information organized on the basis of constituencies is presently not available.

Tamilnadu(TN) state offers a possibility to take up a study that could fruitfully use data from Census 2011 and the 2011 TN Assembly Elections. This is because of the following reasons. Unlike most other states, census data collection in TN is organized in a manner that provides for the compilation of data on the basis of electoral constituencies, both events occurred at about the same time; and new data processing technology facilitates timely availability of comparable data.

Utilising this window of opportunity, this paper seeks to use the 2011 Census and Elections data from Tamilnadu to understand people's participation in the electoral process measured in terms of percentage of the eligible population who get registered as voters and the proportion of the population who turn up to vote. It is explored whether such participation varies in terms of gender, literacy and rural – urban classification. It is noted that there are also process related issues pertaining to Census and Elections that impact such people's participation. Steps to improve the processes in order to facilitate greater participation are also suggested.

## **Relevance to Development Studies**

Elections are the bedrock of democratic government. The more people participate in democratic decision making, decision making becomes all the more representative and acceptable. Literacy, urbanization and gender are some factors that are felt to impact voting behaviour. If we are able to pinpoint who are not participating in the electoral processes and if we seek to understand what deters them, then we can identify areas where efforts can be focussed to improve people's participation.

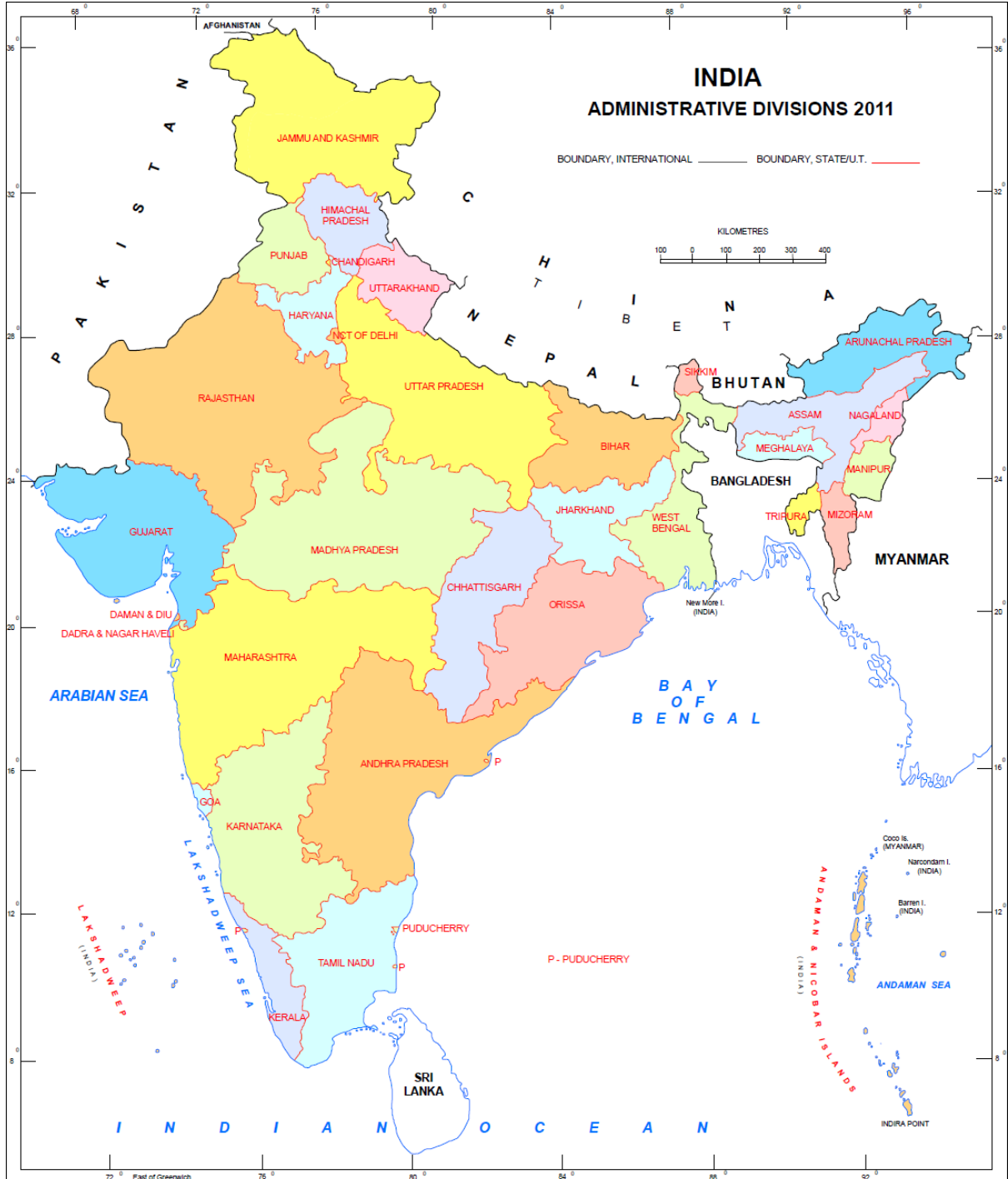
There are various theories that seek to explain voter behaviour. So far, measures of people's participation in electoral processes are available only from electoral data. Due to time lags, elections use projected data from past censuses which do not portray the real picture. By exploiting a unique opportunity afforded by the Census and Elections in the state of Tamilnadu in 2011, we are able to tap into data from two different exercises and seek to understand voting behaviour in Tamilnadu.

This analysis will throw light on how people's participation both in terms of getting enrolled as a voter and in actually voting in the elections, varies across constituencies, across gender, rural-urban, and literate – illiterate divides. It will also identify practical operational issues that seem to inhibit free participation by the people in the electoral process. Efforts made towards streamlining such issues will enthuse greater participation by the public in Census and Elections which will benefit all fields of study. Development in a democratic society is planned and delivered better if it is guided by a political executive that is brought on to the stage by an electoral process that is fair, free and involves the participation of more. The development process should earn the confidence of the people and this is contingent upon democratic processes where large numbers participate and steps are taken to effectively include those who are not keen participants who may be either vulnerable or just plain indifferent.

### **Keywords**

Data analysis – Census – Election – India - Tamilnadu — voting behaviour

# Map of India



The responsibility for the correctness of internal details rests with the publisher.

The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.

The external boundaries and coastlines of India agree with the Record/Master Copy certified by Survey of India.

The state boundaries between Uttarakhand & Uttar Pradesh, Bihar & Jharkhand and Chhattisgarh & Madhya Pradesh have not been verified by the Governments concerned.

The administrative headquarters of Chandigarh, Haryana and Punjab are at Chandigarh.

The interstate boundaries amongst Arunachal Pradesh, Assam and Meghalaya shown on the map are as interpreted from the "North-Eastern Areas (Reorganisation) Act, 1971," but have yet to be verified.

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## Introduction

*“Makkal theerpey Mahesan theerpu” – old Tamil saying (The people’s verdict is God’s verdict)*

In an election everybody has a vote, but does this also imply that everybody has a voice that counts? In a Census everybody has to be counted but does the Census count for all people? In other words are all citizens equally inclined and interested when it comes to participating in democratic processes? It is possible that processes in democracies such as Census and Elections may have different implications for different people. Besides, the procedures and hurdles involved in engaging with such processes may determine how a citizen reacts towards them. Ultimately, the benefit any citizen perceives or anticipates by participating in such processes will determine how he reacts to them. Given the fact that there is huge diversity across India, the responsiveness of citizens to such processes is also seen to vary among states and within any state.

A uniquely Indian problem while seeking to study people’s participation in elections is the absence of any comparable data. That is, data from elections simply report the electorate, turnout etc. without giving any other information about the population. Data from the Census on the other hand, is reported on a different basis and does not lend itself immediately to analysis on the basis of electoral constituencies. The administrative division of the country in terms of district and sub-district units bears no direct relationship to the electoral map of the country in terms of Lok Sabha, assembly and panchayat (village level elected body) or municipality constituencies and this leads to administrative and political problems. The adoption of different basic units for Census and Elections has resulted in the inability to use the data for more purposeful analysis and this has been critically reported in the literature (Alam 2010, An Agenda for Reform of the Election System in India. 2011).

There is also the aspect of timing of the operations. Census is conducted once every decade. However, elections do not follow this regularity and in some states they are conducted more frequently than the mandated five year period. For each and every election a fresh electoral roll is prepared. There is no single permanent roll that is used for each election. That is, even if a legislative assembly and municipal elections were to be conducted within a short period, they both have different electoral rolls though the basis could be the assembly electoral roll. In addition, before every election there is the process of revision of electoral rolls which seeks to remove dead voters, include new voters and to also remove names of people who have moved out. This being said, there are still reports of ‘ghost’ voters – people who are no more resident in the constituency but whose names find place in the electoral rolls. There is a clear absence of reliable data on the extent of this problem. This is because of the lack of any data against which this can be compared.

However, a chance has now arisen to explore such avenues, at least in respect of Tamilnadu. The Census in Tamilnadu was conducted with 1st March 2011 as the reference date. The elections were conducted in April 2011 with the reference date on the electoral roll as 26th March 2011. Thus, we have a situation where the two independent exercises namely the Census and Elections were reporting about data that corresponds to the same month at least and therefore facilitate comparison. Alam reports that as things stand, such a comparison is possible in only three states including Tamilnadu and is not easily possible in respect of other states, due



to the incompatibility of the basic units adopted for the Census and Electoral exercises (Alam 2010). When the comparison is possible, it is an added advantage that they pertain to the same time period. If this were not the case, then it would be very difficult to project the Census data because we will need to assume past rates of growth which many a time may not be able to explain the trend of population growth. This is especially so in the past decade in respect of Tamilnadu. The state after the results of the 2001 Census was expected to reach a population level of over 70 million only by around 2026. This was based on the growth rates seen the decade prior to 2001. However, there has been a rapid growth of population particularly the urban population that the population of TN in 2011 itself was over 72 million. This highlights the futility in resorting to the use of projected census data for any such comparative study.

Thus we have a situation which facilitates the comparative analysis of Census and Electoral data in Tamilnadu if only the Census data could be represented in terms of electoral constituencies.

**This is something which is clearly possible in case of Tamilnadu because of the clear delimitation order issued by the Election Commission of India (ECI) that clearly details the boundaries of each electoral constituency in terms of its constituent revenue village and/or town wards. By taking the Census data from the basis unit level and re-aggregating them in terms of the constituent units contained in each constituency we are able to obtain the 2011 Census data especially the Primary Census Abstract (PCA) in terms of the electoral constituencies.**

In this paper an effort is made to study such diversity of people's responses by taking the case of the 2011 Census and Assembly elections held in the state of Tamilnadu, India. The main aspect of Census 2011 namely the Population Enumeration was taken up in February 2011 and the election was conducted in April 2011 on the basis of electoral rolls updated for that purpose. Thus since these two events took place in close proximity, it provides us an opportunity to take up a comparative exercise based on quantitative data arising out of the processes and also qualitative data coming from field experience.

Over the past few decades there have been drastic changes in many Indian states. The economy has shifted from being predominantly agrarian to one that is largely dominated by the services sector, without developing a sizable manufacturing sector prompting some to term such development as a "rootless wonder". There have been good improvements in birth rates, death rates and other health indicators and some states like Kerala and Tamilnadu (TN) show Human Development Indicators that reflect good improvement in the quality of life of the population. There has been a rise in literacy levels across the country. In some states there has been a huge increase in urbanization. To appreciate these changes, it is necessary to look into Census data.

India has a rich tradition of conducting the decennial census since 1881, with the most recent Census being held in 2011. The Census provides a wealth of data about how the country and its people are changing over the years. The states that comprise the Indian union, between themselves show wide diversity along a spectrum of parameters such as population growth rates, age structure, sex ratio, birth rates, death rates, education levels, urbanization etc.

Along with the above evolution, there are changes in the electoral participation by the people and such changes are seen in India at various levels across the states. In the first few

decades after attaining Independence from British rule in 1947, the political firmament was dominated by the Congress party that had played a key role in the freedom struggle. This Congress dominance continued till 1984 till which time it always (except in 1977) turned out as the single largest party to form the Government at the centre, with a convenient simple majority of the seats in Parliament. Gradually Congress lost its appeal as a party that could appeal to everybody across the spectrum and this saw the emergence and gradual dominance of regional parties. The only other national alternative so far, the Bharatiya Janata Party (BJP) too seems to suffer from a similar predicament of not being able to appeal to people across all the states. Since 1996 the country has been ruled by coalitions led either by the Congress or the BJP. Thus, it appears that a situation has now arisen where coalition governments have become inevitable at the centre.

There has also been a noticeable change in the composition of the political class itself. The old Congress party was dominated by people belonging to higher strata in society (caste / class). This was further accentuated by the prevailing low levels of literacy, awareness and aspiration among the huge population of the backward castes and classes. Over the decades these classes realized the potential in their numbers and saw the way the democratic system can be worked to their favour. This has led to a situation where they now play a much more significant role in the political system across the country. This phenomenon has been elaborated by Jaffrelot and Kumar (Jaffrelot and Kumar 2012). This has also been termed as the '*second democratic upsurge*' by Yogendra Yadav, wherein India witnessed a major participatory upsurge among the socially underprivileged, across caste, economic class, gender or localities (Yadav 2000).

In addition to the socio-economic change indicated above, there have been drastic demographic changes over the past decades. This shows enormous diversity even across states. Specifically, if we look at certain parameters such as the rural – urban composition of population, sex ratios and the literacy levels we find that there have been rapid changes over the past and among the states there is great diversity. It is possible that such aspects too can be expected to play a role in the political participation of people in the democratic processes.

According to Tim Dyson all countries go through various stages of the demographic transition (Dyson 2010). At the initial stage of this transition, countries are in a poor undeveloped stage where they see very high fertility rates and mortality rates. Then, as a consequence of better access to medical services, the death rate starts climbing downwards. This is a period that sees a huge rise in population growth levels because the fertility levels remain high; and most of the people in such societies are very young and the population is very youthful with a very low median age. After this stage, the countries start getting more urban, life expectancy goes up and the fertility levels start to decline. Then the countries reach the final stage of the transition that is characterized by low mortality and low fertility levels just about near replacement levels. These societies also end up having a much higher share of the aged in the population. As countries evolve through various stages of the transition, the changing levels of literacy, urbanization and age structure do impact the political participation of the population.

This is seen in many countries across the globe. The Guardian Weekly reports that in Japan there is discontent over an electoral system based on post-war population figures which is bringing broader Japanese social fissures to the fore (Guardian Weekly 2013). Under their system which analysts call antiquated and that which Japan's Supreme Court says is "in a state of unconstitutionality", rural areas are granted disproportionate power in that they are allotted more representatives in Parliament than they ought to have based on their share of national population. As a result, voters in some rural areas such as Kochi carry more than twice the

weight of those in Tokyo or Sapporo. Rural and urban areas have little agreement on what's best for the country and there is also over-representation of the elderly. This disparity between rural and urban voters stems from mass-migration. After the Second World War, nearly two thirds of the Japanese population was living in rural areas and now it is down to less than a fifth. Though Japan's voting system has gone through reforms, the outlay of parliament seats has not kept up with the population shift (Guardian Weekly, 2013, *ibid*).

Devin Joshi finds geographic, ideological and demographic inequalities in parliamentary representation in India and Sri Lanka. Indian states average one MP (Member of Parliament) per every million eligible voters, but this varies from one representative for every 46000 voters in Lakshadweep to one per 1.6 million voters in Delhi. The similar spread in respect of Sri Lanka is only from one per 45000 to one per 82000. Similarly the density of state legislative assembly representatives per population in large states averages one per 199,000 people (Joshi 2012)

He finds this to be a case of low density of representation. Comparing Germany and the Indian state of Bihar that have similar population sizes, while Bihar has 243 state assembly seats there are 622 in the German Bundestag. UK and Germany with less than 10% of India's population have more MPs than India. The growth in number of Indian MPs has not kept pace with population growth leading to low density of representation. In the lower house of India's parliament namely the Lok Sabha, MPs have increased from 401 in 1946 to 544 while Sri Lankan MPs have quadrupled since Independence from 61 to 225. Sri Lanka's proportional representation electoral system introduced in 1989 correlates with more equal representation than India's single member district plurality electoral system (*ibid*). This leads one to ponder whether there is sufficient and fair representation from existing constituencies in India.

The number of people represented by an elected member has been increasing over the years. This is particularly the case in Tamilnadu which has seen an unprecedented rise in population in the past decade and is also the most urbanized among the larger states. A study of how this has affected the weight of the rural or urban voter, is a matter of great significance which will be explored.

An aspect that further affects the comparative study of both data sets arises from the manner in which they are collected and the uses to which they are put to. Providing the sought data to the Census enumerator is mandatory in that Census Act provides for penal action against those people who do not cooperate with the Census exercise. However, it is seen that people are not very excited about the Census and most of the rich and well off would prefer not to be disturbed by the Census enumerator. However, in contrast, there is no compulsion on any citizen to either get registered as a voter or even to vote in the election if he is enrolled in the electoral roll. That is, the citizen has to apply and then get himself enrolled after a verification process by the field officers.

Time is also another aspect also which facilitates such a study. Hitherto, the processing of Census data was slower and as a result the Census data would not be available for timely analysis. Due to improvements in the processes and adoption of better technologies, we are in a situation where population data from Census 2011 in the form of PCA has been released in 2013 itself. This is also a factor which makes the proposed study useful, timely and not something that has been done in the past.

The ECI is also concerned about enhancing people's participation in the electoral process. Recently it has commissioned a survey in most states to understand the knowledge, behavior, attitudes and perceptions of voters. With greater participation of people, democracy can be expected to be stronger. However, to step towards this direction, we need clear data on what the problems are and where they lie. This will be possible if we are able to use Census data and compare it with electoral data.

Thus, the proposed exercise in this paper, will help to understand the following issues in respect of Tamilnadu, with the use of 2011 data from Census and Elections:-

- How does the inclination of people (eligible citizens) to get registered as voters vary across the constituencies in the state? How is this variation along rural – urban lines and does literacy make any difference regarding this?
- How does the voter turnout vary across the constituencies in terms of gender and literacy? This is turnout as against the eligible population and not as against just the registered voters.
- Are there process related issues relating to Census, Elections and the Electoral system that affect the above outcomes?
- Can anything be recommended to overcome the shortcomings and make the Census and Elections have a more meaningful impact on the functioning of the democratic system?

This paper seeks to fill the gap in the academic literature by taking up a comparative study of the data sets from Census and Elections 2011 in Tamilnadu in order to address the above questions. In addition to analyzing the data, it seeks to address policy issues pertaining to democratic participation by people in the electoral process. The idea is to address the imbalance by understanding the present issues in participation and to thereby come out with specific recommendations that can help to improve people's participation to make the democratic exercise more representative and meaningful.

## Background concepts and theories

*“Every election is determined by the people who show up.” — Larry J. Sabato,*

There are two indicators that clearly reflect the participation of citizens in the democratic process – namely; getting oneself registered as a voter and secondly exercising the franchise at the appropriate time. Palshikar and Kumar feel that though turnout is a good indicator, there are other indicators of political participation that are generally ignored; these include people’s interest and participation in election campaign and other similar political activities (Palshikar, Kumar 2004). In India voting is not compulsory, indeed registering as a voter is also not compulsory but voluntary. That is, any eligible citizen needs to apply formally to get registered as a voter on the electoral roll. Thereafter, it is his/her own sweet will to vote or abstain in the ensuing election. Thus, the figures relating to voter registration and voter turnout in each constituency will yield more insight into the inclinations of the population in those areas.

Before we examine the figures, it is necessary to look at various existing theories about voter turnout. Internationally a lot of people still do turn out to cast their vote, although they are not obliged to do so; and this constitutes the paradox of (not) voting (Geys 2006). The Downsian ‘expected utility’ model of voter turnout states that a voter, in deciding whether to vote or abstain, calculates the expected utility of either action and votes if benefits exceed costs (Downs 1957). On one hand there are costs that a voter makes before the election day (example for gathering information about candidates, policies etc.) especially registration procedures, if fulfilled by voters, also involve significant costs (Highton 2004). On the other hand there are costs that the voter incurs on election day (getting to the polling station, opportunity costs etc.). Though it is implausible that the level of real turnout rates can be explained on such instrumental ‘rational choice’ and utilitarian grounds it is useful to predict that turnout falls with increasing costs or rises when elections are more important.

There are other theories that state that people may vote to see democracy continue and thus derive a ‘consumption’ benefit of voting. This can refer to expressing one’s compliance with the ethics of voting or expressing a preference amongst the candidates (Geys 2006). According to Goodin and Roberts, since the probability of affecting the electoral outcome is negligent, ethical preferences are likely to dominate an individual’s electoral decisions. There is also the Game theoretic approach to turnout proposed by Ledyard, Palfrey, Rosenthal that holds that people take the decisions made by others into explicit account. There are also group based models which argue that voting may be rational for a group of individuals because the expected benefits may exceed the voting costs at the group level (Grossman & Helpman 2001).

Simon’s theory of bounded rationality implies that people are not and cannot be utility maximisers but can best be described as ‘satisficers’. This is because they are constrained both by a lack of knowledge about the different consequences of their decisions and by their limited intellectual capacity to analyze all available options. This idea of limited information has been incorporated into theory of voter turnout by Matsusaka. Starting out from the assumption that people have a natural predisposition to vote, he argues that the probability of turning out increases with the individual’s information level (Matsusaka 1995). Larcinese (2000) added that the ideological preference of the voter influences the decision to acquire information and that non-partisan citizens are more likely to acquire information and thereby increase their likelihood

to vote. Such information based models help explain why some people have a higher likelihood of showing up at the polls but do not predict any actual level of turnout.

There are certain newer models that introduce elements of psychological learning theories into the calculus of voting models, in that people learn from their own past actions and results therefrom and then act. ‘Voting and abstention, in other words, are habit forming’ (Gerber et al, 2003). Such models based on adaptive learning theory seek to explain changes in voting behaviour within the individual over time; however given the variance in the costs of voting over different groups in the population such learning models are also compatible with the observed differences in turnout levels across groups (Geys 2006).

Thus citizen involvement in the voting exercise has been sought to be explained by various approaches as stated above - instrumental rational view, consumption benefit view, ethical voting, group based models, information based models and learning theories. In addition, there are also game theoretic approaches and Minimax Regret approach given by Ferejohn and Fiorina. Most theories seek to explain differences in turnout patterns while some strive to predict turnouts.

Yogendra Yadav, an eminent psephologist at CSDS and presently a politician feels that in respect of India there is no steady decline in voter turnout or increase in political apathy; rather, we are in the midst of a ‘participatory upsurge’ of a kind that could become a model in the history of democracy. According to him, global average of turnouts among electoral democracies in the post-war period is about 65 per cent and at 57 per cent India is way behind the established democracies in Western Europe, but substantially ahead of the US and most of South America. But he cautions that this could also be an understatement on account of spurious names on the rolls in the form of dead, migrated or simply non-existent voters. He feels that the socially disadvantaged value their status as citizens and have learnt to use their vote as a weapon of the weak. This has had two consequences – a substantial change in the social profile of the political elite, as more and more of political leaders and representatives come from communities that were excluded from political power and secondly the poor vote more than the rich especially in urban areas, unlike the scene in the global north where the rich, well-educated and those belonging to the majority community were more likely to vote and participate in political activity.

Apart from the above, there is also a need to examine the local factors that could affect turnout. For example, a voter’s inclination to vote could be affected by whether it is a first-past-the-post system as it is in India, or a system of proportional representation as seen in some western European countries. It has also been felt that the party system and the subsequent “symbol” concept may also have an impact on turnout (Jaffrelot 2007).

People’s interest in participating in the Indian elections has been studied by Palshikar and Kumar who find that people in general relate more to the state governments than to the national government and hence there is greater interest in the former, resulting in consistently higher turnouts in state assembly elections than in the Lok Sabha elections. Such higher turnout at the state level makes the Indian case different from ‘advanced’ democracies where the national elections witness higher turnout than the state or local elections. Besides, even in making the choice for Lok Sabha elections, the state government and its performance mattered to them; thus it is natural that turnout should be higher in the election of the more immediate level of government compared with distant government in the Delhi (Palshikar, Kumar 2004).

Similarly, they also find that unlike in western democracies where there is a trend of higher turnout among urban voters, who also have a higher sense of efficacy; in India there is a higher turnout and higher sense of efficacy among rural voters. This higher turnout in some ways also implies that the poor and the underprivileged voted more compared with the rich and privileged sections of society. Regarding gender they find that women turnout is lower in all states and that though there is a 'democratic upsurge' this social churning has largely bypassed the issue of gender disparity (ibid).

Thus though there are a lot of abstract theoretical studies that seek to explore why people vote the way they vote, there is need for greater exploration of this same phenomenon in respect of Indian elections. Similarly, people's responses towards Census operations have not been studied in detail. The worldwide experience regarding this is also mixed. For example, there are people who argue that voting must be made mandatory so that people participate and thereby justify their criticisms about government functioning. But it is not the case that mandatory voting may be a good solution. Brazil is one country for example where voting is mandatory and there are calls for revoking this because some people feel that it distorts the voting mechanism and that it may be better to let people to decide whether to vote or not.

In the Indian context of elections too there has been great series of reforms over the past two decades. Today in most elections there are photo rolls – namely electoral rolls that contain the photograph of each and every voter as also the number on the identity card of the voter. This is a great step towards reducing opportunities for impersonation. The poor voiceless voter has so far not been able to do anything about criminalization of the political arena where people with criminal antecedents have been projected as candidates. This can now be expected to wane, thanks to judicial pronouncements in this regard. For example, even a person convicted by a lower court for a grave offence, would continue to be a legislator, on the grounds that he has filed an appeal at a higher court. In most cases, the time taken at the higher court would be much more than the tenure of the elected office. The Supreme Court has now ruled that even a sitting member, on conviction by a court, stands to lose his seat by disqualification. It is hoped that this will reduce the pressure on political parties to field candidates with criminal backgrounds. Another interesting development is the order by the Court that the electronic voting machine should also offer the voter, an opportunity to indicate that he/she does not vote for any of the contesting candidates. This in future could be an interesting thing to watch, especially the legal situation if more voters in any constituency decide to exercise this "reject all" option. This could even help to improve the first-past-the-post electoral system in India wherein in some cases it is possible that the elected candidate has obtained the votes of a very low percentage of the population in the constituency. This strikes at the very basis of representativeness of elected representatives in India's first-past-the-post system.

The application of right data in the apt manner can be handy to understand policy issues but in the absence of data one is not in a position to understand the implications of policy measures and take follow up action. That is, in the absence of socio economic data about constituencies we cannot evaluate the effectiveness of elected representatives. Similarly, in the absence of election data that can be bench marked against population census data we will be working in a vacuum without knowing how the impact of the electoral process has been on the population in terms of representativeness etc. This paper seeks to explore this issue and identify issues involved when seeking to apply data from independent sources towards understanding impacts of policies.

## Elections in India

*“...they say if you don't vote, you get the government you deserve, and if you do, you never get the results you expected.” — E.A. Bucchianeri,*

After attaining Independence from British rule in 1947, the framers of the Constitution of independent India opted for a democratic form of Government on the basis of universal adult suffrage. This in itself was a far sighted decision taking into account the widely prevalent illiteracy, poverty and inequality all over the country. In addition, the country had just come out of the yoke of colonial rule and prior to that it was ruled by kings. It was the first time, the country had emerged as a single federal political entity in its present shape. In retrospect, it can be stated that India has indeed thrived as a Democracy, because it has regularly held periodic elections and there have been regular changes of ruling regimes based on these election results.

Conduct of free and fair elections is a lynchpin of democracy. Without this, the entire basis of democratic form of government becomes shaky. In the Indian context, with huge diversity in the population in the form of religion, caste, rural/urban residence, literacy levels etc. and with the male / female gender diversities, free and fair elections are inevitable if the democratic form is to be accepted by all citizens.

India is often described as “the largest democracy in the world” chiefly because of its ability to organize free elections at regular intervals (Jaffrelot 2007). The elections to Parliament at National level and to state legislatures are directed by the Election Commission of India (ECI) a constitutional body. Elections to the urban and rural local bodies in the state are coordinated by the concerned State Election Commission (SEC). Besides, there are also elections for a multitude of cooperative societies. The ECI conducts elections under the auspices of the Representation of People Act and the rules made thereunder. The Parliament comprises of the lower house (Lok Sabha) to which about 544 MPs are directly elected by the people and the upper house (Rajya Sabha) which comprises 233 members (indirectly) elected by state legislative assembly members and 12 nominated members.

Since Independence in 1947, the country has seen rapid growth. Population growth has been along different trajectories in various states. The southern states such as Kerala and Tamilnadu have reached population stabilization levels with low birth rates just near the replacement level. But, there are other states in the north which are still having high birth rates. Yet since 1977 the number of seats in the Indian Parliament has been fixed on the basis of the 1971 census results. The idea at that time was not to penalize states for lowering their birth rates and hence their rates of population growth. It was originally intended that this ‘freeze’ on political representation would be reviewed and probably lifted in 2001. Instead, however the freeze has been extended till 2026. According to Tim Dyson, the increasing disparity between the number of people in different states and their number of elected representatives is a potential source of friction. Together with differentials between states in their contribution to central government finances, it has underlain tensions between the states. There are reasons to believe that demographic growth has been a force behind the decentralization of governance (Dyson 2010).

Dyson goes on to add that demographic changes were also having major repercussions in the political and administrative realms. For example, other things being equal one might hypothesize that over the long run a large increase in population scale will lead to an increasingly



differentiated administrative hierarchy – due to increasing ‘administrative over-extension’. Relatedly, several of India’s Union Territories have been made into states – Arunachal Pradesh & Goa for example. It is also significant that the recently created states of Uttarakhand, Chattisgarh and Jharkhand were all carved out of very populous states and that they also have large tribal population.

The political parties too have been responding to such demographic changes. In the initial years, the scene was dominated by the Congress party that had played a key role in the movement to secure Independence. The congress sought to be very accommodative. But over the years some parties have arisen which have made specific appeals to distinct social groups. The emergence of these parties is clearly a consequence of the decline of Congress, which created the space for new parties to emerge and more internal cleavages based on caste and community to come to the fore. The emergence of the caste cleavage has tended to be stronger in socially-divided states, particularly those that are beset by poverty. In this sense social conditions are now mirrored in patterns of political conflict to a much greater degree than was ever the case previously, and in this respect the Indian party system has become more representative of the society at large [Yogendra Yadav in (Heath and Jeffery 2010)].

The logic of the Indian electoral system encourages parties to form alliances, both political and social, since no grouping on its own can be sufficient to win power. The nature of the complex cleavage system in Indian society based on religion, caste, region and language means that appeals to just one group will never be sufficient to gain political power. Also geography means that any religion or caste is not concentrated in any one place, so no community can win power on its own. This imposes a constraint on how far parties can go in appealing to a single, distinct group. (ibid)

India has over the decades tried to grapple with the triple challenges of huge population, low literacy levels of its electorate and the large number of contesting candidates. This led to evolution of the symbol system, which though it allowed voters to cast their ballot under conditions guaranteeing independence, adequate information and secrecy; had the unintended consequence of institutionalization of the party system (Jaffrelot 2007). By instituting this procedure, the Election Commission accepted the principle that endorsement by a central party organization was the essential determinant of party affiliation without taking into account other aspects such as his own views or statements etc.; which thereby reduced the complexity of candidatures to two relatively simple categories, mutually exclusive groups of party candidates on one hand and an undifferentiated mass of independents on the other, and it greatly strengthened the recruiting power of the central party organizations in the process (Bruce Graham in (Jaffrelot 1993)). In order to retain a symbol, a party had to obtain a minimum percent of votes polled at National or State levels. So parties tended to field candidates even in constituencies where they had no standing, simply to attain the required voting percentage (Jaffrelot 2007). In addition, each candidate had to forfeit a deposit if he failed to obtain a minimum number of votes. These factors go on to influence who enters the fray and what choice is available to the voter. The voter’s perception of this will have an impact on whether he/she turns out to vote.

In India’s 543 Lok Sabha constituencies, in the 2009 elections there were on average about 15 candidates competing, but only one among them got elected. This left roughly half the voters in each constituency with no LS representation by their preferred party. However, in the case of Sri Lanka’s proportional representation (PR) system any party receiving over 10 percent of the votes in a district got a seat thereby enabling most Sri Lankan voters to be represented by

the party they elected. This PR system creates incentives to include diverse demographic groups on party lists (Joshi 2012).

Sanjay Kumar has studied political participation by urban youth in India and he finds that they are gradually politically mobilizing and socializing. So far, youth have consistently recorded lower voter turnout compared to voters of other age group and participation in voting is even lower among the urban youth compared to the rural youth. Young urban Indian women consistently display lower voter turnout as compared to young urban Indian men. **A study cited in his report indicates that many voters think that the entire voting system, from registration to actual voting is voter unfriendly. Some others felt that the mismanagement of the electoral rolls was the reason for their non-voting. Thus, rather than pointing to some latent political and theoretical explanations for lower voter turnouts, the empirical data unearth reasons which were rather every day and logistical in nature. A national level representative sample of urban youth indicated that the single most important reason for not voting among the urban youth was their being out of station on the day of voting and not their being disenchanted with politics** (Kumar 2013). However since election dates are usually known well in advance and that it is declared a holiday for all sectors, it is possible that these people preferred a holiday outing to voting.

A reason for some apathy towards voting by the middle and upper classes could be the archaic procedures involved. Significantly, **for each and every election the electoral rolls are freshly prepared.** That is, there is no permanent electoral roll. There are periodic revisions in the form of summary revision and special revision of rolls to ensure that the rolls reflect the voting population. That is, every year or more frequently in case of elections, the voters are given an option to get included, call for deletion or make modifications in the rolls. There are specific paper forms for each request which have to be filled up and submitted at the appropriate local office. These days in many big cities the ECI is giving the option of filling out such forms online. But thereafter, the procedure is that the local official or a teacher has to come and enquire about the application and then recommend any inclusion, deletion or modification. In some summary revision cases it is possible that when the official had visited, the voters concerned could have gone out on a long visit etc which may even lead to deletion of their names from the rolls on the grounds that they did not seem to reside there anymore. Such people when they go to vote are shocked and surprised to find that their names no longer find place in the rolls.

Another problem is that of accounting for dead people and for people who have moved out of their erstwhile addresses to another part of the same town or even to another town or maybe even another state. Unless the political parties through their agents and field workers specifically bring to the notice of the local election officials about such cases, it is possible that such names continue to exist on the rolls. Sometimes, it is possible that the parties turn a blind eye to such instances, because such names provide the basis for bogus voting by getting some other favourably inclined or incentivised person to vote by impersonating as the persons on the roll. Again, since the elections are a national issue but are held at local levels, this leads to problems in ensuring the integrity of the rolls due to such multiplicity of agencies. For example a person who was a voter at Chennai, if he moves to Bengaluru in a neighbouring state, he has to apply for getting his name included at the new station and an intimation will be sent to the old station asking the officials concerned to remove the name from their rolls. In many cases people find it difficult even to locate their names on the rolls because they are not familiar with how the rolls are organized into parts.

It is possible that the poor people living in urban slums and those in rural areas do not face such issues. This is in spite of the fact that they may be more illiterate as compared to their urban counterparts. A reason for this is that such people are very keen to ensure that they retain their right to vote and be counted. They feel that they stand to lose something maybe some benefit that they could be entitled to from the state, if their names are not there on the rolls. Most importantly, having their names on the rolls entitles them to a voter identification card which serves as a very critical document for any adult to be identified. This is called for as proof of identity when they have to transact with any office such as the bank, welfare/pension etc. This is added incentive for them, whereas the urban and rich voters have alternate documents such as a drivers license, passport etc to identify themselves to the same authorities.

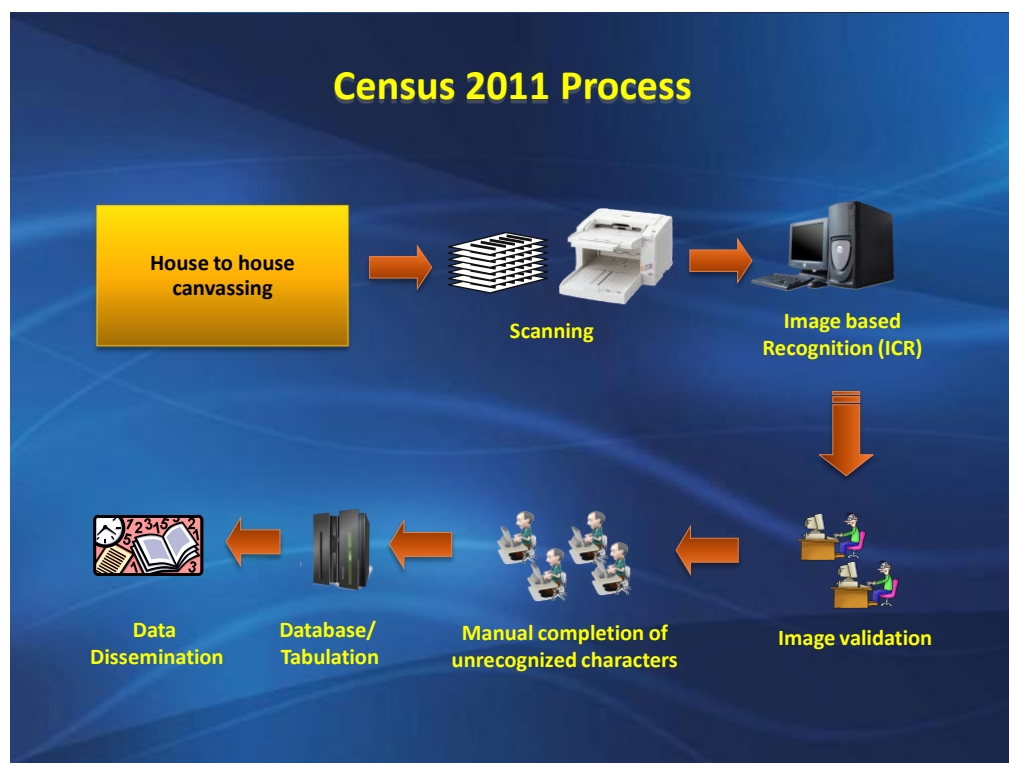
In respect of the poor rural and illiterate people, since the bureaucratic complex and its arcane procedures anyway stupefy them, they do not deal with this personally but through the intermediary namely the political party workers. Grassroots level field work is better organized at village levels and in urban slums that the political party agents go through the rolls sincerely and ensure that people who they consider to be their vote bank are not left out of the rolls. Such scrutiny is not done by them in case of the urban middle and upper classes because they are perceived as fickle voters. Most instances they do not find it convenient to turn up to vote and if and when they do turn up, there is no guarantee that they will vote for a party that champions their vote. Similarly they do not depend very much on the local political persona but for a poor person or for one who lives in an urban slum such a political persona is a great source of patronage and his intervention is required whenever the voter has to deal with agencies of the state such as police, health department etc. This explains why getting ones name on the roll is a real concern for the middle class voter but is not viewed as a great hassle for the rural and poor.

# Indian Census

*Census should serve the country by making a full and accurate exhibit of the elements of national life and strength and it should serve the science of statistics by so exhibiting general results that they may be compared with similar data obtained by other nations.* ... James A Garfield (1867)

The Indian Census is one of the largest administrative exercises in the world. For the recent 2011 Census more than 2.5 million people were engaged for the task of collecting data about a population more than a billion. They had to traverse across the country with an area 2.4% of the world's land area across 0.6 million villages and 7933 towns. To prepare for this exercise training was conducted in 18 languages to train the field staff in the respective areas. India had a history of regularly conducting decadal censuses since 1881. The Census Commissioner based at New Delhi and working for the Union Home Ministry directs the operations all across the country, assisted by a Census Directorate in each state. The Census operations were conducted in two stages, namely the House-listing & Household schedule (HL) canvassing stage and the subsequent stage of population enumeration (PE).

The HL operations help to draw up a frame that is used during the PE. The objective of HL is to ensure that the entire area under the map is covered and all structures identified. Alongside, other details about the houses such as water supply, type of dwelling, sanitation/drainage etc. are also collected. In Tamilnadu (TN) the HL operations were conducted in June-July 2010. In February 2011, the PE operations were synchronously carried out all over the country. During this stage, enumerators fanned out across the country to collect details about each and every resident with a paper schedule for each family and each line on the schedule representing details about one individual.



The above details are entered on a pre-printed paper sheet that has boxes to be filled in with specific codes. These sheets were canvassed in the local language and they were printed in 16 different languages. Thereafter, the sheets are collected and scanned where the codes entered are recognized by Intelligent Character Recognition (ICR) technology. This process is also overseen by human operators. Then, the data is compiled and released. Apart from a mere head count, from out of both stages of the Census we get a wealth of information covering aspects such as where people live (urban / rural), in what condition (type of house, sanitation, water supply), assets they have (phones, cars, TVs), how they move around (migration, mother tongue), what they do (work, literacy levels), how they are growing (fertility) etc.

The Census is carried out by the Central government as a statutory activity under the Census Act 1948 and Rules. The administrative machinery under the control of the state governments is used to conduct the field work for the Census. There are various implementation aspects that affect the quality of the data coming out of the Census. Often times the enumerator is a school teacher or a local government functionary who is already overburdened and is not able to spend enough time and energy on Census tasks. In many cases the agencies concerned do not realize the significance of the data being collected. Unlike the election exercise where there is great political/public interest, though being gigantic in scope, Censuses do not attract the mindshare of the politicians or the general public.

According to the Census Act, Census data is to be treated as confidential. This is to ensure that the respondent provides the data without the fear that it may be used for any purpose against him or her. Another aspect is that the data is recorded as disclosed and it is not the endeavour to cross check or substantiate with documentary support.

The Census enumerator is the lynchpin of the entire mammoth exercise. Over many weeks some of them have to traverse through tough terrain to remote places and in harsh weather. Normally, school teachers have always been preferred as enumerators because it was felt that being educated they could understand and appreciate the questions thereby eliciting and recording responses from illiterate people. However, on the administrative side, the conduct of census operations at the local level falls in the domain of the Revenue department in rural areas and the Municipalities in urban areas. Needless to say, the field level revenue and municipal staff are perennially overburdened that in most cases they do not show great interest in Census work. Besides, this is not as urgent as a law and order situation or collection of municipal taxes and at the same time, there is no political or public pressure regarding good conduct of Census. Thus, Census occupies much lesser mindshare in the priorities of local officials.

A major hurdle for local officials is that in many cases, especially in urban areas, the teachers are not interested to take up the task of census enumeration. The teachers who are drafted for census duty are paid a token amount of money as honorarium. For the 2011 Census it is indeed a handsome amount at least for rural areas but irrespective of the amount most urban teachers were not motivated simply by the monetary incentive offered. This is because in most instances the schools were not ready to spare the teachers for census work. A specific order was issued by the state government that teachers in government or aided institutions should be paid and permitted to go for census tasks. However, in spite of this, the local officials had to use their local clout to ensure that teachers were permitted to take up Census work.

In a big city it is not always possible that the teacher gets to enumerate at a location convenient to their place of stay or work. For example, in the city of Chennai thousands of

enumerators were deployed and naturally some of them had to travel to faraway places. This was necessitated by the requirement to deploy only teachers. During the course of enumeration the enumerators found that the urban populace especially some from the middle and upper classes were hardly interested to cooperate and respond. Some people frequently dodged under the pretext that they were engrossed in some work and requested the enumerator to come later. In some areas the enumerators were looked at with suspicion and in certain posh areas they were not allowed to enter huge compounds and had to talk to the security staff only. In one instance, a lady enumerator at Gopalapuram area in Chennai city was assaulted inside an apartment and robbed of her belongings. An enumerator from Poes Garden area complained that she was denied access to the lofts in the apartment and was asked to take the stairs instead. Thus it is clear, that the urban rich classes were not keen to cooperate with the census enumeration as they were largely cynical and did not see any benefit to them from the exercise.

At the same time, in the same Chennai city there were teachers who were deputed to slum areas who had a much different experience. Across the country, each enumerator was assigned the task of enumerating about 1000 people for which they were assigned about three weeks time. But in slum areas the task was completed in two or three visits. The reason is that the people there were much better organised. The first task was to meet them and explain to them about the operations. Then, the whole community responded positively and the local leaders helped the enumerator to collect the necessary data. This is because, the poor people in the slums felt that there could be positive outcomes from the census. For example, the Census was the basic exercise that leads to classifying and identification of slums. If a specific EB is NOT classified as a slum in the census then it stands to lose out on slum development funds that are granted by the state and central governments. Similarly, the people in the slums apprehend that in case they are enumerated, they could end up losing benefits provided by the state such as pension, food grains etc not to mention freebies such as free clothes, colour television, grinders etc.

Thus there is a clear difference in how the Census exercise is viewed by the rich and the poor. While the rich see it as a waste of their time and unnecessary interference with their affairs or even an intrusion into their privacy, the poor see it as an exercise by the state where it will help them to ensure that their presence is also recorded. Many persons from middle classes also share this anxiety about ensuring that they were not left out in the census. But in such cases the anxiety was largely misplaced because they feared that if they did not get themselves enumerated they stand to lose their privileges and benefits such as their vote, voter identification card or maybe even passport etc. This was unfounded because in case a person does not get enumerated in the Census he is not liable to be penalised in any way. Any such omission simply compromises the integrity of the large scale data but does not imply any effect on the individual citizen. Yet, there were people in the urban middle classes who intentionally close to stay at home, contact their enumerator and took such steps to ensure that they were enumerated.

In TN the basic unit for conducting the census in rural areas is the revenue village and in respect of urban areas it is a ward. Every ward or revenue village is divided up into enumeration blocks (EBs) that roughly have a population of around 800 in order to facilitate enumeration by a single enumerator. However, adoption of this sort of a basis is not the norm in various other states. The problems arising out of adopting such diverse units as basis for enumeration has been elaborated in great detail by Alam (Alam 2010). In fact, even within the state of Tamilnadu the way villages are organized under the two main departments namely Revenue and Rural Development show great diversity. For example, under the Revenue department each District in the state is subdivided into many sub districts that are made up of several revenue villages. This

is the administrative hierarchy that is used for Census and even for Elections. However, with regard to rural development the same district is also at the same time, divided into various blocks that are made up of village panchayats. At the lowest level many village panchayats may be co-terminus with a revenue village. But a large number of villages and panchayats do not show any correlation regarding their boundaries or extent. This is the reason; there are 16671 revenue villages across the state that corresponds to 12524 village panchayats.

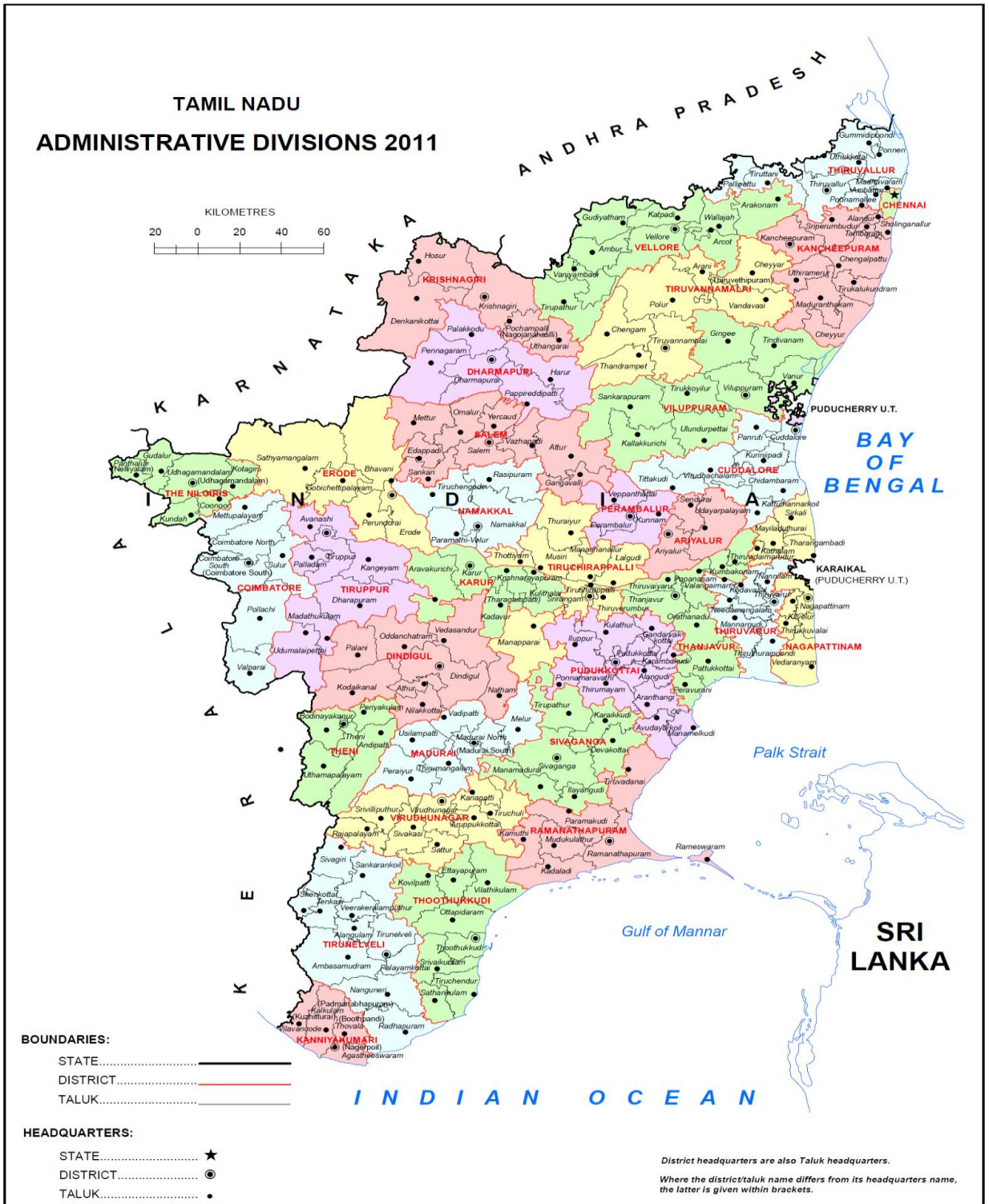
While drawing up the EBs for the Census, a golden rule to be followed is that any EB should NOT cut across the boundary of any village panchayat even if the entire area falls within the same revenue village, as is often the case. A detailed statement called the Location Code Statement (LCS) is prepared after a strenuous exercise, by the Census directorate based on field level inputs from the revenue and development departments. The integrity of the LCS is very critical to ensure that the collected data can be assimilated properly to portray the details relating to any particular unit such as a village or a panchayat. The LCS is a sort of correlation statement that indicates the village and panchayat within which each EB falls.

Thus, on completion of the Census operations and after the data is processed, the output tables are in the form of data that pertain to each village and town. This is then built up to bring out data pertaining to higher levels such as districts, state and ultimately national data. However, if data pertaining to village panchayats is required, then there is quite a lot of re-working to be done to present the data based on village panchayats as the basic unit.

For the purpose of this study, the data from the TN Census 2011 in the form of village level Primary Census Abstract (PCA) was taken as the starting point. The entire data was meticulously reorganized on the basis of the Election Commission's delimitation order that detailed each electoral constituency in terms of its constituent villages and towns or parts thereof. This yielded the constituency based PCA for the entire state. Now this data could be compared with data from the ECI that was already organised around constituencies.

The PCA data giving the age wise break up was made available only by 2013 by which time it was too late to be taken up for comparative analysis. However, the data in respect of those aged 18 and above has been culled out and the constituency wise population (male and female) has been prepared and kept as Appendix II. In this paper, for comparison purposes, the electoral data is compared against the census data for the constituency including all age groups. This data set is enclosed as Appendix I. This is indeed a restrictive comparison only as the percentage of those aged 18 and above is not the same across all constituencies but varies from around 66 percent to 73 percent. Thus, the data made available organized across constituencies is a significant store of a lot of socio economic information about electoral constituencies and will serve as a useful source of research in future.

# Map of Tamil Nadu





# Analysis of Census and Electoral data

*Statistics is the Grammar of Science* .... Karl Pearson

*Statistics : The mathematical theory of Ignorance* ... Morris Kline

Towards the exercise of looking into what can be learnt from interpreting data from two different sources we start by looking at what comes out from each of the data sets. Data about voting from the TN Elections 2011 which is arranged constituency wise has been posted by the ECI at their website in the Statistical Report (SR) available at

[http://eci.nic.in/eci\\_main/StatisticalReports/AE2011/stat\\_TN\\_May2011.pdf](http://eci.nic.in/eci_main/StatisticalReports/AE2011/stat_TN_May2011.pdf).

The Chief Electoral Officer of TN has posted a Narrative report (NR) available at

<http://www.elections.tn.gov.in/NarrativeReportTNLA2011.PDF> which contains more data that attempts a comparison with population data.

In the above exercise comparison is made against projected population data based on 2001 Census. The voter data is based on the people on the electoral rolls as in March 2011. But the population data is that which is projected for 2010 based on 2001 Census. For example, the total population for TN was projected as 67 million but the 2011 Census figure reports a population of 72.14 million. In addition, an attempt has also been made to study the age-cohort wise elector information. This will not be realistic because the figures used are projected. When there is a difference of more than 5 million in the total population (over 7 percent), the errors in the age cohorts will also be significant. This will definitely be the case because the growth in the population of the state has been at the higher age groups that vote, and not due to the birth rate which still continues to fall.

Similarly, the gender balance in the rolls has been studied based on the sex ratios that came out of Census 2001. Needless to say, not only is the data old but the comparison has been made taking the district as a single unit. This may not be accurate because this glosses over the variations in sex ratios that will be seen even among the many constituencies contained in a single district.

The analysis referred above, though essential, cannot be used to come to firm conclusions on account of the lack of data that pertains to the same time and from the same administrative units. This is sought to be offset by relying on Census data. In order to realize the significance of what the relevant data can portray, we consider the aspect of elector population ratio.

	From the Election (NR)	Using 2011 Census data
Number of voters	47049529	47049529 (from election)
State Population	67011999 (projected figure)	72147030 (Actual census count)

Elector Population Ratio	70.21	65.21
Elector pop ratio - Male	69.96	65.46
Elector pop ratio - Female	70.46	64.96
Sex Ratio in population	987	996
Sex ratio among voters	989	989

From the above data, the election report seems to indicate a high level of voter enrolment with a higher percent of women as against the projected population data. But, when it is compared with population from census data we find that the extent of enrolment of voters in general and women voters in particular is seen to be exaggerated in the election report. This is the effect at the state level and if we look at the numbers at the level of a constituency, the distortion becomes significant.

In order to examine how voter enrolment varies across the state and to study its relationship with literacy and urbanization, the constituency wise male and female enrolment rates are correlated with the respective male and female literacy percentages and the urbanization to arrive at the following findings:-

Percentile	Enrolment	Enrolment Male	Enrolment Female
1%	48.64	49.33	48.66
5%	56.83	57.90	56.58
10 %	60.10	60.21	59.54
25 %	63.00	63.34	62.41
50 %	65.47	65.55	65.29
75 %	68.13	68.06	68.11
90 %	72.01	72.15	71.33
95 %	73.43	74.21	73.34
99 %	83.29	84.32	82.36

The constituencies that show very low values are :-

Enrolment		Enrolment Male		Enrolment Female	
Tiruppur (North)	47.77	Jolarpet	48.63	Tiruppur (North)	46.27
Tiruppur (South)	48.07	Tiruppur (North)	49.22	Tiruppur (South)	46.77
Jolarpet	48.64	Tiruppur (South)	49.33	Jolarpet	48.67
Palladam	49.91	Palladam	51.02	Palladam	48.78
K.V.Kuppam	51.02	K.V.Kuppam	51.41	K.V.Kuppam	50.61

The constituencies showing high figures are:-

Enrolment		Enrolment Male		Enrolment Female	
Tirupattur	93.24	Tirupattur	92.11	Tirupattur	94.43
(Vellore District)		(Vellore District)		(Vellore District)	
Cumbum	91.59	Cumbum	91.07	Cumbum	92.11
Gudiyattam	83.28	Gudiyattam	84.32	Bhuvanagiri	82.36
Bhuvanagiri	83.12	Bhuvanagiri	83.87	Gudiyattam	82.27

The correlation figures with respect to literacy and urbanization works out as:-

	Total literacy rate	Male literacy rate	Female literacy rate	Percentage of urbanization	Sex Ratio
Total Enrolment percent	-0.034	-0.037	-0.034	0.010	-0.073
Male Enrolment percent	-0.014	-0.020	-0.011	0.0115	-0.025
Female Enrolment percent	-0.053	-0.051	-0.055	0.009	-0.117

The data available from elections pertaining to polling is as follows :-

	Number of voters	Number who voted	Polling percent
Male	23655187	18379034	77.70
Female	23393226	18377708	78.56
Total	47049852	36756817	78.12

The turnout figure seen above, though impressive needs careful reading. A good measure to assess the representative nature of the turnout is to calculate it as a percentage of the number of eligible voters, that is the entire population aged 18 and above. This number, specifically the age profile at lower level units such as villages and towns etc, from the Census 2011 operations, has been made available only in November 2013. However, as a proxy, we can compare it against the entire population in the constituency that was released earlier, as an effort towards identifying voting trends across constituencies. This can also be studied across lines of gender and literacy.

Basing the election data on the population data arising from Census, we note the following:-

	Number who voted ( from Elections)	Population (from Census)	Voters as percent of TOTAL population (across all age groups)
Male	18379034	36137975	50.86
Female	18377708	36009055	51.02
Total	36756817	72147030	50.94

We now proceed to look at what Census data reveals about the state. While data is available on a wide spectrum of parameters, we limit to just the total population with classifications along the lines of gender, literacy and rural-urban status. TN was found to have a population of 72.1 million out of the country's 1.21 billion. 48.4% of this were to be found in Urban areas as against the national urbanization figure of around 31%. Among the 32 districts in the state, Chennai the state capital was entirely urban and the level of urbanization in the other districts ranged from a low of 11% in Ariyalur to 82% in Kanyakumari. The state had a sex ratio of 996 females per 1000 males as against the national figure of 943. This positive trend is seen in both rural and urban areas which show sex ratios of 993 and 1000 respectively as against the corresponding national figures of 949 and 929. Among the districts, the sex ratio varies from a low of 946 in Dharmapuri to a high of 1042 in The Nilgiris. The state showed an overall effective literacy level of 80 % against the national figure of 73%. This varied within the state from a low of around 71% in Villuppuram, Ariyalur, Krishnagiri to a high of over 90% in Chennai and Kanyakumari districts. While the female literacy level for the state was 73.4 % low levels of female literacy around 56% were seen in rural areas in the districts of Salem, Erode and Dharmapuri. While the above observations come out of analyzing the census data organized around districts, we now seek to analyze the same parameters if the same data were to be re-organized on the basis of electoral constituencies.

Data when organized on the basis of constituencies, is bound to present a different picture which is possibly more important to understand development of constituencies. While the Census points to a urban population share of 48.4 % we see that out of the 234 constituencies there are 93 constituencies that have a urbanization figure higher than 48.4% of which 34 are entirely urban. In about 122 constituencies, the urbanization rate is less than 40% out of which in 19 it is less than 10 percent.

Regarding the sex ratio, while the state average was 996 we find that there are 103 constituencies where the sex ratio is less than the state average. There are 110 constituencies where it is greater than 1000.

About literacy, in the Census people aged 7 and above who are literate are treated as effectively literate. Therefore, the number of literate people aged over 7 years as a percent of the population over seven is termed as effective literacy rate. This works out to 80 percent for the

state, while the crude measure is the number of literate persons in all age groups as a percent of the total population which works out to about 72% for the state. We find that there are 122 constituencies where the literacy rate is less than the state average. There are 70 constituencies where the female literacy rate is less than 60 percent.

With the above idea of how data comes out from Census and Elections, organizing the data on constituencies basis we now examine how enrolment as voter varies across the state. In 15 constituencies we find that the voters are more than 75% of the total population. Taking the state average enrolment figure of 65.2% we find that there are 116 constituencies where the voters form less than 65.2% of the population in the constituency.

The constituency wise data summarized along percentiles is as follows:-

Percentile	Enrolment	Literacy	Sex Ratio	Urbanization
1%	48.64	56.34	916.16	2.6
5%	56.83	59.15	947.26	8
10 %	60.10	62.95	967.21	11.61
25 %	63.00	66.89	985.15	20.05
50 %	65.47	71.46	998.7	38.15
75 %	68.13	77.26	1014.44	73.51
90 %	72.01	81.98	1027.18	100
95 %	73.43	82.73	1037.76	100
99 %	83.29	83.99	1054.35	100

Constituencies with low numbers

Enrolment	Literacy	Sex Ratio	Urbanization
Tiruppur (North) 47.77	Thali 54.85	Pennagaram 908	Mailam 0
Tiruppur (South) 48.07	Veppanahalli 54.89	Omalur 910	Veppanahalli 0
Jolarpet 48.64	Sankarapuram 56.34	Edappadi 916	Rshivandiyam 2.6
Palladam 49.91	Pennagaram 56.51	Sankari 922	Kunnam 3.77
K.V.Kuppam 51.02		Mettur 924	Kalaspakkam 4.06

Constituencies with high numbers

Enrolment	Literacy	Sex Ratio	Urbanization 100%
Tirupattur 93.24 (Vellore District)	Nagercoil 85.81	Pattukkottai 1081	All of Chennai
Cumbum 91.59	T.Nagar 85.68	Orathanadu 1054	Most of Kovai city
Gudiyattam 83.28	Kolathur 83.99	Avinashi 1054	Part of Salem city
Bhuvanagiri 83.12	Thousand lights 83.51	Tiruchendur 1045	Part of Tirunelveli city
		Peravurani 1044	Part of Erode city

How does the above voter enrolment vary along the parameters of literacy, rural urban or gender? In order to study this, we seek to see if the data sets are correlated. The correlation among the variables is seen in the following table:-

	Elector registration	Literacy	Urban
Literacy	-0.034		
Urban	0.010	.795	
Sex ratio	-0.073	.366	.033

Among the variables, it **is seen that literacy and urbanization are very highly correlated**. The implication is that if a constituency is more urban in character then it is more likely that the literacy rate in that constituency is higher as compared with constituencies that are more rural. Another relationship is **that sex ratio is higher in such of those constituencies that show more higher literacy levels**. That is, wherever sex ratios are low it is largely in those constituencies where the literacy levels are also low. Surprisingly, the urbanization and sex ratios are not correlated. That is, sex ratio varies across both urban and rural constituencies but irrespective of whether it is rural or urban, if the literacy levels are higher then the sex ratio is also higher.

Proceeding to examine how the voter registration varies across these variables, we find that the only positive correlation though quite weak is with sex ratio. That is, in those constituencies where there is higher sex ratio it is likely that they will have higher voter registration as compared with those where the sex ratios are lower. Regarding literacy levels, the correlation is negative and very weak. **We could almost conclude that registration as voters is almost independent of literacy levels across the constituencies**. However with regard to urbanization there is negative correlation but still nothing very significant. We can possibly infer that as constituencies get more urban, the voter registration dips a wee bit.

Next we take up the analysis of voter turnout across constituencies. The spread of data is as follows:-

	Mean	Minimum	Maximum
Total Turnout	51.47	24.87	76.58
Male Turnout	51.40	24.78	75.48
Female turnout	51.55	24.96	77.73



Just as was done above for enrolment, we now evaluate the correlation of turnout against the three variables and we get the following output:-

	Literacy	Urbanization	Sex Ratio
Turnout	- 0.430	- 0.426	0.024

**This leads to the interpretation that while voter turnout seems to be almost independent of sex ratio of the constituency it is quite significantly and negatively correlated with literacy and urbanization.** That is, as the constituency becomes more urban or more literate (this will indeed be the case since we saw earlier that urbanization and literacy are strongly correlated across constituencies), the chances are higher that it will see a lesser voter turnout.

Now we seek to study whether there is any difference between the turnout pattern of male and female voters.

	Mean	Minimum	Maximum
Total literacy	71.67	54.85	85.81
Male Literacy	77.51	61.40	88.04
Female Literacy	65.80	47.39	84.52

The correlation works out to:

Correlation Between	For Males	For Females
Literacy and Turnout	- 0.346	-0.481
Sex Ratio & Turnout	0.024	0.023

This leads us to infer that male and female turnout are not dependent much on the sex ratio. However, there is a clear negative correlation between the turnout and literacy rates for both men and women. This negative relationship is much stronger for women turnout as against men. That is, as the level of literacy increases among the women in the constituency, it is seen that the female turnout is lesser in such constituencies.

## Procedural issues in Census and Elections

The work on the field for both Census and Elections is done entirely by the existing workforce at the states and districts in the city municipal offices and taluk (sub-district) offices. The most common category of staff deployed for field work is the school teacher who is present in adequate numbers across the country and who is expected to be capable enough to appreciate the task and deliver it. During the Census and Elections all these people are deemed to be working for the Central Commissioner and ECI respectively.

Field work for Census is long drawn (spread over many weeks), boring and there is public apathy and political indifference. On the other hand, Election work is short (a few days), with great media and political interest and maybe more interesting. Though the staff are paid handsome honoraria for lending their services, it is noted that this is not enough of an incentive because they are already pretty well paid and they have to be coerced and coaxed to report for such duty (especially if it falls during holidays and vacation time!). Thus, we largely see government/municipal employees and teachers who are not interested, being drafted for Census and Election duty. With this backdrop, we now proceed to see what could be the shortcomings in the Census and Elections that could then be rectified by suitable reform.

The Census data has been used for significant decisions in the past such as the Partition of India in 1947, the re-organization of the states on linguistic basis in 1957 and the electoral delimitation exercises. But the Census data is based on administrative units which mostly do not match the electoral constituencies. Thus, **despite the regular conduct of such huge exercises, socio economic data is not available at the constituency level, which thereby hampers meaningful aggregate data analysis of electoral outcomes.** (Alam 2010).

In order to strengthen Democracy, Bose (2008) calls for coordination between the Census and Election exercises so that age data are correctly recorded and there are no fake voters and at the same time no genuine citizen aged over 18 years is denied the right to vote. He also highlights the need for a “Census Commission” as a permanent organization as against the present practice of appointing a Commissioner just a couple of years prior to each Census.

Kumar (2009) reports that about 40% of the voters do not vote in different elections and he attributes this not merely to apathy but also because of faulty electoral rolls and inability of some to produce proof of their identity. He also finds that the trend of limited participation in the electoral process has a weak social bias in favour of the more privileged sections.

Saraph (2011) argues that in the absence of correspondence between administrative boundaries and constituencies, and in case of constituencies changing in composition from one election to another, the ability of a vote to act as a proxy for governance is destroyed. He further adds that six decades of governance with such disconnect between the offices of election have resulted in a serious imbalance in governance, development and environmental sanity (Saraph; 2011). He points out that in the process of preparation of electoral rolls, the existence of citizen data in the national Census is ignored. He also points to various procedures that need to be simplified.

Gowda et al also feel that the voter enrolment process needs to be made more citizen friendly since it is cumbersome for citizens to enrol themselves if they miss out on being included in the roll updating and revision process. Gowda and Sridharan (2012) report that India has developed complex election expenditure, political party funding and reporting and disclosure laws. They find that these laws may have a perverse impacts on the electoral system in that they tend to drive campaign expenditure underground and foster a reliance on unaccounted funds or “black money”, which thereby leads to an adverse selection system.

### Reforming Census Operations

The Census warrants reforms on two fronts namely equipment and personnel. Right from the first stage of drawing up Census enumeration blocks, the process is done manually on paper. Today, with GIS technologies, it is possible to draw up a clear map without missing a single structure. This was tried in some capital cities but needs to be pushed further. In fact, Pizza vendors are seen to better use high-tech GIS software for planning routes for Pizza delivery in crowded by lanes of cities. Satellite imagery can be used to draw up maps that ensure that no structure is left out.

The present method of capturing data on a paper and then de-coding it has to change simply for the reason that in spite of resorting to fast imaging software, there is quite some time before the data is made available for the users. In this regard, the recent Brazilian Census shows the way forward where hand held devices were used to capture data from respondents which were then automatically sent to a database(from IBGE website). With today’s tele-density, it is possible to use such networked devices to capture data and store it immediately. This will also facilitate much closer monitoring of progress in the coverage of the field work in the form of areas covered and households covered in each area (Enumeration Block). This was tried out in the recent Socio-Economic and Caste Census,2011 where the enumeration process was contracted out and hand held tablet devices captured the data which was then uploaded on a computer at the end of each day. Periodically it was uploaded to a central server.

Instead of relying on any customized device, it will be preferable to develop an App that can be loaded on to any smartphone or laptop and then used for enumeration process. Till such time, customized devices can be adopted which also become an asset because they can then be used for other regular surveys. (This is akin to the Electronic Voting Machines (EVMs) – that are stored and repeatedly used).

Ultimately even the best devices and technology will not prove worthwhile if they are used by uninterested persons. The mind-set needs to change that Census field work can be done only by full time teachers. In a huge country with lots of talent and unemployment, it is possible to deploy Census volunteers who will be ready to take up this task at even lesser cost. A verification system needs to be in place to ensure that people do the enumeration properly and that the quality and integrity of the data is maintained. With almost every adult or household having a mobile telephone, this task becomes manageable. There is almost no incentive for anybody to distort raw Census data. Volunteers suitably identified and trained can prove adequate for the enumeration task. A Census call centre will come in handy to handle the interfacing with the citizens.

In addition to deploying latest technology and the right people, there is still another ingredient required. This is to ensure that people realize the significance of the task and participate accordingly. It will not be fruitful to force people to participate but the stakes can be raised. After the Census every decade, there must be compulsory electoral redistricting based on the latest figures, as is being done every decade in the USA. This will ensure that political parties take greater interest in the Census process. They would not want to miss out any household and would also be keen to ensure that the data is captured properly without distortion. Gradually such delimitation should also seek to re-shape the constituencies so that they stand based on administrative units such that census data can then be used for electoral analyses.

### Reforming Electoral process

This attitude of the upper classes is seen to be indifferent by their lack of interest and participation in the political process. India's successful conduct of periodic elections came about only due to the enthusiastic participation by the poor and rural segments of the population. It remains a case that the well-heeled do not co-operate with Census operations, do not cast their vote yet maintain a cynical attitude towards public systems with great expectations from it.

This cannot be entirely attributed to white collar indifference. The processes of getting oneself registered as a voter, getting a voter ID card, casting one's vote are all archaic processes which are indifferently executed by the administrative machinery that has no incentive to consider the interest of the voter. Such routine activities are better left to be done by engaging private agencies. This does not imply that the political process can be out-sourced to political interests but that there are routine aspects in the electoral process that warrant a citizen interfacing which can be better delivered by engaging private non-governmental agencies.

Changes in disclosure norms about contesting candidates was brought about by strong campaigning by civil society actors like Action for Democratic Reforms (ADR). Yet even after the rules were in place, ADR through its Election Watch ensured that relevant information was obtained (sometimes even by resorting to the Right to Information), analysed and disseminated to the electorate. This is some task which can't be done by any political or state agency. Similarly, even for voter enrolment, a private company (Tata Tea) joined in as part of its publicity campaign to enable voters to become more aware and get enrolled. Through its website ([www.jaagore.com](http://www.jaagore.com)) there are celebrities crying out that only 16% of urban youth are voting and the site provides a convenient handle to know about the various electoral forms, procedures etc. This is a welcome development and many such attempts can be incentivised by the Election Commission.

Other possible activities – looking at every household whether the voter is still there or dead / moved out, verifying the address of applicants seeking new enrolment, distributing voter slips to all voters telling them about place/time of voting etc – all these are routine tasks which are presently being carried out by indifferent municipal staff or teachers. Many view such tasks beneath them and do not see any incentive to do these properly. Similar to the Census idea, there could be a pool of volunteers or private agencies that can be drafted to do such tasks. Unlike the Census, where they merely collect data, here there is a possibility that such agencies can be hijacked by political interests. This can be averted by adopting a transparent monitoring mechanism. The risk is less than what is there in the present system where the civil servants sometimes play partisan.

Regarding the contest in elections, many a time the incumbent candidate has an added advantage by virtue of being an insider. In a huge country with a large talent pool, it can be decided that no incumbent should contest again in any election to the same office. This will ensure a level playing field for all candidates. For example an assembly legislator should be barred from standing again for assembly elections. This will weed out the old and will forcibly bring in fresh thinking into the political arena.

Greater coordination between Census and Elections especially brought about by harmonizing and having comparable administrative units as basic building blocks will ensure greater information flow. Routine tasks are not done better by the bureaucracy. Such tasks can definitely be outsourced without affecting the integrity of the task, what with today's technology and awareness. There is a need to adopt new technologies and new practices. In the Indian Census and Election exercises, if new technologies are adopted and if routine tasks (especially those that involve dealing with the average citizen) were to be outsourced to be executed by private agencies (NGOs, Volunteers etc.), then even without any drastic change in the age old Election and Census laws, there is the possibility that they can be delivered better. This is particularly important because they have a direct or indirect impact on how all other public services are delivered.

## Conclusion

In a democracy it is essential that people participate in the relevant processes so that the elements of democratic functioning such as representativeness and accountability can be retained. Across the world, we see that though there are many democracies, they seem to span a diverse spectrum. At one end we have advanced democracies inspired by the western European ideals. At the other end there are certain countries that are democratic just in conducting elections but are in effect authoritarian dictatorships where the same person retains his control on the state apparatus continuously. In between these two extremes, there are many countries that can be classified as “hybrid” democracies.

Where any country gets placed on this democratic spectrum, depends on how systems are established and encouraged that engender the participation of greater numbers of people. This entails a variety of requirements such as a free and vibrant press, an independent judiciary that is free and fearless when it comes to acting against the ruling regime, electoral commissions free of political interference that conduct periodic elections in a free and fair manner that paves the way for peaceful transitions of power etc. In most cases, a vibrant opposition is seen to act as an effective check and balance to counter any case of authoritarian tendency. Though a free press, independent judiciary etc are indeed required, in cases where a dominant person takes over as a leader, albeit through democratic channels, in many countries he is able to subvert or dominate even these institutions that nobody criticizes or acts against him. If such is the case, there may be a facade of democratic institutions but yet they remain ineffective. True democracy can exist only when there are free and fair elections that reward performers, punish wrongdoers or non-deliverers and every ruling party seeks to function with this in mind that they are likely to be voted out by the people if some other party offers a better alternative in the minds of the people.

Thus, among the number of institutions that are needed to sustain and nurture democratic societies, a free and fair electoral system where people can vote fearlessly and the system reflects the will of the voters without getting subverted by vested interests, is indeed the most essential ingredient required for effective functioning of a democracy. But, institutions or systems by themselves do not make any impact and a lot of their effect depends on the people; namely the people who run and manage the institutions and the people who are governed. In the Indian context, this is particularly significant because an alien system, namely the western model of democracy, was inflicted from above, on the people who at the time of Independence from British rule in 1947 were largely poor, illiterate and unexposed to the concept of a democracy based on one man one vote.

The Census however had an advantage in that it was institutionalized by the late 19<sup>th</sup> century all over India. But, the awareness among the people, the types of questions asked and most importantly the application of Census data for development applications are factors that changed perceptions and attitudes of people about the Census. As the years progressed, the country saw rapid development and this was not a uniform phenomenon all over the country. Among the states some saw good progress in human development in the form of better delivery of health, education etc alongside improvements in infrastructure and economic growth. Some states however failed to develop fast and were seen to be laggards. The population saw clear differentiation along the lines of literacy levels, gender and rural-urban composition. This divide affected the way in which they accessed the democratic processes and also the way in which such processes evolved to meet the people’s requirements.

Any study of how electoral and demographic parameters were related was hugely affected by the fact that these two exercises were conducted in a manner without any link between the two operations. However, the Census and Election in 2011 in the state of Tamil Nadu, provided an unique opportunity by throwing up data about Census and Elections that can be compared at the level of electoral constituencies. This was used to study how people's response to democratic processes such as voting differed along the lines of literacy, gender and rural-urban divide.

It is found that there is significant variation in the enrolment of voters, that is, the percentage of the total population in a constituency that have been enrolled that is, registered as voters. This varies from a low of around 48 percent to a high of more than 90 percent. This gives a clear focus area for the election authorities to look specifically at constituencies that may have higher number of bogus/ghost voters as also target those constituencies where steps need to be taken to enrol more number of citizens as voters.

It is seen that the level of literacy in a constituency is closely correlated with the degree of urbanization. Thus, as constituencies become more urban in nature we see a clear rise in the literacy levels there. When it comes to getting registered as a voter, there is almost no difference between constituencies when studied across the literacy parameter. But there is a clear negative correlation between voting and literacy levels, which seems to imply that in spite of insignificant differences when it comes to getting registered as voters, the literate voters do not turn out for voting as enthusiastically as their illiterate fellow citizens.

When analyzed from the gender angle, it is seen that women get less interested in voting as they become more literate. That is, in those constituencies where the female literacy levels are higher, there the turn out by women voters is much lesser as compared to turn out by women in constituencies with lesser levels of female literacy.

The quantitative data analysis from Census and Elections helps us to identify such of those areas where focus is needed to enrol more voters or to increase turnout. But having said this, there are procedural bottlenecks too that need to be addressed. There is great scope for adopting friendlier technologies in both processes. Given the high levels of skilled manpower available across the country, there is good potential for out-sourcing a number of operations that can be better delivered by private volunteers and can be effectively monitored as well. Regarding the Census, if it is mandated that re-districting will follow every Census, it will succeed in attracting political and public interest that could ensure greater coverage and participation.

This paper has sought to attempt a simple quantitative analysis of comparable data from Census and Elections in Tamil Nadu. A study of procedural issues that would seem to affect people's participation has also been touched upon. The Appendix contains constituency wise Census data on certain parameters which can prove to be a mine field of hitherto unavailable information in the form of demographic data at the level of electoral constituencies, offering enormous scope for further detailed analyses. Another last minute addition is the constituency wise age data that was compiled in November 2013 due to the data being made available recently. This brings out 41 constituencies where the voters on roll outnumber the 18 plus population. This could be a census undercount or more possibly places where the rolls need greater clearing of dead or ghost voters. Thus the data from two sources can be utilised to orient action appropriately. However owing to structural issues, such analysis is not possible in many states of the country whereby there is a need to restructure the basis on which data is collected. In addition, procedural improvements suggested will elicit greater and better response from the citizens.

## Appendix I Data set used for analysis

	Male	Female	Total Pop	Men Voters	Women Voters	Total Voters on Roll
GUMMIDIPOONDI	171274	171898	343172	107153	108250	215403
PONNERI (SC)	151631	151801	303432	101902	100525	202427
TIRUTTANI	176003	175022	351025	117526	118216	235742
THIRUVALLUR	159102	158045	317147	104369	103488	207857
POONAMALLEE (SC)	159862	159570	319432	115782	113587	229369
AVADI	233809	227975	461784	141809	135730	277539
MADURAVOYAL	236075	231349	467424	138550	130891	269441
AMBATTUR	234923	231282	466205	136039	128846	264885
MADAVARAM	204396	198568	402964	139920	135658	275578
THIRUVOTTIYUR	168042	165665	333707	112279	109141	221420
DR.RADHAKRISHNAN NAGAR	150463	150809	301272	97336	97784	195120
PERAMBUR	180615	178824	359439	116681	115607	232288
KOLATHUR	146948	147425	294373	104247	103677	207924
VILLIVAKKAM	133739	133778	267517	96498	96678	193176
THIRU-VI-KA-NAGAR (SC)	135751	136731	272482	90019	91161	181180
EGMORE (SC)	120965	120852	241817	82359	82363	164722
ROYAPURAM	122769	122719	245488	79572	79742	159314
HARBOUR	134595	125226	259821	80043	72733	152776
CHEPAUK-THIRUVALLIKENI	140329	134978	275307	93637	93602	187239
THOUSAND LIGHTS	135562	136722	272284	99634	100313	199947
ANNA NAGAR	156791	157659	314450	113653	113085	226738
VIRUGAMPAKKAM	164579	162562	327141	109165	105699	214864
SAIDAPET	172179	162246	334425	109687	109290	218977
THIYAGARAYANAGAR	128404	126177	254581	98130	96709	194839
MYLAPORE	145127	147763	292890	106077	109201	215278
VELACHERY	167028	166417	333445	114019	113179	227198
SHOZHINGANALLUR	251603	245023	496626	182617	174994	357611
ALANDUR	218203	215541	433744	120580	118815	239395
SRIPERUMBUDUR (SC)	174004	168514	342518	104768	105643	210411
PALLAVARAM	196475	195470	391945	140595	137047	277642
TAMBARAM	200877	196235	397112	129191	125721	254912
CHENGALPATTU	198800	195775	394575	127584	124809	252393
THIRUPORUR	157267	153676	310943	97342	94667	192009
CHEYYUR (SC)	135822	135207	271029	88310	85576	173886
MADURANTAKAM (SC)	137941	137787	275728	90443	90009	180452
UTHIRAMERUR	140752	140083	280835	96791	97396	194187
KANCHEEPURAM	182159	182850	365009	117602	120177	237779



	Male	Female	Total Pop	Men Voters	Women Voters	Total Voters on Roll
ARAKKONAM (SC)	144057	144117	288174	89925	89832	179757
SHOLINGUR	156869	156409	313278	106373	105025	211398
KATPADI	145783	144817	290600	93003	95477	188480
RANIPET	164463	167734	332197	98585	99221	197806
ARCOT	167686	169671	337357	103637	106043	209680
VELLORE	169851	175235	345086	94778	95811	190589
ANAIKATTU	127942	129899	257841	92674	93806	186480
KILVAITHINANKUPPAM (SC)	169001	171491	340492	86899	86794	173693
GUDIYATTAM (SC)	124508	127553	252061	104991	104943	209934
VANIYAMBADI	154348	153133	307481	93622	92920	186542
AMBUR	140908	144152	285060	87546	88521	176067
JOLARPET	197054	195069	392123	95827	94934	190761
TIRUPATTUR	99218	95363	194581	91386	90049	181435
UTHANGARAI (SC)	146330	138088	284418	95261	91570	186831
BARGUR	140009	135227	275236	97739	94505	192244
KRISHNAGIRI	168814	167471	336285	99512	100389	199901
VEPPANAHALLI	153648	146740	300388	95800	89565	185365
HOSUR	201732	191092	392824	119967	109500	229467
THALLI	149699	140959	290658	96385	87980	184365
PALACODU	163503	154015	317518	92554	87439	179993
PENNAGARAM	134608	122226	256834	100786	94583	195369
DHARMAPURI	164428	158076	322504	110047	105797	215844
PAPPIREDDIPPATTI	167310	158861	326171	106515	101897	208412
HARUR (SC)	144454	139362	283816	96977	91661	188638
CHENGAM (SC)	170235	166805	337040	106886	104534	211420
TIRUVANNAMALAI	155048	154455	309503	104935	107359	212294
KILPENNATHUR	154469	152417	306886	102420	102677	205097
KALASAPAKKAM	141013	139077	280090	90542	89043	179585
POLUR	155770	156390	312160	98206	97299	195505
ARANI	161184	162509	323693	107055	108783	215838
CHEYYAR	155436	154459	309895	105793	105215	211008
VANDEVASI (SC)	142734	142874	285608	100812	98091	198903
GINGEE	146774	145430	292204	107657	105579	213236
MAILAM	146199	144124	290323	93233	90295	183528
TINDIVANAM (SC)	143947	143934	287881	94348	94057	188405
VANUR (SC)	149933	149362	299295	98976	97078	196054
VILLUPURAM	156589	157149	313738	104423	104827	209250
VIKRAVANDI	141820	139354	281174	94973	91654	186627
TIRUKKOYILUR	162365	158375	320740	100727	95708	196435
ULUNDURPETTAI	188584	185037	373621	117142	111808	228950
RISHIVANDIYAM	166041	161908	327949	106714	100011	206725

	Male	Female	Total Pop	Men Voters	Women Voters	Total Voters
SANKRAPURAM	143604	140925	284529	106335	102375	208710
KALLAKURICHI (SC)	194963	192456	387419	110672	106517	217189
GANGAVALLI (SC)	137753	135556	273309	91444	91759	183203
ATTUR (SC)	143439	142515	285954	97466	99330	196796
YERCAUD (ST)	170124	166849	336973	105320	104661	209981
OMALUR	177886	162032	339918	118026	109062	227088
METTUR	165551	153064	318615	110055	102553	212608
EDAPPADI	169625	155403	325028	112142	104765	216907
SANKARI	162859	150296	313155	110541	104008	214549
SALEM (WEST)	178663	171531	350194	107983	104374	212357
SALEM (NORTH)	155417	153728	309145	109726	109528	219254
SALEM (SOUTH)	160367	158549	318916	109987	109904	219891
VEERAPANDI	159887	150962	310849	102688	98805	201493
RASIPURAM (SC)	142256	136789	279045	97438	97102	194540
SENTHAMANGALAM (ST)	145473	142986	288459	98674	98950	197624
NAMAKKAL	157146	154923	312069	102344	104352	206696
PARAMATHI-VELUR	133728	133012	266740	92249	94368	186617
TIRUCHENGODU	146149	147860	294009	91325	91266	182591
KUMARAPALAYAM	144528	141751	286279	93649	92759	186408
ERODE (EAST)	132963	133389	266352	87574	87779	175353
ERODE (WEST)	162346	158112	320458	97182	95936	193118
MODAKKURICHI	131330	132925	264255	93439	94370	187809
PERUNDURAI	140576	142176	282752	90006	88235	178241
BHAVANI	135436	135146	270582	99625	96454	196079
ANTHIYUR	139963	139911	279874	88638	84970	173608
GOBICHETTIPALAYAM	148116	143532	291648	105068	103914	208982
BHAVANISAGAR (SC)	130242	128425	258667	101197	98269	199466
DHARAPURAM (SC)	147094	149385	296479	103004	102087	205091
KANGAYAM	159022	157493	316515	97487	96079	193566
AVANASHI (SC)	114130	120333	234463	97748	94987	192735
TIRUPPUR (NORTH)	126478	131254	257732	113505	102799	216304
TIRUPPUR (SOUTH)	119535	123664	243199	87904	80001	167905
PALLADAM	162817	163579	326396	117816	110762	228578
UDUMALPET	157003	159529	316532	100300	100086	200386
MADATHUKULAM	230611	222182	452793	89026	87258	176284
UDHAGAMANDALAM	178185	171048	349233	85332	85867	171199
GUDALUR (SC)	230886	227055	457941	79891	79357	159248
COONOOR	161169	159882	321051	81205	83557	164762
METTUPPALAYAM	219175	215617	434792	106421	105283	211704
SULUR	176641	175347	351988	107143	104346	211489
KAVUNDAMPALAYAM	171223	170668	341891	149595	144982	294577
COIMBATORE (NORTH)	135689	135312	271001	112819	108944	221763
THONDAMUTHUR	173610	175041	348651	107620	105534	213154

	Male	Female	Total Pop	Men Voters	Women Voters	Total Voters
SINGANALLUR	132729	134100	266829	116422	113844	230266
COIMBATORE (SOUTH)	167992	167860	335852	100697	99467	200164
KINATHUKADAVU	114596	116906	231502	107588	106914	214502
POLLACHI	150147	151757	301904	88322	88695	177017
VALPARAI (SC)	115763	117140	232903	80207	81862	162069
PALANI	164402	164785	329187	105505	104273	209778
ODDANCHATRAM	130492	130472	260964	98245	97672	195917
ATHOOR	154663	155637	310300	112234	114153	226387
NILAKKOTTAI (SC)	144482	142159	286641	90890	90251	181141
NATHAM	170044	168713	338757	104011	103245	207256
DINDIGUL	154199	155187	309386	95645	96433	192078
VEDASANDUR	162656	161884	324540	105932	105564	211496
ARAVAKURICHI	118248	120946	239194	84190	86274	170464
KARUR	139427	141486	280913	94805	99404	194209
KRISHNARAYAPURAM (SC)	131151	132075	263226	87201	87571	174772
KULITHALAI	139358	141802	281160	89533	90091	179624
MANAPPARAI	168809	170146	338955	108490	107688	216178
SRIRANGAM	172648	174761	347409	110318	110644	220962
TIRUCHIRAPPALLI (WEST)	160845	165576	326421	101556	104042	205598
TIRUCHIRAPPALLI (EAST)	154238	157569	311807	99974	100925	200899
THIRUVERUMBUR	168769	166262	335031	105533	103549	209082
LALGUDI	125070	129795	254865	86470	88265	174735
MANACHANALLUR	141624	142387	284011	92774	93151	185925
MUSIRI	133279	133565	266844	92394	92319	184713
THURAIYUR (SC)	127581	130535	258116	89696	91159	180855
PERAMBALUR (SC)	180561	181115	361676	112196	116147	228343
KUNNAM	156969	158469	315438	105245	107447	212692
ARIYALUR	159214	161676	320890	108635	110040	218675
JAYANKONDAM	160116	161997	322113	108081	107639	215720
TITTAKUDI (SC)	132409	130197	262606	88716	87009	175725
VRIDDHACHALAM	157437	152446	309883	100062	95778	195840
NEYVELI	143991	139702	283693	85486	80591	166077
PANRUTI	150149	150172	300321	97253	96633	193886
CUDDALORE	142877	145733	288610	90835	91011	181846
KURINJIPADI	150621	147319	297940	93377	88504	181881
BHUVANAGIRI	126226	123356	249582	105863	101606	207469
CHIDAMBARAM	169000	167734	336734	96560	94839	191399
KATTUMANNARKOIL (SC)	138987	137558	276545	94157	87839	181996

	Male	Female	Total Pop	Men Voters	Women Voters	Total Voters
SIRKAZHI (SC)	145699	149162	294861	98295	96449	194744
MAYILADUTHURAI	144362	147726	292088	93889	90970	184859
POOMPUHAR	162590	168817	331407	107702	104323	212025
NAGAPATTINAM	117261	120040	237301	75241	76569	151810
KILVELUR (SC)	111774	114330	226104	70798	70333	141131
VEDARANYAM	116441	118248	234689	77047	77908	154955
THIRUTHURAIPOONDI (SC)	145358	149877	295235	97018	96654	193672
MANNARGUDI	148427	152187	300614	102957	102378	205335
THIRUVARUR	163957	167868	331825	104826	104511	209337
NANNILAM	168951	167652	336603	112282	106382	218664
THIRUVIDAIMARUDUR (SC)	154954	155862	310816	100497	96089	196586
KUMBAKONAM	155448	158470	313918	100581	99684	200265
PAPANASAM	153451	159327	312778	99269	98782	198051
THIRUVAIYARU	160215	160713	320928	103794	103298	207092
THANJAVUR	158673	165181	323854	99431	102339	201770
ORATHANADU	134474	141809	276283	96547	96405	192952
PATTUKKOTTAI	139979	151365	291344	90671	96922	187593
PERAVURANI	127391	133035	260426	86081	87192	173273
GANDHARVAKOTTAI (SC)	123178	122916	246094	78485	74121	152606
VIRALIMALAI	136352	137408	273760	81086	79295	160381
PUDUKKOTTAI	141952	143082	285034	88645	88699	177344
THIRUMAYAM	131804	133559	265363	83615	88270	171885
ALANGUDI	123756	129165	252921	84306	84330	168636
ARANTHANGI	142096	144858	286954	84789	85742	170531
KARAIKUDI	183436	182279	365715	112447	114261	226708
TIRUPPATTUR	166526	165872	332398	107749	110564	218313
SIVAGANGA	165106	168892	333998	105868	107319	213187
MANAMADURAI (SC)	154906	154677	309583	105210	105025	210235
MELUR	146711	144687	291398	98736	99675	198411
MADURAI EAST	180639	178371	359010	116413	116483	232896
SHOLAVANDAN (SC)	134394	133417	267811	87112	86781	173893
MADURAI NORTH	143776	143110	286886	97239	98280	195519
MADURAI SOUTH	126585	126936	253521	89491	89223	178714
MADURAI CENTRAL	132973	134071	267044	95847	96491	192338
MADURAI WEST	165936	163789	329725	108051	105885	213936
THIRUPARANKUNDRAM	179731	177215	356946	107470	105899	213369
THIRUMANGALAM	159930	159489	319419	109397	112403	221800
USILAMPATTI	155800	150692	306492	108427	106954	215381
ANDIPATTI	192079	189056	381135	103919	103867	207786
PERIYAKULAM (SC)	161741	159188	320929	100766	101141	201907
BODINAYAKANUR	154533	153889	308422	103313	102968	206281
CUMBUM	117330	118083	235413	106849	108770	215619

	Male	Female	Total Pop	Men Voters	Women Voters	Total Voters
RAJAPALAYAM	137887	138820	276707	92241	93196	185437
SRIVILLIPUTHUR (SC)	146164	147310	293474	95082	96226	191308
SATTUR	142715	145127	287842	91342	93768	185110
SIVAKASI	148366	150509	298875	90363	91692	182055
VIRUDHUNAGAR	128191	128301	256492	84744	85263	170007
ARUPPUKOTTAI	131724	133337	265061	87935	91154	179089
TIRUCHULI	132662	131175	263837	87970	89450	177420
PARAMAKUDI (SC)	153621	150419	304040	102448	102652	205100
TIRUVADANAI	171546	170885	342431	109272	108521	217793
RAMANATHAPURAM	178541	172964	351505	113330	112775	226105
MUDHUKULATHUR	178950	176519	355469	129205	127508	256713
VILATHIKULAM	128527	131081	259608	87483	87508	174991
THOOTHUKKUDI	166519	166018	332537	106494	105975	212469
TIRUCHENDUR	138256	144491	282747	92403	97548	189951
SRIVAIKUNTAM	134966	140791	275757	85558	90101	175659
OTTAPIDARAM (SC)	138928	139276	278204	83967	82910	166877
KOVILPATTI	147086	152391	299477	89920	90513	180433
SANKARANKOVIL (SC)	142718	146582	289300	95392	95254	190646
VASUDEVANALLUR (SC)	132291	136155	268446	93420	92020	185440
KADAYANALLUR	171248	170396	341644	108445	106209	214654
TENKASI	164040	167215	331255	107777	107351	215128
ALANGULAM	154493	158785	313278	100374	103357	203731
TIRUNELVELI	163845	167485	331330	102887	102111	204998
AMBASAMUDRAM	143004	147887	290891	96157	97395	193552
PALAYAMKOTTAI	153580	157925	311505	98690	98991	197681
NANGUNERI	156148	160630	316778	95155	95463	190618
RADHAPURAM	150284	154368	304652	97996	96985	194981
KANNIYAKUMARI	176177	178901	355078	120386	117045	237431
NAGERCOIL	156272	161751	318023	105401	104158	209559
COLACHAL	149149	150481	299630	115863	109976	225839
PADMANABHAPURAM	153034	154042	307076	104837	100728	205565
VILAVANCODE	146999	150941	297940	103556	102585	206141
KILLIYOOR	144714	147913	292627	107958	103932	211890

Men Voted	Women voted	Total polled	Urban%	M Lit %	F Lit %	T lit %	
90658	88655	179313	12.80	70.20	55.49	62.83	GUMMIDIPOONDI
83605	79094	162699	31.42	75.72	63.78	69.75	PONNERI (SC)
94793	94658	189451	30.47	74.14	57.94	66.06	TIRUTTANI
86267	83863	170130	30.61	76.57	63.93	70.27	THIRUVALLUR
93105	88385	181490	34.79	78.71	67.67	73.19	POONAMALLEE (SC)
102688	96695	199383	99.81	84.54	77.13	80.89	AVADI
100186	90044	190230	100.00	83.12	76.93	80.06	MADURAVOYAL
98069	90118	188187	100.00	85.33	79.85	82.61	AMBATTUR
98804	94377	193181	70.46	81.54	73.33	77.50	MADAVARAM
83385	81256	164641	100.00	81.53	74.36	77.97	THIRUVOTTIYUR
70457	70810	141267	100.00	77.61	69.42	73.51	DR.RADHKRSHN NAGAR
84573	77352	161925	100.00	82.97	76.42	79.71	PERAMBUR
72314	69592	141906	100.00	86.31	81.67	83.99	KOLATHUR
66896	63719	130615	100.00	85.62	81.13	83.38	VILLIVAKKAM
62180	61591	123771	100.00	81.65	74.50	78.06	THIRU-VI-KA-NAGAR (SC)
57420	54709	112129	100.00	84.59	78.57	81.58	EGMORE (SC)
56691	55844	112535	100.00	82.17	75.56	78.87	ROYAPURAM
53173	44064	97237	100.00	82.94	75.62	79.41	HARBOUR
66309	63430	129739	100.00	84.34	78.18	81.32	CHEPAUK-THIRUVALLIKENI
68830	64793	133623	100.00	86.29	80.75	83.51	THOUSAND LIGHTS
76941	74380	151321	100.00	85.71	79.76	82.72	ANNA NAGAR
74215	71512	145727	100.00	84.93	79.62	82.29	VIRUGAMPAKKAM
78038	75967	154005	100.00	84.58	77.63	81.21	SAIDAPET
67528	61956	129484	100.00	88.04	83.28	85.68	THIYAGARAYANAGAR
71454	68816	140270	100.00	85.27	79.58	82.40	MYLAPORE
77149	74702	151851	100.00	85.31	80.49	82.90	VELACHERY
124203	117522	241725	88.51	81.14	73.79	77.51	SHOZHINGANALLUR
86008	81544	167552	100.00	84.81	79.61	82.23	ALANDUR
87710	84439	172149	35.54	78.03	66.19	72.20	SRIPERUMBUDUR (SC)
102791	97496	200287	100.00	84.64	78.98	81.82	PALLAVARAM
91415	86646	178061	89.73	85.11	79.53	82.36	TAMBARAM
96536	89982	186518	70.87	82.07	73.39	77.76	CHENGALPATTU
82124	76722	158846	23.79	77.54	64.36	71.02	THIRUPORUR
73088	68931	142019	18.20	72.99	60.03	66.52	CHEYUR (SC)
75086	72311	147397	19.46	73.47	59.81	66.65	MADURANTAKAM (SC)
84728	82910	167638	26.04	73.95	59.98	66.98	UTHIRAMERUR
96165	95274	191439	62.23	79.07	67.51	73.28	KANCHEEPURAM

72048	69761	141809	42.84	79.09	65.59	72.34	ARAKKONAM (SC)
91067	88448	179515	19.72	75.18	58.72	66.96	SHOLINGUR
74570	76442	151012	49.55	81.02	68.90	74.98	KATPADI
78858	78444	157302	60.30	79.93	68.16	73.99	RANIPET
86712	88409	175121	38.53	78.43	64.62	71.49	ARCOT
69094	71491	140585	95.74	81.53	73.11	77.26	VELLORE
73815	73278	147093	28.37	75.20	61.46	68.28	ANAIKATTU
68630	70588	139218	34.72	77.87	65.11	71.44	KILVAITHINKPM(SC)
80543	81012	161555	37.83	72.69	61.33	66.94	GUDIYATTAM (SC)
73676	73471	147147	48.91	72.83	61.73	67.30	VANIYAMBADI
68633	68202	136835	40.20	75.56	65.63	70.54	AMBUR
75722	80099	155821	37.16	74.14	61.21	67.71	JOLARPET
74888	74129	149017	7.55	70.18	55.66	63.06	TIRUPATTUR
77534	75416	152950	6.49	70.63	56.17	63.61	UTHANGARAI (SC)
78733	79174	157907	9.56	72.10	57.71	65.03	BARGUR
79251	80261	159512	34.64	73.05	60.29	66.69	KRISHNAGIRI
81913	76604	158517	0.00	62.05	47.39	54.89	VEPPANAHALLI
90706	80866	171572	58.43	75.44	66.59	71.14	HOSUR
81998	72900	154898	12.93	61.40	47.91	54.85	THALLI
80300	75667	155967	14.78	65.25	49.85	57.78	PALACODU
83556	78326	161882	11.55	63.84	48.43	56.51	PENNAGARAM
85787	81440	167227	33.59	72.77	59.43	66.23	DHARMAPURI
85916	81893	167809	11.76	70.15	53.96	62.27	PAPPIREDDIPPATTI
77568	72078	149646	13.27	67.80	53.43	60.75	HARUR (SC)
90026	88093	178119	8.00	66.04	51.90	59.04	CHENGAM (SC)
84352	86986	171338	52.83	77.37	66.02	71.71	TIRUVANNAMALAI
86300	86806	173106	9.52	73.22	57.50	65.41	KILPENNATHUR
78552	76861	155413	4.06	67.41	50.41	58.96	KALASAPAKKAM
83171	83229	166400	19.94	75.94	59.22	67.57	POLUR
90006	90280	180286	33.85	77.85	62.66	70.23	ARANI
90555	88336	178891	16.23	76.06	59.89	68.00	CHEYAR
82318	79811	162129	14.61	75.15	58.63	66.89	VANDEVASI (SC)
87540	86254	173794	11.61	72.90	58.02	65.49	GINGEE
77149	74020	151169	0.00	71.76	55.46	63.67	MAILAM
76600	75856	152456	32.94	74.90	61.48	68.19	TINDIVANAM (SC)
81230	77236	158466	10.60	74.19	59.59	66.90	VANUR (SC)
85908	85760	171668	42.66	78.74	67.10	72.91	VILLUPURAM
77350	74514	151864	4.28	72.22	56.98	64.67	VIKRAVANDI
81307	77392	158699	14.20	69.55	54.72	62.23	TIRUKKOYILUR
96233	94345	190578	6.35	67.35	50.78	59.15	ULUNDURPETTAI
79296	91771	171067	2.60	64.60	49.08	56.94	RISHIVANDIYAM

83496	87003	170499	13.60	63.90	48.63	56.34	SANKARAPURAM
87290	90796	178086	24.84	71.21	55.10	63.21	KALLAKURICHI (SC)
73951	75420	149371	24.76	72.10	57.12	64.67	GANGAVALLI (SC)
78489	79996	158485	43.27	74.02	60.86	67.46	ATTUR (SC)
90545	88473	179018	17.36	68.80	54.62	61.78	YERCAUD (ST)
99075	89475	188550	8.14	66.53	50.92	59.09	OMALUR
88295	80647	168942	41.75	71.44	56.57	64.30	METTUR
96669	88480	185149	37.81	65.93	49.10	57.88	EDAPPADI
95919	88584	184503	46.52	68.27	52.43	60.67	SANKARI
87112	82193	169305	83.34	75.34	64.44	70.00	SALEM (WEST)
82737	80026	162763	100.00	82.61	74.77	78.71	SALEM (NORTH)
87647	85433	173080	100.00	79.72	70.58	75.17	SALEM (SOUTH)
91839	87633	179472	56.30	70.11	55.35	62.95	VEERAPANDI
81455	79953	161408	36.63	73.65	59.74	66.84	RASIPURAM (SC)
79296	81477	160773	26.46	72.39	58.80	65.65	SENTHAMANGALAM (ST)
81866	86938	168804	38.39	77.90	64.29	71.15	NAMAKKAL
73506	77778	151284	29.59	75.60	58.45	67.05	PARAMATHI-VELUR
74639	74761	149400	38.55	76.57	63.72	70.11	TIRUCHENGODU
81047	79926	160973	71.79	74.59	60.28	67.50	KUMARAPALAYAM
68670	67211	135881	100.00	82.20	73.05	77.62	ERODE (EAST)
77782	74743	152525	78.41	79.03	67.52	73.35	ERODE (WEST)
77756	75017	152773	45.24	75.71	59.31	67.46	MODAKKURICHI
77713	71667	149380	39.54	74.12	57.80	65.91	PERUNDURAI
82588	77497	160085	46.14	75.46	59.91	67.69	BHAVANI
74114	68616	142730	45.72	74.10	58.56	66.33	ANTHIYUR
89205	84857	174062	39.73	70.99	55.01	63.13	GOBICHETTIPALAYAM
84266	78939	163205	24.13	65.59	50.11	57.91	BHAVANISAGAR (SC)
83030	78703	161733	42.66	71.99	56.88	64.38	DHARAPURAM (SC)
81202	76615	157817	28.85	66.53	52.35	59.47	KANGAYAM
80868	73490	154358	53.91	83.69	71.29	77.33	AVANASHI (SC)
85787	75086	160873	61.80	81.16	72.06	76.53	TIRUPPUR (NORTH)
65505	56773	122278	61.67	84.73	72.63	78.58	TIRUPPUR (SOUTH)
93413	83280	176693	54.66	77.50	66.90	72.18	PALLADAM
79267	76997	156264	36.17	73.60	61.18	67.34	UDUMALPET
73457	69720	143177	93.01	80.34	70.86	75.69	MADATHUKULAM
62124	59547	121671	100.00	81.79	73.29	77.63	UDHAGAMANDALAM
57208	56663	113871	56.79	75.18	64.09	69.68	GUDALUR (SC)
60437	60268	120705	59.98	78.41	66.96	72.71	COONOOR
87400	83775	171175	84.73	81.91	73.98	77.98	METTUPPALAYAM
87661	81737	169398	100.00	84.44	78.88	81.67	SULUR
111727	104844	216571	90.32	81.15	73.56	77.36	KAVUNDAMPALAYAM
79756	75004	154760	100.00	85.81	80.90	83.35	COIMBATORE (NORTH)
82201	77853	160054	100.00	85.25	79.63	82.43	THONDAMUTHUR



73595	69413	143008	78.12	79.91	70.33	75.12	COIMBATORE (SOUTH)
81788	76872	158660	45.29	78.85	67.61	73.20	SINGANALLUR
85587	81691	167278	62.83	75.76	62.75	69.19	KINATHUKADAVU
72076	69216	141292	48.13	78.49	66.90	72.66	POLLACHI
62176	61899	124075	26.38	73.44	59.22	66.29	VALPARAI (SC)
86774	82502	169276	58.10	77.02	64.74	70.87	PALANI
84524	83785	168309	14.28	74.33	57.10	65.72	ODDANCHATRAM
93497	96239	189736	34.66	75.61	61.06	68.31	ATHOOR
72111	70884	142995	29.55	74.69	61.69	68.24	NILAKKOTTAI (SC)
88235	87706	175941	12.25	71.92	56.71	64.34	NATHAM
73691	73451	147142	88.78	83.19	75.28	79.22	DINDIGUL
84551	83304	167855	21.90	72.02	55.13	63.59	VEDASANDUR
70270	75691	145961	34.69	77.89	60.83	69.26	ARAVAKURICHI
78850	83494	162344	82.00	82.29	70.54	76.37	KARUR
74926	76365	151291	24.59	72.91	55.16	64.00	KRISHNARAYPURAM (SC)
79084	80176	159260	20.08	71.24	55.78	63.44	KULITHALAI
86226	86126	172352	15.54	74.11	56.87	65.46	MANAPPARAI
89917	88951	178868	37.40	80.46	69.10	74.75	SRIRANGAM
75948	78116	154064	100.00	85.53	80.10	82.77	TIRUCHIRAPPALLI (WEST)
75639	75516	151155	100.00	85.37	79.79	82.55	TIRUCHIRAPPALLI (EAST)
75915	74493	150408	82.88	85.04	77.21	81.16	THIRUVERUMBUR
70873	74669	145542	23.24	80.66	69.12	74.78	LALGUDI
77732	78541	156273	19.81	77.98	64.70	71.32	MANACHANALLUR
74941	76008	150949	28.19	76.35	61.30	68.82	MUSIRI
71747	76081	147828	18.90	76.96	63.96	70.39	THURAIYUR (SC)
89806	98280	188086	23.58	75.30	62.80	69.04	PERAMBALUR (SC)
80816	93035	173851	3.77	70.68	52.47	61.53	KUNNAM
90501	94776	185277	9.01	71.26	54.35	62.74	ARIYALUR
87753	91479	179232	17.04	73.22	58.07	65.60	JAYANKONDAM
65375	73460	138835	16.14	70.57	53.65	62.18	TITTAKUDI (SC)
77331	80222	157553	26.74	74.87	58.89	67.01	VRIDDHACHALAM
70350	65725	136075	37.27	78.50	63.93	71.33	NEYVELI
80864	80102	160966	44.68	75.03	61.72	68.38	PANRUTI
70450	70965	141415	73.51	80.67	71.91	76.25	CUDDALORE
80014	77089	157103	22.48	73.38	58.90	66.22	KURINJIPADI
85631	83708	169339	17.96	76.09	61.15	68.71	BHUVANAGIRI
73276	74782	148058	41.05	80.20	70.49	75.36	CHIDAMBARAM
72020	72178	144198	20.91	76.23	64.04	70.17	KATTUMANNARKOIL (SC)
75929	77237	153166	14.45	77.87	67.67	72.71	SIRKAZHI (SC)
70457	70758	141215	37.92	82.09	73.22	77.61	MAYILADUTHURAI
83580	85398	168978	7.00	79.67	69.24	74.36	POOMPUHAR
57864	62424	120288	51.25	81.19	72.26	76.67	NAGAPATTINAM
59801	61051	120852	8.57	79.91	68.26	74.02	KILVELUR (SC)

62463	67219	129682	20.05	81.49	68.77	75.08	VEDARANYAM
75739	80093	155832	15.62	79.72	67.84	73.69	THIRUTHURAPONDI (SC)
79310	86230	165540	25.39	80.26	69.33	74.73	MANNARGUDI
83294	88633	171927	27.18	81.15	71.58	76.31	THIRUVARUR
89453	90579	180032	13.42	79.93	69.21	74.59	NANNILAM
79237	79644	158881	21.91	79.66	68.90	74.26	THIRUVIDAMARDUR (SC)
80228	80514	160742	66.51	82.66	74.09	78.33	KUMBAKONAM
78543	81300	159843	22.39	77.61	66.93	72.17	PAPANASAM
88202	85600	173802	11.91	79.90	69.11	74.50	THIRUVAIYARU
72497	75437	147934	92.26	85.79	80.20	82.94	THANJAVUR
76817	81530	158347	6.98	75.87	61.21	68.34	ORATHANADU
65611	80097	145708	41.35	79.57	68.42	73.78	PATTUKKOTTAI
67062	73230	140292	10.63	76.35	62.12	69.08	PERAVURANI
61847	60217	122064	10.68	71.91	56.58	64.25	GANDHARVAKOTTAI (SC)
68439	69379	137818	12.39	70.67	55.06	62.84	VIRALIMALAI
68196	70806	139002	53.56	79.17	67.89	73.51	PUDUKKOTTAI
61782	73271	135053	8.15	75.61	58.61	67.05	THIRUMAYAM
65819	71864	137683	11.12	78.25	63.88	70.91	ALANGUDI
59733	67835	127568	18.73	78.97	66.58	72.72	ARANTHANGI
78963	88940	167903	28.95	79.58	65.68	72.67	KARAIKUDI
79013	93633	172646	46.45	79.25	66.92	73.09	TIRUPPATTUR
71651	84939	156590	13.75	78.11	63.45	70.70	SIVAGANGA
77217	83853	161070	26.35	77.83	61.66	69.75	MANAMADURAI (SC)
74674	84092	158766	16.59	75.69	59.87	67.84	MELUR
89050	90258	179308	56.93	80.79	71.49	76.17	MADURAI EAST
72132	72023	144155	30.42	76.26	63.28	69.80	SHOLAVANDAN (SC)
70641	72045	142686	100.00	84.64	77.91	81.28	MADURAI NORTH
67553	67727	135280	100.00	84.96	78.30	81.63	MADURAI SOUTH
71919	71908	143827	100.00	85.87	79.77	82.81	MADURAI CENTRAL
80576	79389	159965	92.54	84.51	77.61	81.08	MADURAI WEST
82198	80230	162428	77.53	80.29	70.26	75.31	THIRUPARANKUNDRAM
89306	92654	181960	22.65	77.21	61.75	69.49	THIRUMANGALAM
86132	86234	172366	16.63	72.46	55.15	63.95	USILAMPATTI
84428	85793	170221	34.18	73.97	58.49	66.29	ANDIPATTI
79772	79606	159378	65.15	77.71	66.17	71.98	PERIYAKULAM (SC)
82475	84766	167241	50.05	77.14	62.19	69.68	BODINAYAKANUR
80458	84345	164803	75.09	78.78	66.96	72.85	CUMBUM

73022	75503	148525	62.76	79.74	67.83	73.77	RAJAPALAYAM
76482	78678	155160	51.08	76.76	62.89	69.80	SRIVILLIPUTHUR (SC)
74018	78097	152115	36.08	77.45	63.11	70.22	SATTUR
72945	74248	147193	82.53	79.07	67.64	73.31	SIVAKASI
66710	67477	134187	58.45	80.31	68.92	74.61	VIRUDHUNAGAR
71563	77195	148758	47.18	80.81	68.46	74.60	ARUPPUKKOTTAI
72829	76038	148867	11.82	76.12	59.85	68.03	TIRUCHULI
69365	78740	148105	36.82	79.71	65.39	72.63	PARAMAKUDI (SC)
70615	85042	155657	23.83	78.97	66.82	72.91	TIRUVADANAI
73651	86415	160066	49.16	80.19	71.70	76.01	RAMANATHAPURAM
83113	93701	176814	12.47	75.66	59.99	67.88	MUDHUKULATHUR
64907	68179	133086	14.23	78.00	63.50	70.68	VILATHIKULAM
78797	77700	156497	95.08	84.20	79.89	82.05	THOOTHUKKUDI
68303	77048	145351	56.79	83.23	79.35	81.25	TIRUCHENDUR
63333	68530	131863	24.95	82.27	75.70	78.91	SRIVAIKUNTAM
63251	62962	126213	37.19	79.94	70.61	75.27	OTTAPIDARAM (SC)
63495	66907	130402	63.73	79.58	68.25	73.82	KOVILPATTI
70245	73693	143938	22.68	76.04	60.46	68.14	SANKARANKOVIL (SC)
68602	73182	141784	45.32	75.21	58.16	66.56	VASUDEVANALLUR (SC)
76287	85560	161847	62.07	77.35	62.23	69.81	KADAYANALLUR
83916	85251	169167	42.78	78.32	65.40	71.80	TENKASI
79308	85057	164365	27.99	78.18	65.38	71.69	ALANGULAM
78457	78521	156978	56.23	80.08	70.60	75.29	TIRUNELVELI
71556	73867	145423	71.69	82.93	73.27	78.02	AMBASAMUDRAM
65944	68912	134856	100.00	85.49	78.56	81.98	PALAYAMKOTTAI
69314	72826	142140	24.02	80.41	71.71	76.00	NANGUNERI
66900	71539	138439	35.79	81.66	75.83	78.71	RADHAPURAM
88777	90641	179418	68.38	84.29	81.20	82.73	KANNIYAKUMARI
73527	72838	146365	86.17	87.13	84.52	85.81	NAGERCOIL
68278	76542	144820	79.96	84.18	82.06	83.12	COLACHAL
69869	73990	143859	82.64	83.90	80.92	82.41	PADMANABHAPURAM
72894	70505	143399	93.17	84.21	80.28	82.22	VILAVANCODE
63173	72587	135760	86.11	81.64	79.03	80.32	KILLIYOOR

## Appendix II - Data set with 18 plus population

Constituency	Number of households	18+ years population		
		Males	Females	Total Population
Gummidipoondi	90457	118245	120903	239148
Ponneri (SC)	78945	104686	106768	211454
Tiruttani	83033	121516	123105	244621
Thiruvallur	80023	109848	111164	221012
Poonamallee (SC)	72179	97214	98778	195992
Avadi	117119	161441	160365	321806
Maduravoyal	118516	163001	162735	325736
Ambathur	120248	162203	162684	324887
Madavaram	100644	141134	139682	280816
Thiruvottiyur	85785	116025	116527	232552
Dr.Radhakrishnan Nagar	74214	108015	109837	217852
Perambur	89373	129667	130247	259914
Kolathur	75138	105491	107373	212864
Villivakkam	68387	96010	97434	193444
Thiru-vi-Ka-Nagar (SC)	66812	97451	99583	197034
Egmore (SC)	55828	86840	88020	174860
Royapuram	57734	88135	89380	177515
Harbour	55649	96649	91230	187879
Chepauk-Thiruvallikeni	64787	100755	98322	199077
Thousand Lights	67339	97316	99575	196891
Anna Nagar	79520	112556	114826	227382
Virugampakkam	85370	118156	118403	236559
Saidapet	85339	123633	118191	241824
Thiyagarayanagar	66169	92187	91903	184090
Mylapore	74669	104178	107613	211791
Velachery	88654	119910	121207	241117
Shozhinganallur	126275	174919	172920	347839
Alandur	111412	151690	152106	303796
Sriperumbudur (SC)	92925	134219	132429	266648
Pallavaram	100284	136582	137938	274520
Tambaram	101489	139651	138488	278139
Chengalpattu	97953	138203	138157	276360
Thiruporur	77213	109333	108453	217786
Cheyyur (SC)	67032	94418	95412	189830
Madurantakam (SC)	69710	95890	97231	193121
Uthiramerur	70321	97845	98853	196698
Kancheepuram	91631	126626	129028	255654
Arakkonam (SC)	70599	96063	98886	194949
Sholingur	74864	104609	107323	211932

Katpadi	67876	97219	99371	196590
Ranipet	78170	109656	115075	224731
Arcot	83095	111810	116411	228221
Vellore	81073	113238	120212	233450
Anaikattu	62283	85308	89121	174429
Kilvaithinankuppam (SC)	81377	112685	117657	230342
Gudiyattam (SC)	56565	83013	87506	170519
Vaniyambadi	70338	102931	105079	208010
Ambur	65217	93948	98894	192842
Jolarpet	92281	131413	133857	265270
Tirupattur	45543	66182	65452	131634
Uthangarai (SC)	70381	94802	92113	186915
Bargur	66983	90692	90188	180880
Krishnagiri	79794	109329	111672	221001
Veppanahalli	68291	99535	97875	197410
Hosur	96479	130692	127465	258157
Thalli	66125	96987	94029	191016
Palacodu	77669	106152	104799	210951
Pennagaram	62681	87429	83205	170634
Dharmapuri	80231	106727	107537	214264
Pappireddippatti	82912	108614	108086	216700
Harur (SC)	72380	93758	94802	188560
Chengam (SC)	79041	114066	114836	228902
Tiruvannamalai	71194	103879	106322	210201
Kilpennathur	71248	103498	104925	208423
Kalasapakkam	67605	94482	95742	190224
Polur	75877	104357	107648	212005
Arani	77635	107980	111857	219837
Cheyar	75954	104141	106325	210466
Vandavasi (SC)	70282	95626	98346	193972
Gingee	69168	96354	97520	193874
Mailam	69005	95980	96646	192626
Tindivanam (SC)	68030	94494	96512	191006
Vanur (SC)	70107	98426	100153	198579
Villupuram	74145	102791	105371	208162
Tirukkoyilur	70375	106599	106209	212808
Vikravandi	65135	93107	93449	186556
Ulundurpettai	82910	123809	124085	247894
Rshivandiyam	71085	109013	108578	217591
Sankarapuram	66116	94279	94503	188782
Kallakurichi (SC)	94292	127993	129057	257050
Gangavalli (SC)	72816	93961	96005	189966
Attur (SC)	75574	97830	100926	198756
Yercaud (ST)	87507	116044	118173	234217
Omalar	86771	121422	114842	236264
Mettur	85759	112987	108470	221457

Edappadi	87312	115777	110137	225914
Sankari	83946	111151	106511	217662
Salem (West)	90434	121893	121513	243406
Salem (North)	80236	106004	108871	214875
Salem (South)	83288	109380	112286	221666
Veerapandi	82324	109100	106959	216059
Rasipuram (SC)	74495	98869	99546	198415
Senthamangalam (ST)	79319	101079	104030	205109
Namakkal	85640	109186	112711	221897
Paramathi-Velur	76953	92906	96760	189666
Tiruchengodu	78543	101514	107541	209055
Kumarapalayam	80561	100425	103134	203559
Erode (East)	73939	96328	99134	195462
Erode (West)	90998	117638	117530	235168
Modakkurichi	80758	95140	98783	193923
Perundurai	82659	101011	103168	204179
Bhavani	84101	107330	106696	214026
Anthiyur	76713	94368	95455	189823
Gobichettipalayam	90103	106558	111013	217571
Bhavanisagar (SC)	90639	115217	117057	232274
Udhagamandalam	65500	79779	86179	165958
Gudalur (SC)	63185	88420	94008	182428
Coonoor	68968	83568	88574	172142
Dharapuram (SC)	86520	100784	103424	204208
Kangayam	83034	97335	98796	196131
Avanashi (SC)	87716	113065	116628	229693
Tiruppur (North)	127182	165362	161652	327014
Tiruppur (South)	97149	127772	124450	252222
Palladam	129621	165548	165184	330732
Udumalaipettai	86733	108162	110996	219158
Madathukulam	67487	82994	85212	168206
Mettupalayam	91902	118196	120691	238887
Sulur	93100	117007	117968	234975
Kavundampalayam	119892	159123	159098	318221
Coimbatore (North)	96820	128239	129379	257618
Thondamuthur	89661	124303	125925	250228
Coimbatore (South)	71646	98507	99839	198346
Singanallur	95997	126029	129146	255175
Kinathukadavu	92040	121956	123852	245808
Pollachi	76022	96351	98939	195290
Valparai (SC)	65884	83186	86249	169435
Palani	88647	113165	116724	229889
Oddanchatram	75598	89825	92421	182246
Athoor	81988	106459	110240	216699
Nilakkottai (SC)	73232	99466	100711	200177
Natham	82425	117057	119515	236572

Dindigul	79640	106139	109922	216061
Vedasandur	79243	111969	114675	226644
Aravakurichi	69763	82605	87677	170282
Karur	79160	97407	102573	199980
Krishnarayapuram (SC)	68841	91632	95757	187389
Kulithalai	69331	97356	102800	200156
Manapparai	78708	116181	120470	236651
Srirangam	88728	118795	123712	242507
Tiruchirappalli (West)	82068	110683	117217	227900
Tiruchirappalli (East)	76880	106142	111555	217697
Thiruverumbur	84918	116173	117739	233912
Lalgudi	67722	86060	91882	177942
Manachanallur	74399	97473	100818	198291
Musiri	73008	91732	94573	186305
Thuraiyur (SC)	72245	87797	92414	180211
Perambalur (SC)	96396	118566	125204	243770
Kunnam	82105	103420	109600	213020
Ariyalur	85081	105552	111917	217469
Jayankondam	82751	106155	112143	218298
Tittakudi (SC)	65216	88544	89463	178007
Vridhachalam	75605	105292	104762	210054
Neyveli	69006	96298	96003	192301
Panruti	70820	100396	103176	203572
Cuddalore	70190	95520	100114	195634
Kurinjipadi	73068	100727	101231	201958
Bhuvanagiri	63188	84413	84766	169179
Chidambaram	80840	113007	115248	228255
Kattumannarkovil (SC)	67645	92940	94516	187456
Sirkazhi (SC)	74529	98302	103054	201356
Mayiladuthurai	73366	97399	102063	199462
Poompuhar	82598	109688	116624	226312
Nagapattinam	58758	79114	82935	162049
Kilvelur (SC)	60079	75413	78990	154403
Vedaranyam	64507	78566	81699	160265
Thiruthuraiipoondi (SC)	78962	100386	105539	205925
Mannargudi	77535	102508	107169	209677
Thiruvarur	85336	113234	118213	231447
Nannilam	85386	116701	118078	234779
Thiruvidaimarudur	77076	105640	109828	215468
Kumbakonam	79389	105965	111653	217618
Papanasam	78379	104587	112241	216828
Thiruvaiyaru	79910	109229	113249	222478
Thanjavur	82299	108144	116362	224506
Orathanadu	68352	91624	99868	191492
Pattukkottai	74544	95371	106598	201969
Peravurani	66439	86797	93684	180481

Gandharvakottai (SC)	56892	81606	83952	165558
Viralimalai	62898	90330	93847	184177
Pudukkottai	68085	94036	97718	191754
Thirumayam	65945	87315	91215	178530
Alangudi	62155	81960	88190	170150
Aranthangi	69817	94123	98923	193046
Karaikkudi	91959	125398	127563	252961
Tiruppattur	82523	113810	116057	229867
Sivaganga	86060	112849	118174	231023
Manamadurai (SC)	78986	105892	108243	214135
Melur	74851	100246	101800	202046
Madurai East	90192	123427	125498	248925
Sholavandan (SC)	69460	91826	93866	185692
Madurai North	74899	98233	100685	198918
Madurai South	65302	86483	89300	175783
Madurai Central	69783	90844	94316	185160
Madurai West	87147	113382	115239	228621
Thiruparankundram	93102	122808	124687	247495
Thirumangalam	87208	109270	112205	221475
Usilampatti	82943	106471	106041	212512
Andipatti	106147	130862	134072	264934
Periyakulam	84835	110193	112891	223084
Bodinayakanur	84450	105270	109120	214390
Cumbum	62680	79918	83723	163641
Rajapalayam	79668	93879	96855	190734
Srivilliputhur (SC)	82709	99513	102778	202291
Sattur	81179	97160	101249	198409
Sivakasi	82229	101008	105006	206014
Virudhunagar	70290	87280	89520	176800
Aruppukkottai	73456	89679	93027	182706
Tiruchuli	68217	90332	91531	181863
Paramakudi (SC)	75998	103510	102991	206501
Tiruvadana	80970	115581	116996	232577
Ramanathapuram	80712	120307	118433	238740
Mudhukulathur	86225	120573	120859	241432
Vilathikulam	72510	86877	90961	177838
Thoothukkudi	84929	112574	115222	227796
Tiruchendur	70984	93438	100251	193689
Srivaikuntam	71354	91216	97685	188901
Ottapidaram (SC)	73229	93919	96658	190577
Kovilpatti	82503	99412	105738	205150
Sankarankovil (SC)	78967	96559	102099	198658
Vasudevanallur (SC)	75173	89510	94864	184374
Kadayanallur	88564	115898	118749	234647
Tenkasi	88302	110999	116513	227512
Alangulam	84663	104534	110631	215165



Tirunelveli	88791	110865	116698	227563
Ambasamudram	79629	96755	103034	199789
Palayamkottai	77411	103915	110032	213947
Nanguneri	82054	105652	111917	217569
Radhapuram	78475	101685	107555	209240
Kanniyakumari	95232	124251	128845	253096
Nagercoil	84861	110202	116482	226684
Colachal	75684	105192	108381	213573
Padmanabhapuram	79016	107934	110947	218881
Vilavancode	76537	103667	108702	212369
Killiyoor	72209	102057	106525	208582

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