

Do Urban Voters in India Vote Less?

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The conventional wisdom that urban voters in India vote less, the authors argue, rests on a shaky empirical foundation: they describe the errors and biases associated with three main methods of estimating urban turnout in India, and note that, even when taken at face value, these measures tell us only about metropolitan India, but not about small towns. Then, they use new data to argue that urbanisation in parliamentary elections since at least 1980 is associated, other things being equal, with lower turnout within but not across states, and that within states, this negative relationship holds for the smaller towns as well as metropolitan cities since at least 1989.

India has so far been a predominantly rural democracy, but the balance between its rural and urban population is now changing. Although more than two-thirds of its population continues to live in rural areas (according to the 2011 census, 69% of the Indian population lives in rural areas, and 31% in urban areas), the absolute increase in persons living in urban areas in the 2001–11 decade was greater than the absolute increase in persons living in rural areas for the first time since independence (Census of India 2011a). The declining trend in the annual growth rate of the urban population in previous decades was also reversed in the 2001–11 decade (Government of India 2011a, Table 1.7, p 20; Bhagat 2011). By 2050, according to a projection by the UN's Department of Economic and Social Affairs, 50% of the Indian population will live in urban areas (United Nations 2014, Annex Table A2).¹

In comparative terms, the share of the urban population in India, and the rate at which it is growing are both modest. In China, for example, more than half of the population (54%) already lives in urban areas (United Nations 2014, Annex Table A1). By 2050, over three quarters of China's population (76%) will live in urban areas, compared to only half of India's (United Nations 2014, Annex Table A2). Closer to home, three of India's South Asian neighbours—Bangladesh, Bhutan and Pakistan—already have a higher percentage of the population living in urban areas (34%, 38% and 38%, respectively) (United Nations 2014, Annex Table A1). The percentage of the population that is projected to be urban by 2050 in these three countries is also higher than in India (56%, 55% and 57% respectively) (United Nations 2014, Annex Table A2).

Elsewhere in the developing world, such as in Africa, there are also many countries which have a higher percentage of urban dwellers, and are expected to grow at faster rates between now and 2050 (United Nations 2014: 11, 36–37, Annex Tables A1 and A2).

But the sheer size of India's population means that the *absolute number* of urban dwellers in India, at 410 million in 2014, is already second only to China (United Nations 2014, Annex Table A1).² It also means that, even though most of its voters still live in rural areas, India has the largest pool of urban voters in the democratic world. And even this modest rate of urbanisation is shifting the balance between rural and urban voters in India, so that in just three decades, it will not be a predominantly rural democracy but one in which rural and urban voters are equally balanced.

How might urbanisation affect the nature of democratic participation? The conventional wisdom on contemporary Indian politics is that urban voters vote less than rural voters,

An Appendix to the text is available on the EPW website.

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implying that as India urbanises, its democracy may lose the highly participatory character which it has had in recent years. As a news report states baldly: “Rural India is more active when it comes to voting than urban India. This is a known fact” (Tewari 2014a, 2014b, see also *Times of India* 2011).

But this cannot be accepted as a “known fact” for two reasons. First, previous work shows only that turnout in *metropolitan* constituencies, located mostly in Delhi, Mumbai, Kolkata and, depending on the cut-off, Chennai, Hyderabad and Bengaluru, is significantly lower than in other types of constituencies (Auerbach 2015; Yadav 1999, 2000, Palshikar and Kumar 2004; Kumar 2009; Falcao 2009; National Election Study 2014). But most of India’s urban population lives in small and medium size towns with a population of less than a million (10 lakhs) (Figure 2). The story of *metropolitan* turnout, then, is only a small piece of the overall story of urban turnout in India.

When it comes to voters in smaller and medium size towns, the scholarly conclusions are not clear. The data from the National Election Studies (NES) indicate that turnout in India’s “mixed” constituencies, where these small and medium size towns are likely to be located, is either no different from turnout in mostly rural constituencies (Yadav 1999, Table 10) or actually *higher* than turnout in highly rural constituencies and in metropolitan ones (Palshikar and Kumar 2004; Kumar 2009; Falcao 2009; National Election Study 2014). Studies based on NES data which argue that urban turnout in India is lower than rural turnout in parliamentary elections, including some of our own previous work, usually ignore this fact (Jaffrelot 2008; Chandra 2013). Studies based on other data also ignore constituencies with small and medium size towns: Auerbach 2015 for instance does not address the relationship between urbanisation and turnout in constituencies with small and medium size towns although the data introduced there could have been used for this purpose in principle, while Joshi (2014), who studies urban turnout in local elections, also focuses on the six “megacities” (Hyderabad, Bengaluru, Mumbai, Chennai, Delhi and Kolkata), and larger cities within Gujarat instead of the smaller towns.

Second, constituency-level analyses of the relationship between urbanisation and turnout rest on a relatively shaky empirical foundation to the extent that they do not account for the errors and biases introduced by the method of matching electoral constituencies, according to which data on electors and turnout are reported, and census units, according to which data on urban populations is reported. Previous studies have relied on one of the three methods to estimate urban turnout in India as a whole: (i) matching census units to electoral units *manually* by utilising polling booth data (for example, NES data, Alam 2010; Shashidharan 2013); (ii) using GIS-based *area weighting* to do the same thing in a more precise way (for example, Bhavnani and Jensenius 2015; Jensenius 2016); and (iii) using the *density* of the electorate, calculated by dividing the size of the electorate by the area of a constituency, as a proxy for its degree of urbanisation (for example, Auerbach 2015). Each of these methods—*manual matching*, *area-weighting* and using *density* as a proxy—comes with significant errors and biases. Some of these have been thoughtfully described in Hemanshu (2009),

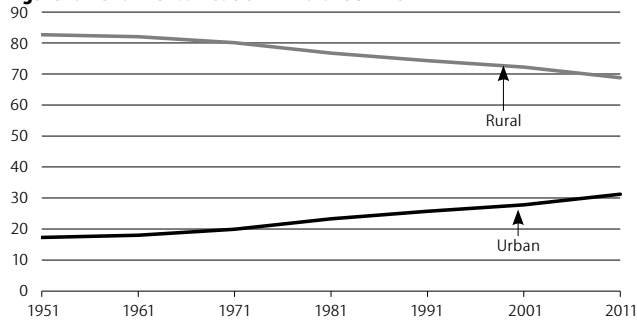
Alam (2010) and Bhavnani and Jensenius (2015) but not yet incorporated into analyses and interpretations based on these data.

This article tries to put the assessments of urban participation in India on a sturdier empirical foundation in two ways: First, we document a number of sources of error and bias in each of the three methods not addressed previously and then suggest ways in which these errors and biases can be compensated for in analyses based on these data, and ways in which they should be taken into account in any interpretation of constituency-level data on urbanisation. Second, we introduce two new measures of urbanisation across parliamentary constituencies. Building on Auerbach 2015, we introduce an improved *density-based* measure of urbanisation which, we argue, is the best of three imperfect methods for comparing trends in urban turnout (or other aspects of behaviour associated with urbanisation) across time. We also generate a second, *area-weighted* measure by matching census towns and villages to electoral constituencies, and use it to check the density-based measure (Chandra and Potter 2016). The data set containing both measures is included in the Appendix (available on EPW website).

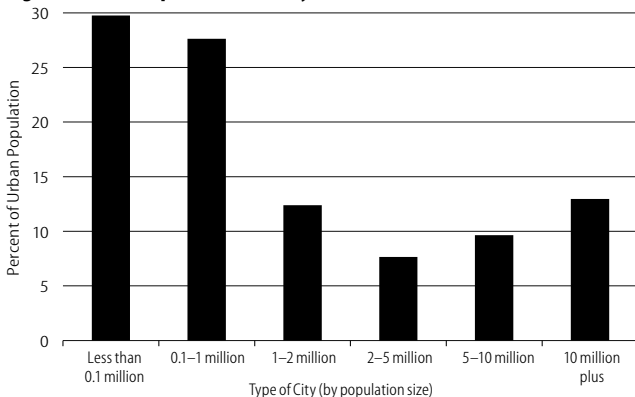
Based on this data set and assessment of the errors and biases associated with it, we conduct a preliminary analysis of urbanisation and turnout in *parliamentary* elections between 1977–2014, using state-fixed effects as a first-cut method for taking some of the errors described here into account. The analysis suggests that *within states*, there is indeed a negative relationship between urbanisation and turnout in parliamentary elections since 1980. But it does not support the claim that the negative relationship between urbanisation and turnout holds *across states*.

In the 1980s this negative relationship appears to have been driven mainly by the metropolitan constituencies. But at least since 1989, it holds also in constituencies which house small and medium size towns: that is, the relationship holds even when we exclude the major metropolitan constituencies. If the recent past is any indication of future trends, then these results suggest that as India urbanises, voter participation in parliamentary elections in urban areas may indeed decline relative to rural areas *within the same state*, or at least slow in its rate of increase.

We do not propose an argument about why voters in more urbanised constituencies might vote less in parliamentary elections than those in rural constituencies within the same state, or conduct multivariate analyses of voter turnout in these elections, or investigate the relationship between urbanisation and turnout in other types of elections (for example, in legislative assemblies or local governments). We also do not examine aspects of political behaviour other than turnout which may be related to urbanisation (for instance, patterns of party competition or violence). Our goal is simply to put a blunt fact—the direction of the relationship between urbanisation and turnout in parliamentary elections—on a stronger empirical foundation, to use that foundation to propose a more nuanced interpretation of the relationship between urbanisation and turnout, and to provide other scholars with the raw data and reasoning which allows them to improve upon it. We hope that others will use this to conduct more complex, multivariate, analyses of turnout to theorise about this relationship, and to ask a

Figure 1: Trend in Urbanisation in India 1951–2011

Source: Government of India (2011a, Table 1.8, p 20), citing Census of India 2011a, b, c, d.

Figure 2: Urban Population (2011) by Size of Town

Source: Calculated from Census of India (2011d).

broader range of questions related to urbanisation and political behaviour across levels of elections in India.

Section 1 describes the pattern of urbanisation in India. Section 2 elaborates on the pros and cons of each of the three methods of constructing estimates of urbanisation and turnout described above. Section 3 elaborates on the density-based measure we introduce here. Section 4 compares it to the second area-weighted measure we also create. Section 5 analyses the relationship between urbanisation and turnout over time based on this measure. Section 6 provides a snapshot of this relationship in the 2014 parliamentary elections. The online appendix provides the raw data used here for all parliamentary constituencies from 1977–2014.

1 The Nature of Urbanisation in India

In 1951, when India held its first post-independence elections, only 17% of its population, and by extension, electorate, lived in urban areas. By 2011, when the most recent Indian census was conducted, the percent urban population had almost doubled to 31%. Figure 1 captures the trend in the growth of the urban and rural population in India from 1951 to 2011.

Figure 2 describes the percent of India's population that lives in cities of different sizes. It shows that, although India is home to some of the world's largest cities, most of its urban population lives in towns of a more modest size. Cities with a population of 10 million or greater—the “megacities” of Delhi, Mumbai and Kolkata—house only 13% of India's urban population. The smaller metropolises, with a population of 5–10 million—Ahmedabad, Pune, Hyderabad, Bengaluru and Chennai—house another 10%.

This means less than a quarter (23%) of India's urban population lives in cities with over 5 million inhabitants. Other relatively large cities (with a population of 2–5 million) house even less (8%). The majority of urban Indians live in towns of intermediate to small size: 12% in towns with a population of 1–2 million, 28% in towns of 0.1–1 million, and 30% in those whose population is less than 0.1 million.

The growth in urban population over the last decade, furthermore, has also come mostly from these small to medium towns. According to a report by the Ministry of Urban Development, “the growth in population in the Mega Cities [Mumbai, Delhi and Kolkata] has slowed down considerably during the last decade (Government of India 2013–14: 213–23). Population growth in these megacities has occurred in peripheral areas rather than the core (municipal corporation) areas (Bhagat 2012: 34; Kundu 2011). While population growth in “the second ranking” megacities of Chennai, Bengaluru, Hyderabad and Ahmedabad has been higher, Bhagat (2012) notes that population growth rates in most large urban agglomerations declined during the 2001–11 period. This indicates, according to him, that the turnaround in Indian urbanisation is mainly due to the transformation of formerly rural areas into small towns, leading to their reclassification into urban areas by the census, and to the “peripheral” expansion of existing urban centres.

The story of urbanisation in 21st century India, then, is less the story of Delhi, Mumbai or Kolkata and more the story of Raipur or Ranchi or Karimnagar or Mainpuri, and of still smaller but growing urban agglomerations (Mukhopadhyay and Maringanti 2014; Pradhan 2013). If we are to understand the full contours of the relationship between urbanisation and turnout or other forms of political behaviour, then, it is these smaller towns that we must focus on.

2 Three Methods for Measuring Urbanisation from Aggregate Data

In an ideal world, in order to measure differences in participation related to urbanisation, we would want to obtain individual-level data—or at a minimum, data on political participation at the level of the town or village or, even better, neighbourhoods, or hamlets or polling stations. There are some creative efforts underway to create such data, using polling station data for the 2014 elections (for example, Susewind 2014) and property tax data for neighbourhoods within Delhi for the 2012 municipal corporation elections (Joshi, Pradhan and Sidhwani 2016).³

But survey or polling booth or neighbourhood data are not systematically available for many previous elections or for all constituencies. In order to assess the relationship between urbanisation and voting patterns across time and for India as a whole we must pursue some method of matching census units to electoral constituencies. In this article we focus on the matching at the level of the parliamentary constituency.

The central problem faced by all researchers in trying to do this is that the boundaries of census units (towns, villages, blocks, or districts) do not necessarily coincide with the boundaries of parliamentary constituencies. In particular, major urban areas overlap numerous constituencies, some of

which contain both urban and rural areas. So, measuring urbanisation at the constituency level requires some method of assigning urban populations to constituencies. There are several possible methods and none is perfect. Each generates estimates with different types of error and different trade-offs.

2.1 Manual Matching

The simplest method of manual matching, often used by articles in the news media, is to classify all constituencies whose boundaries intersect with a major city as “urban.” But this method, first, can produce large errors because parliamentary constituencies often intersect cities while also including large rural areas.

Take the example of the city of Hyderabad. It sprawls across several Lok Sabha constituencies, but classifying all of them as urban would misclassify those which contain some portion of Hyderabad city but have large peri-urban or rural areas.

In the case of smaller cities—for example, Raipur or Ranchi—classifying constituencies which they intersect with as urban would introduce even larger errors because the intersecting constituencies would likely contain even larger areas that are rural or peri-urban. This method would also misclassify villages contained within the boundaries of cities—for example, there are substantial areas in many of the constituencies that are classified as villages by the Indian census that would be classified as urban under this method.

Second, since census data is only collected every 10 years, this and any other method of estimation based on census data will produce estimates of urban population of a constituency that will be considerably out of date for several elections.

Third, because the method is so imprecise, manual matches usually lend themselves to categorical measures of urbanisation. So far, for instance, they have been used to generate either a dichotomous measure separating “urban” from “non-urban” constituencies, or a trichotomous measure which distinguishes between “urban,” “semi-urban” and “rural” constituencies (Yadav 1999, 2000; Palshikar and Kumar 2004; Kumar 2009; Falcao 2009). But a continuous, or at least more fine-grained, measure of urbanisation would be more informative.

There is no reason of course that manual matching could not be used to construct a continuous measure in principle, but it would take an enormous effort to create a fine-grained continuous measure through a manual match. More recently, following the 2008 delimitation, the NES team has attempted to do precisely this, by compiling socio-economic information for the lowest level of aggregation in census units—the ward and village—and then aggregating upwards to the level of the assembly constituency and then the parliamentary constituency (Alam 2010). Analyses based on these data have not yet been published, to the best of our knowledge.

Fourth, the inherently imprecise nature of manual matching makes it difficult to correct for inconsistencies across time. Consider the example of the NES classification of urban, mixed and rural constituencies between 1977 and 2014. These estimates were created manually, although the precise method for the manual matching is not clear. Between 1977 and 1998,

constituencies classified as “rural” were those with an urban population of 25% or less, constituencies classified as “mixed” were those with an urban population of 25–50% and constituencies classified as “urban” were those with an urban population of more than 50% (Yadav 1999: Table 10). From 1999 onwards, the criterion for the classification of constituencies as “rural” remained the same, but the constituencies were classified as “mixed” if they had an urban population of 25%–75% and as “urban” were those with an urban population of more than 75% (Palshikar and Kumar 2004, Table 3, p 5413; Kumar 2009, Table 4, p 48; National Election Study 2014).

This means that the published NES data on urban turnout are not comparable over time. Producing data that allows comparison over time would mean the onerous task of regenerating the classifications manually from the raw data.

Even when the criteria are held constant, furthermore, the degree of reliability of the data is not clear, since the counts of constituencies included in each of these classifications remains fixed across some elections, and fluctuates across others. For instance, the number of “rural,” “mixed” and “urban” constituencies in the NES data remained fixed between 1977 and 1998 at 421, 59 and 63 respectively. Since the 1981 and 1991 censuses recorded a growth in urban populations, the fixedness of this classification over time must surely contain significant errors, but it is hard to assess their nature and magnitude.

Similarly, although the new criteria for classification have remained constant since 1999, the number of constituencies in each NES classification (urban, mixed and rural) changed significantly between 1999 and subsequent elections.

We assume that the changes in classification must have come about through an effort to improve the data. But it is hard to assess the reliability of these classifications without more information on the criteria used for manual matching. Further, these changes in classification across elections mean that the data on turnout within each type of constituency in each election are not comparable across elections and cannot be used to estimate trends over time. We expect that work underway by the NES to create new classifications based on ward and village level information (Alam 2010), especially when used along with the 2011 Census data, should significantly address the blunt classifications of the previous measure.

2.2 Area-weighting

A second method is to create a GIS-based area-weighted estimate of the urban population in a constituency—this method essentially uses mapping software to do what the previous method attempts to do manually and therefore achieve a higher level of precision, transparency and replicability. This requires “superimposing” digitised maps of census units over electoral constituencies and estimating the urban population of a constituency by allocating the population of census units to each constituency based on the proportion of the area of the census unit contained by that constituency.

This method requires the researcher to make a judgment about which census units—towns or villages or blocks or districts—to use to construct the match. Bhavnani and Jensenius

(2015) and Jensenius (2016) created a set of area-weighted estimates, using blocks as the basic census unit to match with electoral constituencies. Here, we construct a different area-weighted estimate by using towns and villages as the relevant census units to match with electoral constituencies.

The area-weighting method has the advantage of providing a continuous measure of urban population in a constituency. But it comes with new drawbacks.

First, since census data is only collected every 10 years, this method, as with the manual matching method, will be considerably out of date for elections between censuses.

Second, any process of matching census units to electoral constituencies carries error, but the nature of the error varies depending on which census unit we choose to match with. If we match census blocks to constituencies, there is a lower likelihood of error in the placement of the right blocks in the right constituencies, since such large units can usually be reliably located in and across constituencies.

But because they rely on the assumption that “the population is evenly distributed across the land mass of the split blocs,” (Bhavnani and Jensenius 2015: 226) and allocate populations across constituencies in proportion to the area of the block or district that intersects it, they can create large errors by ignoring concentrations of the population within these blocks. If we use smaller census units such as towns and villages for matching, as we do in the area-weighted estimate we construct here, there is a high likelihood of error in the placement of towns and villages at the boundaries in the right constituency. But the magnitude of error in allocating the population of a census unit across these constituencies is lower (see Appendix, available on EPW website).

Third, as in the case of manual matching, because census data are based on a dichotomy between “town” and “village,” using them does not allow us to capture peri-urban areas (for example, the area along a highway) outside this dichotomy. For example, individuals living in an area that just misses the cut-off for being a census town are considered as rural as individuals living in a small village in an isolated area. Similarly, individuals living in an area that just makes the cut-off for being a census town are considered as equally urban as individuals living in the centre of Mumbai or Kolkata.

2.3 Using Density as a Proxy for Urbanisation

A third method, following Auerbach (2015), is to use the density of the electorate in a constituency as a proxy for its degree of urbanisation. In the simplest form, a density-based measure is simply the total electorate of a constituency divided by the area of the constituency in square km. This measure follows a widely-used convention of using population density as a measure for urbanisation. The Indian census also incorporates density into its measure of urbanisation. It classifies a census unit as urban either if it is a unit with a municipality, corporation, cantonment board or notified town area committee or satisfies the following criteria: it has a population of 5,000, in which 75% of the male main working population is engaged in non-agricultural pursuits, and has a population density of at least 400 persons per sq km (Census of India 2011a).

This measure has several non-trivial sources of error too. First, treating the density of the *electorate* as the density of the *population* ignores any differences across constituencies in the size of the population under 18. This will be particularly important if we believe that there are differences in the size of the underage population in rural and urban areas.

Second, the density of the electorate may be an underestimate of population density in constituencies which have a large number of inhabitants who are not registered voters—for example, cities with large numbers of undocumented migrants—and an overestimate of population density in constituencies in which there are large numbers of registered voters who are not residents—for example, areas with high outmigration. Any errors in voter registration will also be reflected in errors in any corresponding estimate of electorate density. Existing studies indicate that the magnitude of error in the count of registered voters is non-trivial (Janaagraha 2012, 2015).

Third, density at the level of the constituency can mask different patterns of concentration of the urban population within a constituency. In large constituencies in which the population is clustered in a small but dense urban core, using density as a proxy will produce an underestimate of the urban population. This is particularly problematic for constituencies with dense urban centres in barren, mountainous or forested areas.

Consider the example of Jodhpur parliamentary constituency in the Thar desert: this constituency has a low population density because of its large sparsely inhabited areas, but a high urban population because much of its population is packed into the town of Jodhpur. Similarly, this measure will overestimate urbanisation in constituencies which have a high population density because of large numbers of closely clustered villages, rather than a high degree of urbanisation. The relatively high population density of several constituencies in the fertile plains areas of Bihar, Uttar Pradesh and Bengal are examples.

Finally, the long gap in delimitation of parliamentary constituencies between 1976 and 2008, and the freeze on number of parliamentary constituencies allocated to each state even in 2008, create an additional source of error—or at least difficulty in interpreting constituency-level density as a proxy for urbanisation. If delimitation were driven only by the concern for equalising the number of voters in each constituency, and there were no restriction on the number of constituencies allocated to each state, it would not produce systematic differences in the electorate density of constituencies across states. But the freeze on the number of constituencies allocated to individual states creates *state-specific differences in constituency-level density*. Differences in the constituency-level density of the electorate across states, then, may be a function not just of urbanisation, but also of this institutional restriction. The same problem should not hold within states.

3 When and Why the Density-based Measure Is Better than the Alternatives

We suggest that when we want to compare trends across time, the density method is the best of three imperfect alternatives to construct aggregate constituency level measure of urbanisation.

It has several advantages: it is computationally simple, yields a continuous measure of urbanisation, is updated for each election because data on the electorate are updated by the Election Commission of India after each election, and can easily be extended to constituencies in legislative assembly and local elections.

Further, the sources of error and bias associated with it, while non-trivial, can at least be partially addressed in a computationally simple way. For example, once we know about the scale and direction of the errors in voter registration, we can adjust the estimates of density by inflating or deflating the count of the electorate accordingly. We can introduce similar adjustments if we know something systematic about how the age composition of the electorate varies. We can also take regional differences in urban concentrations or delimitation effects into account by introducing control variables in analyses using this measure.

Accordingly, we use it here to generate a basic measure of urbanisation across parliamentary constituencies in each election from 1977 until the present. But we also generate a second area-weighted measure (by matching towns and villages from the 2001 Census to parliamentary constituencies) as a check to identify the errors associated with this density-based measure. This second measure is described in a subsequent section.

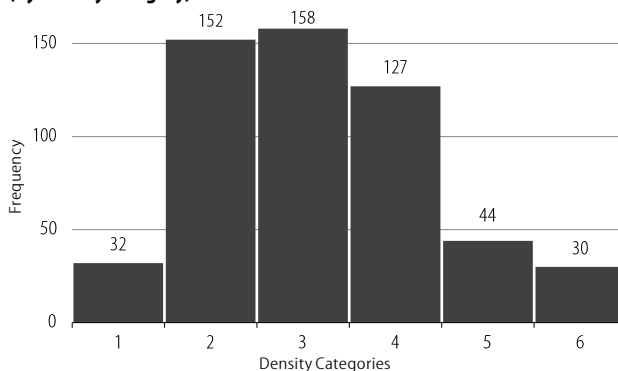
The density measure, as noted above, is simply the total electorate of a constituency divided by the area of the constituency in sq km. We calculate the area of constituencies from GIS shapefiles on constituency boundaries provided by M. Infomap, which produces a more precise measure of area than pixelated maps (as done in Auerbach 2015) for most but not all cases (Appendix available on EPW website). Data on the size of the electorate for each constituency comes directly from the Election Commission of India website. Dividing the size of the electorate by the calculated area (in km) yields a continuous measure of electorate density.

The Appendix (available on EPW website) lists the value of this measure for each parliamentary constituency in every election between 1977 and 2014. In order to convey the intuition behind this measure and how to interpret it, we illustrate it below by dividing it into six categories and explaining what each category captures.

- (i) Electorate density of less than 100 persons per square km;
- (ii) Electorate density of 100 or greater, but less than 250 persons per square km;
- (iii) Electorate density of 250 or greater, but less than 500 persons per square km;
- (iv) Electorate density of 500 or greater, but less than 1,000 persons per square km;
- (v) Electorate density of 1000 or greater, but less than 5,000 persons per square km;
- (vi) Electorate density of 5,000 or more persons per square km.

These cut-offs follow those used by the Census of India when mapping population density across states (Census of India 2011a, b, c, d), with one modification: the census treats population density of 1,000 or greater as a single category, but we

Figure 3: Frequency Distribution of Parliamentary Constituencies (By Density Category) 2014



Source: Chandra and Potter (2016).

distinguish densities between 1,000 and 5,000 and densities greater than 5,000 in order to account separately for the especially dense metropolitan cities.

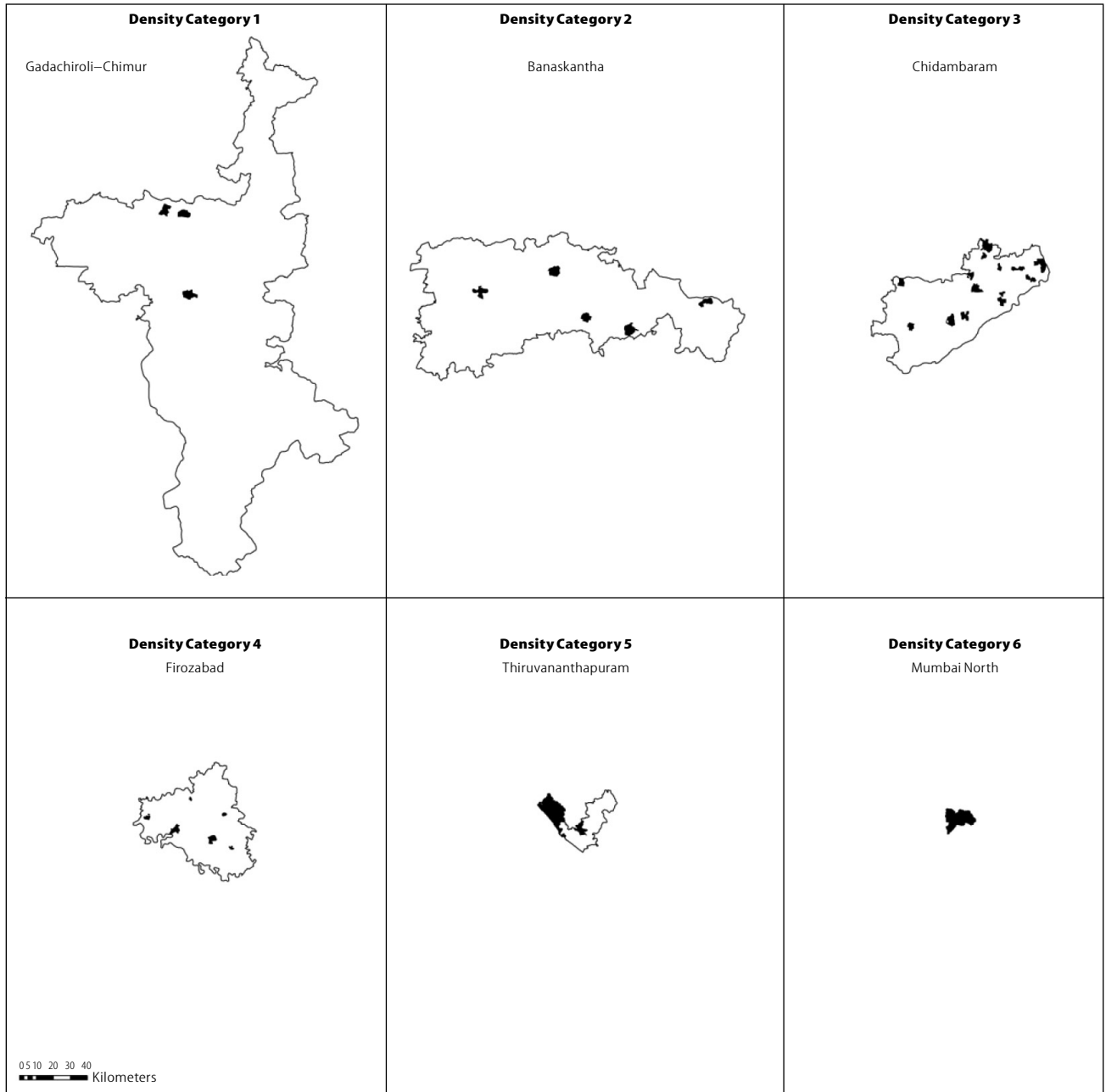
As a rule of thumb, we can think of the bottom two categories as mostly rural constituencies, of the middle two as semi-urban or semi-rural, and of the top two categories as highly urban. Figure 3 describes the frequency distribution of constituencies in each category in 2014. (Note that because the size of the electorate and therefore the density of each constituency varies across elections, the number of constituencies in each category will vary across elections.)

We discuss each category individually in the remainder of this section, using the median constituency from each category as a prototypical example. Figure 4 (p 64) maps this prototypical example from each category identifying the location and area of the urban units within it according to the 2001 Census.⁴ Given the increase in urbanisation that occurred between the 2001 and 2011 Censuses, there may be some additions to this list of towns if some former villages had enough population growth to cross the threshold for the census definition of an urban unit.

Category 1—Electorate density between 0 and 100: This very low-density category comprises 32 parliamentary constituencies in 2014 located largely in desert, mountainous or forested regions. A typical example, shown in Figure 4, is the Gadchiroli–Chimur parliamentary constituency. This is a large heavily forested constituency with an area of 20,441 sq km (considerably higher than the average area of 5,993 sq km for parliamentary constituencies in 2014). The electorate of the constituency is 1.5 million, just less than the average electorate size of 1.54 million in the 2014 parliamentary elections. Other constituencies in this category are also usually in forested, mountainous or desert areas. They include Ladakh in Jammu and Kashmir, Bastar in Chhattisgarh, and several constituencies in the North East.

Category 2—Electorate density between 100 and 250: This category includes 152 parliamentary constituencies in 2014. A typical example is Banaskantha constituency in Gujarat. It has an area of 8,736 sq km, an electorate of 1.5 million, and a density of 173 electors per sq km. Other constituencies in this

Figure 4: Prototypical Constituency from Each Density Category



The shaded areas in each constituency are areas that are classified as towns and urban agglomerations by the 2001 Census. Source: Chandra and Potter (2016).

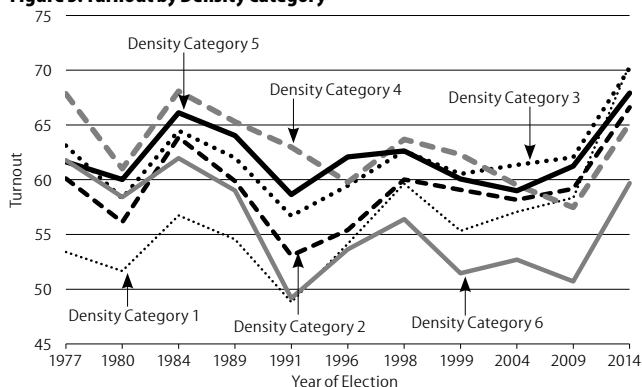
category include Gwalior in Madhya Pradesh, Ganganagar in Rajasthan, and Bolangir in Odisha.

Category 3—Electorate density between 250 and 500: This category includes 158 parliamentary constituencies in 2014. A typical example is Chidambaram constituency in Tamil Nadu. It has an area of 3,840 sq km, an electorate of 1.4 million, and a density of 356 electors per sq km. Other constituencies in this category include Karimnagar in Andhra Pradesh, Silchar in Assam, and Alipurduar in West Bengal.

Category 4—Electorate density between 500 and 1,000: This category includes 127 parliamentary constituencies in 2014.

A typical example is Firozabad constituency in Uttar Pradesh. It has an area of 2,372 sq km, an electorate of 1.6 million, and a density of 670 electors per sq km. Other constituencies in this category include Jehanabad in Bihar, Kollam in Kerala, Indore in Madhya Pradesh, and Jalandhar in Punjab.

Category 5—Electorate density between 1,000 and 5,000: This category includes 44 parliamentary constituencies in 2014. A typical example is Thiruvananthapuram constituency in Kerala. It has an area of 642 sq km, an electorate of 1.12 million, and a density of 2,077 electors per sq km. Other constituencies in this category include Visakhapatnam in Andhra Pradesh, Surat in Gujarat, and Pune in Maharashtra.

Figure 5: Turnout by Density Category

Source: Chandra and Potter (2016).

Category 6—Electorate density 5,000 or greater: This category includes 30 parliamentary constituencies in 2014. A typical example is Mumbai North in Maharashtra. It has an area of 133 sq km, an electorate of 1.8 million, and a density of 13,434 electors per sq km. Other constituencies in this category include Hyderabad and Secunderabad in Andhra Pradesh, Bengaluru Central and South in Karnataka, and North and South Kolkata

4 Comparing the Density Measure with an Area-weighted Measure

We check the density measure against an area-weighted measure based on the 2001 Census data. Note that we can only construct this area-weighted measure using the 2001 Census data, because neither the detailed data on towns and villages nor GIS shapefiles are available yet from the 2011 Census.

That means that this measure is likely to be a reasonable estimate of urbanisation only for the 1999 parliamentary elections, which are closest to the 2001 Census year. Using it for other elections would at a minimum require some assumptions to link urbanisation in 2001 to urbanisation in the past or present. We do not make any such assumptions here.

We construct a measure of the percent of urban population in each constituency in the 1999 elections by aggregating the population of all census units categorised as towns by the Indian census in 2001 up to the Lok Sabha constituency level and dividing this figure by the population of census units categorised as villages or towns. This method should be more exact for the population figures we are interested in than using census blocks, since the data is being aggregated from a much smaller unit—the village/town as opposed to the much larger block. But note that some flaws in the GIS data can introduce larger errors for particular constituencies.⁵

We construct this measure using GIS shapefiles to locate 2001 Census towns into Lok Sabha constituencies. We then sum the populations of all town census units in a given Lok Sabha constituency. We are able to do this for all constituencies except two in Delhi for the reasons mentioned in the previous footnote. Of the 541 constituencies for which we have data, the mean urban population across constituencies is 26.43%, close to the census estimate of an urban population of 27.82% for the 2001 Census year (Census of India 2001).

There is, as we might expect, a positive correlation between the two measures for the 1999 parliamentary elections. The correlation is 0.46 for all constituencies, taken together. If we remove the top 10 outliers (all in density category 6), the correlation between our two measures increases to 0.62. Breaking this down by density category indicates a weaker correlation between density and the percent urban population of a constituency for the lower density categories. This suggests that the errors associated with the density variable are concentrated in the lower density categories. We expect that this may be a consequence of the “Jodhpur” problem described above: in inhospitable terrain with mountains or deserts, low population densities disguise concentrated urban populations.

One way to address this problem in analyses using the density measure would be to introduce a control variable for terrain in analyses using these measures. But a simpler, first-cut response, which we adopt here, is simply to introduce state-fixed effects in the analysis. This ignores within state differences in terrain of course, but to the extent that the territories within an entire state exhibit similarities in terrain (for example, the north-eastern states are mostly heavily forested, Jammu and Kashmir is mostly mountainous, and Uttar Pradesh or Bihar are mostly plains areas with fertile agricultural land), this is a simple first-cut way of controlling for terrain.

Indeed, *within* state correlations between the density-based measure and the area-weighted measure of urban populations are much higher. Of the 18 states that have more than two constituencies (for which a correlation is possible), only Odisha, Bihar, Assam and Himachal Pradesh have correlations less than 0.5. This indicates that the density measure is much closer to the urban population measure when we compare constituencies within a state to each other than when we compare constituencies across states. This is probably a consequence of the delimitation effects discussed earlier, in addition to other state-specific factors such as terrain. This too can be addressed, therefore, by including state-fixed effects in all our analyses.

In the section that follows, we conduct a preliminary analysis of the relationship between density and turnout over time using state-fixed effects. The use of state-fixed effects, of course, does not address all potential sources of error. For example, it

Table 1: Turnout across Density Categories (1977–2014)

	Density Category 1	Density Category 2	Density Category 3	Density Category 4	Density Category 5	Density Category 6
1977	53.40	60.11	63.12	67.84	61.63	61.78
1980	51.66	56.14	58.30	61.01	60.01	58.41
1984	56.74	63.86	64.48	68.07	66.11	61.96
1989	54.56	59.86	62.00	65.29	64.03	59.01
1991	48.83	53.08	56.70	62.97	58.65	49.18
1996	54.16	55.40	59.46	59.76	62.08	53.64
1998	59.65	60.01	62.63	63.68	62.62	56.40
1999	55.33	59.08	60.53	62.30	60.06	51.46
2004	57.06	58.17	61.35	59.50	58.99	52.69
2009	58.36	59.17	62.05	57.47	61.24	50.71
2014	70.50	66.61	70.21	65.14	67.92	59.69

Source: Chandra and Potter (2016).

may not ameliorate the possibility of errors based on errors in the voter registration list.

5 Analyses of the Relationship between Density and Turnout over Time

Figure 5 (p 65) presents the relationship between average voter turnout in each of our density categories over time. The corresponding data are in Table 1. We use this categorical measure purely for the purpose of graphic illustration. But note that all quantitative analyses that follow are based on a continuous measure of urbanisation. We use the categorical measure only for robustness checks.

We see that the least dense constituencies in Density Category 1 go from the lowest turnout in 1977 to nearly the highest in 2014. The four density categories in the middle do not change substantially except in the most recent elections

Table 2: The Relationship between Density and Turnout in Parliamentary Elections (1977–2014)

	OLS (1)		OLS (2)		N
	No Fixed Effects		Fixed Effects		
1977	12.09 (21.94)		-7.02 (8.18)		542
1980	9.78 (18.22)		-30.12** (10.39)		529
1984	10.74 (11.87)		-22.69** (5.99)		542
1989	9.36 (9.08)		-16.68+ (9.21)		529
1991	-3.13 (14.31)		-28.79** (4.81)		534
1996	-3.29 (15.20)		-24.41** (5.79)		543
1998	-9.13 (13.79)		-20.28** (3.71)		543
1999	-17.63 (18.39)		-28.52** (8.71)		543
2004	-18.33 (16.53)		-33.19** (6.17)		543
2009	-51.24** (18.30)		-63.99** (13.91)		543
2014	-45.56* (16.95)		-59.29** (13.42)		543

+p<0.10, *p<0.05, **p<0.01. Standard Errors Clustered by State (in parentheses).

Table 3: The Relationship between Density and Turnout in Parliamentary Elections 1977–2014 (with Density Categories Excluded)

	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)	OLS (7)
1977	-11.98+ (6.68)	-10.67 (9.39)	-5.09 (7.45)	-7.25 (8.12)	-8.04 (6.68)	156.52 (128.35)	5.38 (97.09)
1980	-34.65** (7.46)	-31.41* (13.07)	-24.15** (8.41)	-31.65** (9.86)	-31.40** (9.71)	-7.35 (92.05)	-92.85 (76.44)
1984	-25.77** (4.75)	-22.54** (7.90)	-19.31** (5.13)	-23.63** (5.08)	-21.96** (5.56)	-68.50 (109.86)	-153.18 (92.07)
1989	-16.44 (9.70)	-19.11* (8.08)	-16.41 (9.75)	-15.38+ (8.49)	-17.37+ (8.53)	-104.55+ (56.61)	-126.16* (47.36)
1991	-28.55** (5.05)	-27.94** (5.87)	-27.79** (4.66)	-27.89** (4.27)	-28.41** (4.48)	-171.09* (68.64)	-194.97** (58.15)
1996	-23.52** (6.34)	-23.47** (7.02)	-23.57** (5.75)	-23.58** (5.32)	-24.55** (5.72)	-203.29* (74.92)	-204.11** (57.91)
1998	-19.75** (3.91)	-19.12** (4.48)	-20.41** (3.63)	-19.20** (3.85)	-20.41** (3.27)	-232.86** (83.97)	-256.82** (80.38)
1999	-28.14** (8.32)	-21.89** (5.07)	-28.70** (7.79)	-27.42** (9.87)	-28.89** (8.61)	-333.06+ (168.00)	-374.30* (155.75)
2004	-32.92** (6.24)	-29.13** (8.24)	-33.48** (6.46)	-31.04** (5.91)	-32.40** (5.72)	-352.25** (86.51)	-346.34** (85.24)
2009	-63.42** (14.13)	-54.45** (17.43)	-66.45** (13.88)	-61.57** (13.18)	-64.94** (12.59)	-329.56** (45.72)	-330.62** (45.42)
2014	-58.83** (13.52)	-55.56** (15.44)	-57.36** (13.27)	-58.28** (13.39)	-59.51** (12.35)	-269.97** (76.88)	-265.13** (77.16)

+p<0.10, *p<0.05, **p<0.01. Standard Errors Clustered by State (in parentheses).

Note: All columns include state-fixed effects, and standard errors are clustered by state. Column 1 excludes constituencies in density category 1; column 2 excludes constituencies in density category 2; column 3 excludes constituencies in density category 3; column 4 excludes constituencies in density category 4; column 5 excludes constituencies in density category 5; column 6 excludes constituencies in density category 6; column 7 excludes constituencies on both extremes—density categories 1 and 6.

in 2014 where they all jump. Turnout in the highest density category constituencies, by contrast, was roughly in the middle until 1991, when it plunged to as low a level as category 1. After that, it has consistently been the category with the lowest turnout.

If we could read the data on density as a straightforward proxy for the degree of urbanisation, they would suggest that at least since 1991 onwards, voters in metropolitan cities indeed vote in significantly lower proportions than voters elsewhere. But there is no consistent pattern in turnout in the other categories of constituencies. This would then be a story only about differences between the extreme cases—Delhi, Mumbai, Kolkata—and the rest, but not a story about differences in turnout between constituencies that are predominantly rural and constituencies that are associated with small and medium towns.

But we cannot take the data at face value for the reasons outlined above. Category 1 constituencies may conceal a higher level of urbanisation than the density measure leads us to expect. Further, the density categories may not be a straightforward reflection of urbanisation because of state-specific distortions introduced by the freeze on delimitation between 1977 and 2008.

Consequently, we analyse the data in OLS regressions using the continuous measure of urbanisation. Table 2 reports the results from cross-sectional OLS regressions of turnout on electorate density for each election between 1977 and 2014 without state-fixed effects (column 1) and with state-fixed effects (column 2). All models include standard errors clustered at the state level. Note that each cell reports the

results of a separate regression of turnout on density in the relevant election year.⁶

Column 1 shows that when state-fixed effects are not included, there is no statistically significant relationship between density and turnout in any parliamentary election prior to 2009. For the 2009 and 2014 elections we see a large negative and statistically significant relationship between density and voter turnout, that is, higher density constituencies had lower turnout in these two elections.

In column 2, we run the same OLS models, but also include state-fixed effects to account for variables that affect turnout at the state level. Once state-fixed effects are included, we see that there is a negative and significant relationship between density and voting in every election from 1980 to 2014. The magnitude of this negative relationship is greatest for the 2009 and 2014 elections.⁷

To make sure that this negative relationship is not driven by any particular density category, and in particular that it is not driven by categories at the extremes, Table 3 shows the results of replicating the analyses in Table 2 when we exclude constituencies in each density category one at a time (columns 1–6) and then the two density categories at the extremes together (column 7).⁸ For example, column 1 examines the relationship between

electorate density and turnout in each election on all constituencies *except those in density category 1*. Note that the density variable used in the analysis is always continuous.

Table 3 indicates that before 1989, the negative relationship between density and turnout was being driven mainly by constituencies in category 6 (that is, constituencies in the metropolitan cities). When constituencies in this category are excluded from the analysis, there is no statistically significant relationship between density and turnout, with state-fixed effects. But from 1989 onwards, there is a negative relationship between density and turnout even if we exclude these metropolitan constituencies, and when we exclude any category of constituency taken separately. We can say therefore that from 1989 onwards, within states, there is a negative relationship between urbanisation and turnout which holds even for the small and medium size towns and not only for the large cities.

As a final check, we conduct the same analysis using the GIS area-weighted measure of the urban population of each constituency rather than the density-based measure. Since the census data on which the GIS-based measure is constructed comes from the 2001 Census, we conduct this analysis only for the three parliamentary elections in reasonable proximity to 2001—the 1998, 1999 and 2004 parliamentary elections (Table 4).

Table 4: Relationship between Percent Urban Population (GIS Area-weighted Measure) and Turnout in 1998, 1999 and 2004 Elections

	OLS (1)	OLS (2)	OLS (3)
	Full Sample	Full Sample	Reduced Sample
1998	-0.08* (0.03)	-0.09** (0.02)	-0.06* (0.03)
1999	-0.12** (0.04)	-0.14** (0.03)	-0.11** (0.03)
2004	-0.09* (0.04)	-0.13** (0.02)	-0.11** (0.03)
Fixed Effects	No	Yes	Yes

+p<0.10, *p<0.05, **p<0.01. Standard Errors Clustered by State (in parentheses)

Column 1 reports the results for the full sample without state-fixed effects. Column 2 reports the results for the full sample with state-fixed effects. Column 3 reports the results for a reduced sample with the “highly urban” constituencies (with an urban population of 75% or more) removed, also with state-fixed effects.

Table 4 shows that at least for the parliamentary elections between 1998 and 2004, there is a negative relationship between urbanisation and turnout in constituencies across and within states that holds whether or not we use state-fixed effects, and that is not driven by the highly urban constituencies.

Table 5: The Relationship between Density and Turnout in the 2014 Parliamentary Elections (with Density Categories Excluded)

	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)	OLS (7)
2014	-58.83** (13.52)	-55.56** (15.44)	-57.36** (13.27)	-58.28** (13.39)	-59.51** (12.35)	-269.97** (76.88)	-265.13** (77.16)
Constant	87.59** (0.23)	70.68** (0.01)	70.68** (0.00)	70.68** (0.00)	70.68** (0.00)	70.75** (0.03)	91.02** (1.28)
N	511	391	385	416	499	513	481
R2	0.73	0.77	0.69	0.68	0.70	0.72	0.75

+p<0.10, *p<0.05, **p<0.01. Standard Errors Clustered by State (in parentheses).

Same as the Note in Table 3.

But we cannot say anything about whether this relationship also holds in elections before 1998 or after 2004 because GIS census data is from 2001.

6 Snapshot of the 2014 Election

We saw in the last section that the negative relationship between electoral density and turnout was present in the 2014 elections with and without state-fixed effects. In this section we look at these elections further to see if this relationship holds up to the exclusion of different categories of constituencies.

Table 5 regresses turnout in 2014 on electorate density in 2014 (as in prior models) but we exclude a density category in each model. Model 1 excludes category 1, Model 2 excludes category 2, and so on. Model 7 excludes categories 1 and 6 together.

We see that the estimates are very consistent in both magnitude and standard error when any of categories 1–5 are excluded. However, when category 6 is excluded we see that the magnitude of the estimate is between 4 and 5 times larger. This would suggest the negative relationship is not at all driven by the metropolitan constituencies once we include state-fixed effects. In fact, the relationship is much stronger when we exclude the densest constituencies.

7 Conclusions

Although this article is about measurement rather than explanation, it may be helpful here in the conclusion to speculate about why there is a negative relationship between urbanisation and turnout within states since the 1980s, at least as a way to interpret the results we have found here and suggest some ways in which the measures could be used to further the analysis.

The tendency to vote less may be associated with the attributes of individual voters in urban areas such as income, education, age or dependence on political patronage. We could investigate this by including these attributes as control variables in more complex, multivariate analyses, or conducting within city studies to see if enclaves or individuals associated with these characteristics within cities are less likely to vote than others.

Further, although our use of state-fixed effects was driven by the need to compensate for measurement error, there may also be reasonable theoretical grounds for believing that state-specific factors influence the relationship between urbanisation and turnout. It may be, for example, that the overall turnout in a state is affected by variables such as the nature of political competition, or the pattern of politicisation of ethnic differences. While these state-level factors may increase or decrease turnout in all constituencies in the state as a whole, there may still be a difference in the extent to which urban rather than rural constituencies are affected by them.

But since these results are based on ecological inference, we must also allow for the possibility that the negative relationship between urbanisation

and turnout at the constituency-level does not mean that voters living in urban areas vote less—it may also be the case that rural voters living in constituencies with urban areas vote less.

There could, in other words, be a neighbourhood affect, in which the presence of urban settlements in a constituency changes the way in which rural voters vote.

NOTES

- 1 By 2030, according to a different projection in a widely cited report by McKinsey and Co, 40% of the Indian population will live in urban areas (McKinsey and Company 2010).
- 2 Note that because this figure is based on UN sources and is for 2014, it differs from the Indian census estimate of 377.2 million in 2011.
- 3 See Maringanti and Mukhopadhyaya (2015) for a more general discussion of new sources of data on urbanisation.
- 4 When the number of constituencies in a density category is even, we choose one of the two possibilities. In one case (density category 5), we do not report the median since that is a suburb of Kolkata (Diamond Harbour) and not typical: here we turn to the category just following the median with an almost identical density (Thiruvananthapuram) which is more typical of the constituencies included in this category.
- 5 The ML Infomap Data locates most census units as polygons, whose area can be apportioned across constituencies but some as points which cannot be so apportioned. This makes a difference, especially in the case of Delhi, for which the data are less reliable for this measure. This means we exclude some constituencies in Delhi from the analysis.
- 6 We recoded density as 1,00,000 (1 lakh) persons per square kilometre to make the results easily interpretable..
- 7 If we use the blunter density category measures (as in Figure 5) as the independent variable instead of the continuous density measure, the negative relationship between density and turnout only becomes statistically significant for the 2004, 2009, and 2014 elections. This points to the advantage of the continuous measure, as using the blunter category measure hides the relationship for earlier elections.
- 8 For each election the category excluded is based on density figures from that election.

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Appendix

("Do Urban Voters in India Vote Less?" EPW, 24 September 2016), Dataset on Urbanization in Parliamentary Constituencies in India 1977-2014, Version 1.0

Notes

This worksheet provides information on how each of the variables in the dataset were constructed. The second worksheet has the name, area, density, percent urban population (calculated using the 2001 Census) and turnout for parliamentary constituencies in elections from 1977-2004, based on the 1976 delimitation. The third worksheet has the name, area, density and turnout for parliamentary constituencies in elections from 2009-2014, based on the 2008 delimitation. Note that the second worksheet does not have a measure for the percent urban population since the detailed 2011 census data are not yet available.

Area

All area calculations are based on shapefiles of parliamentary constituencies acquired by the NYU library from ML Infomap. Among the different projections which can be used to calculate area, we use a map projection that best maintains equal area across India so as not to not systematically overestimate the area of constituencies further from the equator (South Asia Albers Equal Area Conic Projection). We checked this area calculation by aggregating the GIS calculated areas of constituencies for a state as a whole, and comparing the GIS-calculated area of the state as a whole to the area of the state according to the relevant census. In most cases the GIS-calculated area of the state was within a small range of the census-based area.

However, in order to construct estimates of constituency area which are as accurate as possible, we then used these raw area calculations to re-estimate the area of each constituency. We computed the fraction of the GIS-based area of each constituency as a fraction of the GIS area of the state, and then re-estimated the area of each constituency as a fraction of the census area. For example, suppose that the GIS-based area of constituency 1 in state A is 100 square km, the GIS based area of State A was 1000 km square, and the area of the state as given by the census is 1050 km square. We know that the GIS area of Constituency A is 10% of the GIS area of the state as a whole. Consequently, we estimate the true area of constituency A to be $(.1 \times 1050) = 105$ km square.

We had to make exceptions to this procedure for two states for elections following delimitation in 2008—Gujarat and Kerala—because of flaws in the GIS shapefiles provided by ML Infomap. In Kerala, the boundaries for 2009 and 2014 in the ML Infomap data are inaccurate for numerous constituencies. Therefore, for constituencies in Kerala in 2009 and 2014 elections, we substituted the area calculations from Auerbach (2015) instead of our own GIS calculation. In Gujarat the state boundaries in the ML Infomap files are not consistent for 2009 and 2014. In 2009, the GIS boundaries are larger than for 2014 (because some wasteland that was included in the 2009 boundaries is excluded from the 2014 boundaries). This means that we are not able to accurately adjust our Gujarat GIS-measured area to the census area in the way described above. Therefore, for Gujarat, we use the unadjusted GIS-based measure for the 2009 and 2014 elections.

Appendix Table

Constituency	State	PERCENT_URBAN	AREA	DENSITY_1977	DENSITY_1980	DENSITY_1984	DENSITY_1989	DENSITY_1991	DENSITY_1996	DENSITY_1998	DENSITY_1999	DENSITY_2004	TURNOUT_1977	TURNOUT_1980	TURNOUT_1984	TURNOUT_1989	TURNOUT_1991	TURNOUT_1996	TURNOUT_1998	TURNOUT_1999	TURNOUT_2004
Adilabad	Andhra Pradesh	18.86	12729.96	43.06	49.07	55.01	69.77	69.92	84.29	84.74	86.01	89.62	53.15	53.14	61.17	62.18	57.27	62.02	68.35	67.92	72.87
Adoor	Kerala	6.97	3894.79	134.83	157.08	173.11	225.97	231.20	241.37	248.53	258.59	246.51	80.32	52.53	75.03	78.24	73.39	71.18	70.95	69.32	71.29
Agra	Uttar Pradesh	66.46	1251.03	452.50	509.13	511.30	709.52	735.37	954.26	978.82	999.40	1143.63	64.66	53.07	53.48	41.41	44.10	42.49	53.08	51.38	44.92
Ahmadabad	Gujarat	100.00	143.11	4005.91	4882.48	5354.45	6965.92	7349.46	8943.15	9031.51	9224.83	9662.45	64.72	58.25	59.28	57.20	37.48	26.89	48.54	39.98	39.67
Ahmednagar	Maharashtra	23.27	8983.96	64.05	78.76	85.84	109.57	111.44	123.44	125.25	127.68	144.21	56.35	57.97	62.07	53.84	60.16	49.96	58.20	63.80	53.08
Ajmer	Rajasthan	42.96	7020.28	82.31	93.71	105.73	132.73	137.25	150.72	148.77	157.66	171.48	58.22	55.32	57.88	58.41	44.77	41.77	58.02	53.62	43.99

(Continued)

Density

The density calculation for each election year is simply the electorate of a constituency in that election year divided by the area of the constituency as estimated above. Data on the electorate are based on official data, as compiled in Bhavnani, Rikhil R., 2014, "India National and State Election Dataset", doi:10.7910/DVN/26526, Harvard Dataverse, V2 for 1977-2009, and directly from returns published by the Election Commission of India for 2014. Note that the area of a constituency will be constant as long as the delimitation is constant. But the density of the constituency changes from year to year because the size the electorate does.

Urban Population Percent

To construct this measure, we aggregate the population of all census units from the Indian Census in 2001 up to the Lok Sabha constituency level. We aggregate all units categorized at "Towns" by the census into an urban population measure. We then divide this urban measure by the total population measure to create an urban percent measure. To do this we used GIS shapefiles to locate 2001 census towns into Lok Sabha constituencies. The ML Infomap Data locates most census units as polygons. Most polygons fall entirely into one constituency. However, some of the major metropolitan census units overlap multiple constituencies. When census polygons overlap constituency boundaries, we assign the population of the census unit across the constituencies based on area weighting. We allocated the population of census units that overlap constituency borders based on the area of overlap using GIS's "Tabulate Intersection" tool. So, for example, if a census unit has 25% of its area in constituency 1 and 75% of its area in constituency 2, we assign 25% of its population to constituency 1 and 75% of its population to constituency 2. We then sum the populations of all town census units allocated to a given Lok Sabha constituency to give us the urban population of that constituency. We sum the populations of all census units allocated to the constituency to give us the total population of that constituency. Urban population percent is then calculated over the total population.

Note that there are some instances in which the ML Infomap data locates census units as points rather than polygons, thus making it impossible to apportion their area across constituencies. In the case of the points we are forced to make the assumption that the population of the entire census town falls into the constituency where the point is located, i.e. that the actual boundaries of the towns represented by points do not cross constituency boundaries.

Turnout

Data on turnout are based on official data, as compiled in Bhavnani, Rikhil R., 2014, "India National and State Election Dataset", doi:10.7910/DVN/26526, Harvard Dataverse, V2 for 1977-2009, and directly from returns published by the Election Commission of India for 2014.

Appendix Table (Continued)

Constituency	State	PERCENT_URBAN	AREA	DENSITY_1977	DENSITY_1980	DENSITY_1984	DENSITY_1989	DENSITY_1991	DENSITY_1996	DENSITY_1998	DENSITY_1999	DENSITY_2004	TURNOUT_1977	TURNOUT_1980	TURNOUT_1984	TURNOUT_1989	TURNOUT_1991	TURNOUT_1996	TURNOUT_1998	TURNOUT_1999	TURNOUT_2004
East Delhi	Delhi	85.17	316.10	1618.84	2144.75	2633.10	4683.85	5006.38	7026.87	7164.19	7572.96	8246.09	69.19	61.34	60.29	48.78	47.57	25.50	50.92	43.37	45.68
Eluru	Andhra Pradesh	22.11	3934.12	170.25	186.09	201.04	249.45	250.94	284.34	282.03	291.60	292.74	68.16	61.62	75.02	76.99	69.58	69.66	72.85	72.74	77.88
Erandol	Maharashtra	21.91	6441.25	92.81	111.05	120.87	147.64	151.03	160.73	164.41	168.13	188.61	58.80	54.46	58.74	52.77	42.00	49.43	52.10	58.07	50.20
Ernakulam	Kerala	70.00	619.40	940.92	1091.11	1174.91	1552.69	1645.95	1727.58	1819.51	1906.54	1726.08	78.44	58.30	75.28	80.30	71.72	66.83	68.38	65.71	61.63
Etah	Uttar Pradesh	11.39	2675.06	211.12	232.59	245.01	313.72	313.94	381.44	384.92	387.60	421.87	65.99	46.65	53.46	52.10	52.83	46.19	62.94	56.63	52.03
Etawah	Uttar Pradesh	24.93	2556.23	230.54	259.16	282.80	369.16	371.28	439.58	444.74	449.38	494.72	61.79	65.00	59.24	51.91	48.56	45.49	58.13	52.40	55.66
Faizabad	Uttar Pradesh	13.46	2597.51	236.52	260.23	278.67	354.26	364.11	457.58	475.01	473.05	510.69	50.13	44.38	53.67	50.01	47.50	47.33	53.42	53.48	51.76
Faridbad	Haryana	42.96	3596.14	167.19	206.01	241.88	314.58	317.50	387.75	386.68	369.88	430.07	69.44	59.51	60.71	61.87	60.65	58.62	64.67	56.04	54.62
Faridkot	Punjab	28.71	5247.44	123.13	147.28	161.77	190.72	191.81	211.48	229.09	233.36	240.68	73.91	61.24	61.84	62.77	24.58	70.57	72.05	71.19	70.72
Farrukhabad	Uttar Pradesh	19.74	2769.12	230.34	261.65	279.83	344.58	346.58	438.31	443.38	448.51	493.48	57.88	47.19	58.25	53.59	50.39	47.83	57.63	50.97	48.70
Fatehpur	Uttar Pradesh	12.67	3779.54	162.58	183.16	199.12	242.99	243.87	302.11	305.00	309.86	338.50	47.18	44.12	49.76	47.61	39.52	35.45	50.89	45.97	39.60
Firozabad	Uttar Pradesh	12.04	3258.26	187.59	208.37	220.16	281.92	285.89	347.21	348.86	355.31	400.79	51.62	41.15	46.98	47.09	46.64	40.42	51.83	49.52	40.69
Firozpur	Punjab	23.94	5813.77	108.69	129.96	145.34	178.50	179.65	197.33	205.03	208.84	223.99	32.41	59.52	65.39	63.07	41.66	62.68	62.32	61.78	66.55
Gandhinagar	Gujarat	87.72	1049.70	590.38	754.16	885.57	1256.00	1310.22	1669.95	1698.75	1747.02	2026.13	62.39	56.07	57.44	56.74	44.77	27.81	50.67	40.42	39.76
Ganganagar	Rajasthan	26.63	12653.10	47.77	58.43	65.58	85.84	88.28	93.26	94.58	100.30	105.73	60.10	59.11	53.45	52.27	41.78	43.31	60.08	52.41	54.04
Garhwal	Uttar Pradesh	18.89	14420.42	39.05	41.84	45.92	58.89	61.44	67.38	69.46	71.90	74.98	46.50	45.47	51.68	46.87	44.20	42.75	50.47	45.54	46.54
Gauhati	Assam	38.63	4616.61	119.84		189.53		231.23	253.45	292.95	293.48	312.21	51.37		80.29		66.65	71.93	42.58	61.81	61.18
Gaya	Bihar	15.82	4250.30	151.12	166.90	190.97	227.11	228.05	250.77	248.22	248.58	337.93	68.42	54.25	65.60	68.94	63.06	59.19	66.07	60.24	61.50
Ghatampur	Uttar Pradesh	5.88	3790.71	160.24	180.91	192.19	239.61	243.24	286.78	289.41	293.54	318.54	58.97	48.91	49.97	51.46	46.45	40.76	51.01	50.16	41.80
Ghazipur	Uttar Pradesh	11.43	1943.75	329.05	374.38	410.82	522.02	529.48	654.17	659.80	668.82	759.71	56.95	51.65	57.52	51.14	49.60	49.40	57.48	56.46	58.86
Ghosi	Uttar Pradesh	19.31	1870.25	335.07	378.49	412.57	533.11	534.86	642.67	645.41	650.21	763.15	55.55	52.41	53.51	48.76	46.95	49.67	55.76	55.71	50.56
Giridih	Bihar	27.25	3893.18	149.28	175.46	189.01	241.08	245.56	284.74	286.51	286.51	337.18	48.40	43.55	49.64	51.69	49.56	53.90	56.26	47.70	54.42
Gobichetti-palayam	Tamil Nadu	31.64	5002.42	129.72	135.54	146.63	182.50	181.65	194.28	204.15	213.17	210.37	67.11	62.31	71.51	67.93	65.12	68.46	58.99	58.72	64.63
Godda	Bihar	14.47	3668.44	171.94	193.92	214.52	261.76	262.16	295.42	296.21	296.47	364.99	56.78	48.86	53.86	59.16	54.90	57.31	65.22	58.25	62.09
Godhra	Gujarat	15.03	5377.05	96.23	109.52	123.23	154.72	156.71	185.78	186.52	189.74	212.67	55.08	57.05	51.59	49.35	36.65	32.01	57.90	46.37	46.99
Gonda	Uttar Pradesh	8.28	2924.25	205.74	238.83	259.67	321.81	322.92	395.67	399.99	396.41	475.82	43.93	34.28	50.72	48.60	45.36	44.32	52.25	49.78	43.60
Gopalganj	Bihar	6.00	2040.92	330.59	359.72	385.08	462.56	464.81	568.05	576.66	576.66	603.25	62.27	45.69	61.75	72.21	73.57	58.31	59.91	63.03	56.41
Gorakhpur	Uttar Pradesh	28.41	1897.99	300.60	344.63	369.10	459.68	475.87	645.40	656.58	664.52	754.48	56.66	49.67	53.42	51.96	50.95	45.69	50.54	51.58	48.13
Gulbarga	Karnataka	33.57	9912.97	63.52	70.69	77.53	104.47	105.13	121.50	128.53	129.18	145.16	49.31	44.29	52.21	57.83	39.82	47.07	57.74	57.81	57.53
Guna	Madhya Pradesh	19.99	17031.90	37.23	40.69	46.09	59.07	60.14	70.56	71.41	75.21	83.49	50.51	49.90	46.85	55.09	35.82	45.58	59.20	53.05	47.00
Guntur	Andhra Pradesh	36.63	3567.14	221.56	235.96	251.43	312.31	312.45	356.18	354.54	347.51	328.82	64.10	52.18	66.10	67.31	57.94	57.71	59.48	63.02	70.03
Gurdaspur	Punjab	22.18	3260.27	172.84	209.55	231.31	290.93	295.69	322.10	334.73	344.15	371.21	71.42	62.64	65.22	57.44	35.05	64.18	64.56	59.77	64.93
Gwalior	Madhya Pradesh	52.91	5933.43	98.94	111.12	118.72	160.66	168.23	199.39	203.09	215.75	232.83	55.59	48.53	65.48	50.71	36.64	43.01	59.34	48.17	40.88
Hajipur	Bihar	7.66	1493.83	459.87	509.65	558.41	654.36	656.12	708.38	714.75	712.48	809.22	76.45	60.58	70.37	74.84	75.89	71.03	75.19	73.25	64.00
Hamirpur	Himachal Pradesh	7.08	4739.97	110.72	123.97	124.68	162.61	168.63	183.03	188.04	197.79	224.52	61.64	61.52	65.08	63.41	56.58	57.22	71.06	59.25	61.46
Hamirpur	Uttar Pradesh	18.89	7105.43	77.28	87.58	94.69	117.77	118.64	143.03	146.57	148.81	166.81	55.73	52.25	56.39	48.53	45.62	42.91	55.35	57.91	50.97
Hanamkonda	Andhra Pradesh	7.36	5127.34	119.97	135.12	149.15	187.04	187.12	217.25	217.76	218.23	235.42	63.46	56.50	65.83	63.82	39.82	50.68	54.70	65.05	68.92
Hapur	Uttar Pradesh	35.04	1559.99	404.96	463.74	492.68	690.67	694.89	957.51	980.30	1005.20	1158.23	67.39	56.66	58.96	48.36	49.78	45.68	49.97	46.15	44.26
Hardoi	Uttar Pradesh	12.93	2924.99	203.52	219.96	246.92	305.56	308.45	370.36	371.47	370.56	414.79	51.00	38.40	50.60	51.87	47.70	37.05	51.66	51.20	43.03
Hardwar	Uttar Pradesh	25.31	3174.20	174.59	201.05	218.15	280.73	282.82	364.85	368.60	372.93	288.09	64.59	64.06	63.93	55.13	58.28	52.54	61.18	56.34	53.19
Hassan	Karnataka	17.44	6782.15	91.38	107.10	114.23	154.67	155.93	167.32	172.89	179.45	190.63	67.38	61.56	69.20	70.99	65.56	66.76	72.80	70.55	70.56

(Continued)

Appendix Table (Continued)

Constituency	State	PERCENT_URBAN	AREA	DENSITY_1977	DENSITY_1980	DENSITY_1984	DENSITY_1989	DENSITY_1991	DENSITY_1996	DENSITY_1998	DENSITY_1999	DENSITY_2004	TURNOUT_1977	TURNOUT_1980	TURNOUT_1984	TURNOUT_1989	TURNOUT_1991	TURNOUT_1996	TURNOUT_1998	TURNOUT_1999	TURNOUT_2004
Hathras	Uttar Pradesh	15.34	2482.27	261.24	278.49	300.12	361.11	366.48	448.23	455.55	458.51	488.66	60.74	49.10	49.87	49.50	49.69	38.30	46.95	40.40	40.57
Hazaribagh	Bihar	21.92	7060.15	87.67	101.33	112.56	143.15	144.44	171.82	171.91	171.91	167.14	46.48	38.27	46.58	52.43	48.88	51.01	57.03	48.77	59.78
Hindupur	Andhra Pradesh	17.57	9480.29	68.60	75.28	83.37	103.90	103.98	123.59	121.61	121.47	124.39	59.93	41.03	69.98	66.28	60.53	59.11	57.09	66.78	73.61
Hingoli	Maharashtra	12.70	9655.24	61.77	70.16	75.38	96.38	97.57	105.18	107.33	107.09	123.18	52.04	53.17	55.35	53.92	47.75	56.76	63.46	66.65	61.24
Hissar	Haryana	26.38	4632.09	119.55	142.30	159.21	197.10	198.49	222.46	221.57	221.36	245.41	72.51	63.67	65.57	62.85	66.04	70.26	70.65	62.35	67.72
Hoogly	West Bengal	30.84	1079.51	519.41	649.41	717.66	891.10	928.63	1015.16	1053.58	1075.37	1076.12	63.76	71.23	81.93	82.24	78.03	83.72	81.99	79.19	79.62
Hoshangbad	Madhya Pradesh	23.69	11934.09	47.09	52.40	58.49	76.77	78.52	90.30	91.27	96.64	107.86	54.99	52.64	60.70	57.35	46.02	52.47	66.92	58.64	49.28
Hoshiarpur	Punjab	11.36	3662.70	171.00	199.86	213.08	258.38	261.85	282.88	295.03	303.87	310.54	66.68	62.80	63.59	57.89	35.54	56.20	54.68	52.14	57.65
Howrah	West Bengal	94.52	228.89	2925.61	3391.37	3927.82	4926.12	5095.08	5728.05	5973.67	6037.66	5419.31	56.33	64.01	75.34	72.43	67.47	73.11	74.05	71.02	73.49
Hyderabad	Andhra Pradesh	72.80	3386.23	173.11	204.55	229.56	377.48	382.77	442.53	445.08	462.82	522.92	57.96	61.39	74.97	68.78	75.99	61.97	72.19	69.15	55.73
Ichalkaranji	Maharashtra	23.66	4735.43	121.50	144.96	159.52	198.11	205.15	230.99	232.18	235.81	256.59	67.66	65.37	68.54	68.86	52.58	63.05	65.31	69.73	65.11
Idukki	Kerala	3.96	5315.33	108.82	131.15	135.04	183.04	187.74	194.59	198.16	210.99	194.60	71.89	53.65	74.42	76.39	70.77	69.42	67.82	69.01	70.52
Indore	Madhya Pradesh	70.17	3916.18	143.17	174.79	201.85	276.67	293.75	316.54	363.50	377.44	428.49	62.74	59.47	60.58	58.98	48.03	53.58	59.39	55.87	50.92
Inner Manipur	Manipur	41.70	1505.36	270.98	311.77	341.51	400.31	406.22	416.28	425.48	437.06	492.05	60.75	78.76	83.20	64.76	60.21	65.28	67.47	67.28	56.22
Jabalpur	Madhya Pradesh	66.33	4029.84	145.71	166.95	178.69	227.90	234.61	302.06	296.46	308.07	334.48	56.05	48.34	58.08	53.60	41.20	42.94	53.69	42.57	42.39
Jadavpur	West Bengal	67.50	591.71	1055.02	1345.27	1473.24	1913.17	1982.93	2219.18	2330.63	2371.79	2289.88	55.61	64.73	74.78	77.65	72.61	80.20	76.30	70.63	75.45
Jagatsinghpur	Orissa	8.51	2755.74	237.40	265.10	282.41	352.91	369.14	415.20	429.46	447.45	472.29	60.99	61.45	70.22	70.54	65.74	69.27	63.60	61.51	71.19
Jahanabad	Bihar	8.06	2056.47	365.40	419.97	457.05	514.80	519.28	531.50	533.02	537.43	606.26	65.24	65.25	79.07	65.17	71.71	71.94	76.35	70.15	69.29
Jaipur	Rajasthan	77.72	3659.99	166.70	199.83	238.06	336.52	367.93	452.56	443.34	479.17	518.27	57.62	52.23	57.67	57.49	40.97	38.15	48.66	46.10	46.45
Jaipur	Orissa	4.19	3149.73	194.04	213.49	229.20	296.20	305.11	341.79	361.56	371.84	405.99	50.41	52.30	64.61	66.39	58.58	58.96	54.44	50.70	68.52
Jalaun	Uttar Pradesh	22.13	6447.35	93.47	104.33	113.57	144.10	145.55	175.91	178.99	180.60	203.21	61.00	56.65	51.18	53.23	49.22	40.61	52.70	49.37	44.25
Jalesar	Uttar Pradesh	32.14	2529.86	227.78	256.49	271.74	344.10	334.01	433.91	438.07	443.81	490.51	63.36	56.04	55.79	46.02	45.14	47.85	60.39	58.93	52.41
Jalgaon	Maharashtra	34.76	5509.83	107.03	126.73	137.78	171.60	177.75	191.83	197.40	199.85	224.91	59.45	58.62	59.52	63.99	48.12	47.97	57.46	63.70	49.79
Jalna	Maharashtra	19.23	8491.82	72.45	82.05	92.02	116.61	119.40	126.27	128.84	130.26	146.37	50.89	46.69	50.50	58.75	52.44	56.29	56.66	65.68	60.85
Jalore	Rajasthan	11.35	15750.34	41.17	47.01	53.06	68.38	69.92	79.89	77.63	79.08	90.70	43.27	45.10	50.71	53.88	52.47	36.71	55.00	51.66	45.91
Jalpaiguri	West Bengal	19.37	3416.68	155.01	192.01	218.89	273.79	277.75	311.85	317.63	322.51	323.35	57.21	65.73	75.64	77.91	76.54	83.75	80.04	75.49	80.57
Jammu	Jammu and Kashmir	30.90	13351.74	45.01	51.78	60.80	76.89		90.36	108.06	108.36	138.56	57.39	57.84	69.60	55.84		47.02	53.91	46.03	44.41
Jamnagar	Gujarat	47.73	16469.35	29.12	34.19	38.82	49.76	50.15	55.40	56.28	58.19	65.10	50.80	45.55	53.34	43.27	46.13	34.61	49.27	36.80	40.43
Jamshedpur	Bihar	54.30	3643.48	158.07	182.46	206.59	261.67	264.52	312.37	318.53	318.53	376.60	45.49	47.26	57.22	54.15	52.97	58.38	61.60	54.13	56.59
Jangipur	West Bengal	20.94	1981.97	285.20	351.79	390.79	470.43	476.14	528.38	540.47	548.55	546.00	56.13	70.40	75.75	77.17	75.42	82.36	77.26	71.33	81.61
Janjgir	Madhya Pradesh	24.38	9778.05	59.45	64.88	73.93	98.72	103.64	117.52	119.75	127.20	140.56	42.46	42.52	50.44	57.93	37.57	56.20	61.19	53.42	52.22
Jaunpur	Uttar Pradesh	10.75	2006.72	307.06	356.67	378.77	491.10	493.95	628.36	629.47	635.09	755.30	53.96	51.97	56.83	46.20	43.64	45.37	55.26	54.26	47.04
Jhabua	Madhya Pradesh	17.92	9545.41	54.32	61.39	70.00	91.86	93.30	111.05	112.05	116.55	135.15	47.53	44.56	50.00	47.54	44.63	44.81	54.24	53.97	48.75
Jhalawar	Rajasthan	11.77	11456.09	47.95	54.46	61.14	77.75	78.68	92.01	90.22	93.35	103.75	59.71	55.57	55.58	56.12	46.47	44.57	61.19	63.37	47.76
Jhanjharpur	Bihar	1.89	2137.90	294.58	327.61	366.13	448.45	448.91	494.53	492.65	492.98	544.37	73.76	65.04	74.35	55.50	67.31	62.83	65.91	63.99	60.51
Jhansi	Uttar Pradesh	33.77	8224.75	77.02	85.46	94.01	127.11	127.81	155.42	157.84	160.39	185.58	53.54	54.74	59.59	54.69	43.22	52.42	59.19	56.89	53.70
Jhargram	West Bengal	3.50	4968.52	115.91	133.52	150.23	176.56	177.91	189.99	195.47	199.56	207.20	59.74	74.05	77.08	79.61	76.20	85.32	82.62	79.85	77.25
Jhunjhunu	Rajasthan	23.08	7009.81	97.23	112.36	126.64	160.56	162.99	183.22	164.56	168.79	195.53	53.05	54.56	62.26	63.80	46.24	50.50	66.32	56.54	49.72
Jodhpur	Rajasthan	39.02	17785.22	34.35	41.03	48.12	61.15	65.45	78.23	73.83	78.93	88.39	56.12	53.69	53.89	54.14	46.55	42.62	57.89	46.75	55.02
Jorhat	Assam	13.90	4082.50	143.47		178.01		209.15	229.34	245.70	245.80	264.09	51.42		69.51		62.44	69.35	33.13	62.86	61.85
Joynagar	West Bengal	0.00	4217.17	148.45	164.91	180.91	221.04	226.78	252.20	261.02	264.84	269.58	58.97	74.23	78.46	79.86	76.91	81.66	76.22	71.86	70.93
Jullundur	Punjab	54.05	2418.24	244.91	299.89	313.08	387.84	398.57	443.06	460.10	472.28	505.10	71.08	58.67	64.59	58.08	29.95	57.46	57.90	49.29	60.73

(Continued)

Appendix Table (Continued)

Constituency	State	PERCENT_URBAN	AREA	DENSITY_1977	DENSITY_1980	DENSITY_1984	DENSITY_1989	DENSITY_1991	DENSITY_1996	DENSITY_1998	DENSITY_1999	DENSITY_2004	TURNOUT_1977	TURNOUT_1980	TURNOUT_1984	TURNOUT_1989	TURNOUT_1991	TURNOUT_1996	TURNOUT_1998	TURNOUT_1999	TURNOUT_2004
Junagadh	Gujarat	30.70	7845.38	65.81	76.22	88.42	116.70	117.89	134.08	134.90	137.61	157.98	62.62	55.12	51.54	48.82	47.18	31.38	56.33	45.60	53.15
Kaira	Gujarat	23.60	3049.96	187.92	218.26	243.02	302.48	307.30	339.13	339.96	345.83	375.82	69.04	59.61	59.93	60.40	37.31	35.11	59.57	46.01	39.34
Kairana	Uttar Pradesh	20.33	2524.61	226.13	256.14	278.45	348.80	349.35	431.16	432.44	435.51	483.57	65.75	64.29	63.61	59.06	56.85	51.80	65.99	62.94	66.90
Kaisergang	Uttar Pradesh	3.03	2703.56	237.29	251.63	267.82	320.34	323.81	405.07	410.33	413.16	470.79	46.90	37.35	46.74	45.47	51.17	46.66	60.15	56.91	44.78
Kakinada	Andhra Pradesh	31.45	2654.05	247.36	279.29	303.11	368.95	369.91	438.91	436.93	441.58	438.95	66.21	52.91	70.82	71.96	59.92	62.50	69.39	69.33	71.44
Kalahandi	Orissa	6.93	10005.71	54.17	57.67	63.09	84.02	84.43	96.48	101.55	106.04	113.20	33.65	43.16	51.56	54.14	51.52	58.96	60.00	60.56	66.58
Kaliabor	Assam	7.07	4935.77	118.59		160.69		184.07	202.59	224.97	225.20	233.70	49.24		73.04		71.29	74.76	57.74	68.26	66.15
Kanakapura	Karnataka	66.22	5282.93	127.50	148.60	171.04	256.54	259.41	326.38	363.79	399.52	510.23	60.49	60.17	70.69	65.76	57.85	60.66	62.75	58.46	57.59
Kanara	Karnataka	23.01	12584.26	46.40	55.27	58.18	77.15	76.96	84.91	86.33	87.50	95.94	64.91	59.64	64.43	65.17	49.82	60.25	65.86	67.62	69.07
Kangra	Himachal Pradesh	6.53	7791.49	61.23	67.55	72.91	94.72	98.42	112.37	115.02	120.01	132.67	62.22	62.53	65.48	68.78	55.48	60.70	70.94	59.12	62.22
Kanker	Madhya Pradesh	6.43	18406.18	29.71	31.43	35.66	46.22	46.81	53.14	54.28	56.33	62.59	46.55	45.29	50.28	50.31	35.98	56.34	58.81	55.37	48.08
Kannauj	Uttar Pradesh	13.73	3886.83	159.08	177.14	191.95	242.46	243.33	293.47	297.32	297.71	346.47	66.52	59.26	64.56	55.89	50.22	50.96	60.46	59.06	56.33
Kanpur	Uttar Pradesh	86.42	985.14	667.55	717.90	682.68	1062.99	1084.44	1415.68	1423.07	1439.15	1448.76	57.78	50.74	55.94	40.57	37.71	40.88	48.52	44.83	43.35
Kapadvanj	Gujarat	13.38	5720.65	98.13	113.87	130.08	165.42	166.57	192.72	192.97	196.52	221.19	57.70	52.57	60.10	53.82	35.14	27.65	62.13	59.12	47.05
Karad	Maharashtra	12.27	4808.70	130.92	146.44	157.83	197.20	200.59	211.14	213.41	215.17	245.75	52.16	66.31	54.96	59.68	51.81	60.68	62.82	70.93	60.46
Karimganj	Assam	7.35	3269.52	163.75	197.10	207.22		245.19	268.10	288.34	288.47	299.46	43.59	40.97	72.27		73.76	77.35	77.12	72.07	68.58
Karimnagar	Andhra Pradesh	22.12	5549.73	117.22	133.79	150.72	193.84	194.14	224.09	224.88	226.87	242.32	54.96	48.42	57.66	58.78	47.86	54.63	61.55	63.64	65.03
Karnal	Haryana	32.67	3782.06	147.06	176.37	197.43	250.29	251.45	303.84	300.85	299.16	327.95	74.76	64.56	67.98	62.89	65.62	69.70	70.02	68.15	66.02
Karol Bagh	Delhi		26.40	11943.37	13062.39	12561.67	18220.91	19315.61	20590.53	20963.48	21653.67	19137.73	68.36	64.95	66.36	59.29	49.68	53.00	54.03	45.18	49.32
Karur	Tamil Nadu	26.95	4440.19	165.05	171.83	184.22	236.65	235.00	241.64	254.57	263.63	240.84	69.10	66.42	73.95	70.29	66.16	68.07	57.49	61.48	69.54
Kasaragod	Kerala	23.10	2740.29	211.10	247.59	271.95	368.68	378.40	408.61	416.40	437.90	423.36	77.72	68.25	77.47	78.92	74.14	71.25	75.94	77.12	77.72
Katihar	Bihar	9.52	2587.22	204.13	236.60	259.83	330.50	334.40	384.83	401.41	401.78	447.60	58.67	51.03	68.31	72.42	57.53	63.91	67.86	61.53	60.83
Katwa	West Bengal	12.86	1863.54	308.71	382.83	429.58	520.51	542.02	598.18	620.62	635.14	627.58	62.63	75.28	81.08	82.43	79.68	84.49	82.25	77.59	82.62
Kendrapara	Orissa	4.64	2871.02	219.11	240.14	255.63	317.24	328.21	364.38	382.81	390.52	413.38	61.58	59.84	69.44	67.87	62.98	62.11	59.45	55.34	70.46
Keonjhar	Orissa	14.72	10235.80	54.83	60.55	66.25	88.47	89.14	98.53	103.21	106.69	115.62	33.56	29.68	46.32	50.67	46.34	60.59	60.88	56.59	68.84
Khagaria	Bihar	5.39	2568.76	254.35	277.83	298.11	368.64	372.42	402.36	406.71	406.59	465.97	61.71	58.24	62.94	61.45	58.63	65.19	71.21	63.43	56.48
Khajuraho	Madhya Pradesh	20.50	10728.72	62.08	68.10	77.15	98.97	100.92	119.90	121.42	128.61	144.74	49.17	47.35	56.85	57.12	46.55	50.53	62.19	53.18	49.74
Khalilabad	Uttar Pradesh	9.43	2107.52	304.52	342.34	371.23	463.03	463.82	556.79	572.01	576.89	662.89	58.97	46.06	58.30	50.18	47.10	49.64	52.99	54.66	50.16
Khammam	Andhra Pradesh	21.01	8798.58	67.79	79.71	90.12	117.98	118.64	140.10	139.68	139.61	147.59	68.17	68.22	73.65	75.33	68.53	70.98	73.44	74.62	78.79
Khandwa	Madhya Pradesh	25.05	12803.60	40.98	47.83	52.89	67.85	69.17	82.05	82.06	86.71	95.11	59.09	61.56	62.32	59.57	52.25	54.44	61.44	55.91	49.71
Khargone	Madhya Pradesh	15.14	10633.88	50.54	55.07	62.36	81.24	82.80	98.83	100.77	108.79	121.06	59.72	57.93	64.12	57.74	50.63	55.35	60.15	59.29	50.67
Khed	Maharashtra	30.89	7612.28	72.69	85.79	91.17	122.81	125.67	135.18	139.14	140.62	173.31	53.56	49.79	63.47	58.57	47.40	54.70	58.17	61.79	55.49
Kheri	Uttar Pradesh	12.40	6071.92	100.91	119.45	126.76	155.51	156.27	199.57	203.14	207.54	236.76	46.61	37.68	50.31	43.98	45.10	39.29	51.66	55.96	49.16
Khunti	Bihar	6.64	8667.15	64.67	68.51	72.19	87.19	87.32	94.96	96.17	96.01	104.40	32.78	34.33	38.00	44.10	45.34	50.79	55.54	48.65	54.24
Khurja	Uttar Pradesh	28.50	2993.62	204.31	224.34	238.56	321.29	322.42	417.74	420.06	424.90	486.98	58.83	50.02	50.79	44.58	47.06	34.92	45.63	37.87	41.21
Kishanganj	Bihar	5.11	3358.72	178.33	209.25	237.62	284.77	286.89	336.70	336.16	336.27	380.64	47.93	44.79	54.37	57.38	54.52	60.53	64.58	63.54	63.62
Kodarma	Bihar	8.60	6216.63	96.96	109.29	123.36	155.07	155.62	179.31	183.25	182.98	213.26	41.73	39.16	46.25	55.62	50.62	55.34	58.56	52.31	62.28
Kokrajhar	Assam	4.96	6736.65	81.65		108.95		146.57	145.16	173.65	173.45	180.59	60.12		83.71		81.24	77.94	64.56	76.17	79.49
Kolaba	Maharashtra	46.52	5442.13	107.97	121.07	129.90	172.41	180.91	199.50	205.89	212.50	229.74	58.82	54.90	64.59	66.51	54.36	57.59	63.04	57.09	63.46
Kolar	Karnataka	27.93	5026.06	118.35	134.04	142.09	188.78	190.50	208.09	214.95	227.92	251.24	59.09	53.90	64.61	71.14	61.37	66.86	71.08	71.21	72.01
Kolhapur	Maharashtra	35.11	3625.64	152.14	180.59	203.54	246.44	249.64	286.39	287.18	295.56	320.55	67.82	60.07	57.58	58.00	46.30	51.90	68.41	69.79	69.98
Kopergaon	Maharashtra	20.01	6122.78	83.42	101.13	109.35	140.16	143.10	151.01	152.73	155.55	175.99	52.99	67.42	56.52	58.13	56.05	55.10	63.78	68.56	62.06

(Continued)

Appendix Table (Continued)

Constituency	State	PERCENT_URBAN	AREA	DENSITY_1977	DENSITY_1980	DENSITY_1984	DENSITY_1989	DENSITY_1991	DENSITY_1996	DENSITY_1998	DENSITY_1999	DENSITY_2004	TURNOUT_1977	TURNOUT_1980	TURNOUT_1984	TURNOUT_1989	TURNOUT_1991	TURNOUT_1996	TURNOUT_1998	TURNOUT_1999	TURNOUT_2004
Koppal	Karnataka	19.29	9166.53	66.91	79.76	84.85	114.65	115.10	127.35	132.23	135.65	154.20	53.55	49.86	59.09	61.24	51.95	51.73	58.38	61.17	63.25
Koraput	Orissa	17.44	13833.62	42.03	44.69	49.14	64.49	65.17	73.48	78.41	81.02	82.38	24.52	24.34	33.22	39.77	39.32	51.46	45.73	49.20	64.56
Kota	Rajasthan	17.80	10582.22	51.88	60.42	68.16	89.06	93.51	110.23	109.53	115.23	125.41	63.00	53.90	60.37	56.71	43.04	44.40	63.18	51.58	43.71
Kottayam	Kerala	19.13	949.83	606.37	694.26	731.82	937.18	987.81	1019.48	1034.49	1072.18	1014.80	79.19	57.80	80.10	84.18	75.21	70.80	72.77	71.52	73.22
Krishnagar	West Bengal	8.95	2066.21	258.85	313.31	353.67	445.97	449.38	517.85	516.93	524.85	540.82	60.10	77.72	81.87	80.94	80.66	83.09	82.98	77.22	83.25
Krishnagiri	Tamil Nadu	17.36	5462.81	106.75	120.12	132.61	175.47	174.78	197.33	204.27	213.02	229.29	58.25	53.87	65.01	61.93	60.90	61.51	55.80	58.54	58.98
Kurnool	Andhra Pradesh	29.00	8190.54	88.20	82.91	92.50	118.26	118.81	140.30	138.87	142.04	160.03	49.52	44.04	67.09	64.91	59.84	60.58	66.16	64.66	62.47
Kurukshetra	Haryana	22.09	3951.83	136.36	164.53	184.15	231.76	234.82	278.49	275.70	271.56	294.02	77.73	65.51	69.91	66.24	68.57	72.83	70.24	67.44	73.23
Kutch	Gujarat	28.30	23699.74	18.50	21.39	23.53	29.83	31.00	34.88	34.93	36.83	42.47	52.68	53.53	53.18	55.96	47.11	37.32	55.90	43.96	45.60
Ladakh	Jammu and Kashmir	16.57	153028.35	0.42	0.51	0.59	0.66		0.86	0.94	0.94	1.15	67.05	58.84	66.24	84.30		79.74	72.58	80.62	73.35
Lakhimpur	Assam	8.76	8888.59	62.53		81.81		99.83	103.67	119.01	119.34	126.75	49.58		68.93		67.42	72.62	63.45	70.12	71.01
Lakshadweep	Lakshadweep	45.59	30.00	649.03	670.57	732.13	1002.30	1055.50	1137.03	1224.60	1253.97	1301.10	84.16	88.34	86.61	84.77	79.97	88.50	84.56	79.37	81.52
Lalgaon	Uttar Pradesh	7.75	2298.21	289.91	328.13	359.49	448.45	456.28	566.59	568.63	571.74	678.07	51.34	49.31	50.45	47.30	43.53	46.61	53.47	52.40	49.00
Latur	Maharashtra	25.97	6684.49	90.54	101.81	112.92	146.59	148.66	156.33	158.63	164.12	193.46	58.21	62.50	70.46	61.75	56.00	64.10	66.75	68.65	63.59
Lohardaga	Bihar	5.31	9845.58	57.50	64.90	68.96	83.84	84.13	95.34	95.32	95.34	92.09	44.15	39.25	38.89	44.73	45.07	50.28	54.52	38.73	51.45
Lucknow	Uttar Pradesh	83.77	988.38	627.70	695.36	763.33	1144.44	1202.10	1505.66	1530.69	1570.69	1659.20	53.52	37.63	40.30	28.65	32.23	50.78	49.35	48.57	35.28
Ludhiana	Punjab	60.05	2736.49	243.36	302.60	334.87	415.10	439.30	488.80	517.65	537.74	570.24	74.20	58.14	61.85	58.83	16.12	58.39	52.56	45.32	55.75
Machhlishahr	Uttar Pradesh	2.73	2331.26	271.57	303.61	330.60	414.64	415.60	532.17	536.82	541.85	632.30	50.61	49.15	52.12	44.19	44.27	46.88	55.03	51.79	45.89
Machilipatnam	Andhra Pradesh	28.03	3266.24	196.64	215.01	226.99	278.16	278.29	306.94	304.18	308.13	304.13	71.12	65.87	73.75	74.95	66.96	69.50	69.69	70.73	76.04
Madhepura	Bihar	3.36	2397.50	273.55	311.39	348.93	407.49	414.49	416.80	415.92	415.94	495.30	70.15	58.96	65.53	67.97	66.28	61.63	63.26	65.03	58.58
Madhubani	Bihar	4.00	1687.61	411.70	458.64	501.64	581.34	584.88	655.50	653.00	652.45	745.22	67.35	60.96	66.78	56.06	64.07	54.17	65.02	64.20	55.27
Madras Central	Tamil Nadu	100.00	53.16	16183.52	13674.81	16233.80	19315.82	19456.38	19500.54	22699.76	23985.46	19662.53	53.36	67.05	62.47	60.19	53.53	56.45	48.18	48.46	49.06
Madras North	Tamil Nadu	93.03	357.97	2381.84	2064.97	2768.67	3757.72	3795.56	4338.67	5254.23	5702.55	5589.48	54.22	70.15	50.63	60.35	53.97	54.45	45.29	43.08	45.77
Madras South	Tamil Nadu	98.16	288.31	2840.27	2815.89	3533.68	4848.16	4892.44	5455.11	6717.67	7194.10	6763.22	57.95	67.13	63.59	59.17	52.36	55.27	46.41	45.15	47.93
Madurai	Tamil Nadu	71.74	1257.52	605.32	626.96	680.96	904.51	904.88	954.42	1072.96	1137.14	1068.79	63.29	66.74	68.13	62.58	55.33	59.91	48.74	52.34	55.03
Maharajganj	Bihar	4.99	1727.43	395.28	442.55	473.71	592.80	597.72	570.73	568.65	568.22	645.27	64.96	42.59	49.48	57.23	61.12	60.78	67.62	71.04	59.61
Maharajganj	Uttar Pradesh	5.69	2764.95	205.43	233.67	258.82	323.94	324.42	394.46	398.60	408.55	474.22	52.38	53.40	62.30	54.29	54.26	55.44	59.05	59.94	56.94
Mahasamund	Madhya Pradesh	10.53	11348.63	50.00	54.54	60.05	78.69	79.94	89.74	91.14	94.42	103.04	53.54	55.52	60.03	59.52	46.33	59.41	64.68	33.30	65.97
Mahbubnagar	Andhra Pradesh	14.14	8368.23	83.49	87.93	101.06	124.09	124.25	148.61	147.15	149.31	163.23	49.19	50.10	62.45	62.19	56.45	58.39	60.67	63.37	63.44
Mahendergarh	Haryana	24.07	4186.55	155.95	186.13	204.44	252.60	254.13	295.71	292.79	295.45	341.33	70.89	62.57	69.51	60.25	58.91	63.99	64.70	60.21	59.43
Mahesana	Gujarat	25.81	4063.30	146.72	163.33	187.47	245.46	249.49	261.12	266.01	271.81	304.20	64.15	63.98	71.41	65.71	44.71	44.32	69.09	56.92	56.26
Mainpuri	Uttar Pradesh	12.54	3011.57	200.38	218.09	235.11	282.57	291.41	363.81	362.74	368.28	402.12	61.02	53.26	60.43	52.61	49.01	58.33	58.13	51.35	59.45
Malda	West Bengal	11.63	2187.37	251.44	304.58	327.78	411.64	421.72	463.12	471.34	478.78	497.59	65.27	73.72	81.92	80.48	76.89	84.47	80.74	77.36	78.01
Malegaon	Maharashtra	29.60	7364.32	75.19	88.05	95.82	124.06	125.60	143.49	145.58	147.08	165.98	50.29	46.10	54.45	50.56	43.64	40.85	46.95	60.34	48.33
Mandi	Himachal Pradesh	4.69	34176.90	14.44	15.72	17.26	22.12	22.56	26.62	27.26	28.35	31.16	52.63	54.89	56.29	61.49	60.90	57.77	52.30	54.21	62.86
Mandla	Madhya Pradesh	7.36	15176.75	32.77	35.15	40.16	53.49	53.96	62.94	63.58	65.99	72.16	36.29	36.08	46.70	44.40	31.97	57.45	55.88	48.16	53.72
Mandsaur	Madhya Pradesh	22.54	10958.86	54.60	62.07	70.08	90.67	92.85	105.62	106.66	113.46	125.37	66.02	66.07	70.15	64.60	63.30	60.14	71.45	59.95	56.52
Mandvi	Gujarat	9.54	6684.88	81.05	91.54	105.46	133.68	135.23	156.14	156.02	159.12	171.90	60.46	56.04	55.66	46.73	46.96	46.60	60.30	56.46	56.11
Mandya	Karnataka	16.35	4263.59	141.77	156.99	169.54	225.72	227.57	243.98	250.31	257.94	281.16	68.50	64.24	75.41	73.38	62.96	70.24	73.54	72.80	71.54
Mangaldoi	Assam	5.59	4689.56	119.48		167.84		203.89	223.76	251.22	251.65	257.99	51.78		78.21		71.58	75.05	56.60	70.53	70.17
Mangalore	Karnataka	28.26	6711.72	82.81	95.24	99.83	137.63	139.75	143.76	144.82	149.35	164.11	69.91	69.73	72.06	67.66	58.80	70.78	72.93	71.78	71.86
Manjeri	Kerala	20.02	2462.36	231.17	273.74	299.18	413.13	427.90	468.26	477.10	494.60	512.60	75.76	64.03	76.68	79.28	69.43	67.30	68.69	66.52	71.88

(Continued)

Appendix Table (Continued)

Constituency	State	PERCENT_URBAN	AREA	DENSITY_1977	DENSITY_1980	DENSITY_1984	DENSITY_1989	DENSITY_1991	DENSITY_1996	DENSITY_1998	DENSITY_1999	DENSITY_2004	TURNOUT_1977	TURNOUT_1980	TURNOUT_1984	TURNOUT_1989	TURNOUT_1991	TURNOUT_1996	TURNOUT_1998	TURNOUT_1999	TURNOUT_2004
Mathura	Uttar Pradesh	26.80	3456.03	180.68	201.17	210.59	270.67	276.02	335.95	340.24	340.43	369.60	61.84	49.02	61.63	49.57	47.84	42.50	52.62	45.06	47.14
Mathurapur	West Bengal	1.37	2380.21	252.87	283.41	308.47	367.69	379.32	426.43	446.02	452.37	467.75	64.38	75.52	80.46	83.37	80.60	84.00	79.73	76.03	81.54
Mavelikara	Kerala	13.25	927.00	613.85	673.05	726.50	906.16	930.71	950.18	963.97	1010.74	940.23	78.07	67.15	74.16	77.94	71.90	70.14	69.53	70.86	73.96
Mayiladuturai (Mayuram)	Tamil Nadu	28.27	1737.91	372.77	389.37	414.96	523.93	519.41	547.17	570.03	593.03	588.07	75.11	75.34	77.22	73.86	68.48	69.44	63.22	62.66	68.06
Mayurbhanj	Orissa	8.56	7160.04	77.91	82.79	88.04	113.94	115.06	130.59	129.62	134.69	138.34	37.07	35.70	47.66	38.46	47.19	60.11	63.81	58.90	70.26
Medak	Andhra Pradesh	16.77	7199.76	88.25	100.69	115.27	146.84	147.05	170.58	169.64	169.44	174.88	56.33	61.24	65.87	66.67	58.48	62.29	64.59	68.07	71.56
Meerut	Uttar Pradesh	58.11	1777.47	335.00	390.23	418.67	545.76		701.84	710.61	714.19	748.24	67.08	61.23	63.57	55.16		51.19	59.85	58.61	52.44
Midnapore	West Bengal	22.07	2678.53	216.09	249.51	284.29	352.57	358.63	392.68	403.90	410.49	430.42	56.32	71.74	78.70	79.36	75.25	82.52	79.33	77.53	78.80
Miryalguda	Andhra Pradesh	10.43	7758.76	86.07	99.53	109.11	140.63	141.20	163.33	158.23	155.47	166.18	65.91	64.69	71.22	72.17	64.86	65.00	69.68	75.43	74.66
Mirzapur	Uttar Pradesh	14.80	3338.64	187.92	216.66	234.17	308.83	309.73	394.14	401.31	406.16	488.31	49.89	50.30	51.67	44.25	43.63	53.32	63.60	56.87	44.66
Misrikh	Uttar Pradesh	7.41	3746.46	162.40	175.51	192.79	235.54	236.41	288.60	290.12	290.86	329.41	47.22	36.28	50.79	50.00	51.67	42.35	56.01	56.19	44.64
Mizoram	Mizoram	49.63	21081.00	9.70	10.95	12.13	18.58	19.66	19.36	20.99	21.32	26.09	49.26	55.60	0.00	57.73	58.06	72.75	69.06	64.93	63.38
Mohanlalganj	Uttar Pradesh	6.67	3503.09	171.28	186.84	199.39	253.58	254.73	318.27	322.41	328.13	364.93	44.57	38.77	48.92	43.44	42.58	41.66	51.80	52.92	44.73
Monghyr	Bihar	16.33	4185.46	167.18	189.98	206.02	242.60	245.00	270.65	274.15	274.20	313.00	72.98	58.40	63.07	68.42	66.16	64.78	37.06	61.45	63.98
Moradabad	Uttar Pradesh	38.57	1717.35	321.40	363.99	390.25	552.75	556.26	653.60	666.77	673.23	788.00	55.00	48.67	59.34	51.12	51.44	56.65	63.96	55.38	48.41
Morena	Madhya Pradesh	20.05	11540.37	50.98	57.38	64.17	86.11	86.98	105.47	107.59	109.08	124.34	45.97	40.29	44.43	41.82	32.26	33.32	51.45	39.46	33.97
Mormugao	Goa	53.45	2195.43	106.57	118.90	134.62	182.34	186.34	219.38	221.07	225.56	234.81	60.66	65.58	68.68	44.62	39.81	56.03	60.06	44.19	57.75
Motihari	Bihar	7.29	2155.22	305.71	337.30	366.18	434.65	435.90	517.63	516.02	516.25	566.86	54.51	46.23	54.23	58.01	59.19	54.79	59.47	60.85	55.58
Mukundpuram	Kerala	20.23	1940.97	289.59	326.92	362.20	474.61	502.26	517.49	532.90	558.20	527.65	82.52	63.12	80.35	81.90	76.85	72.84	72.02	72.51	70.60
Mumbai North	Maharashtra	73.80	963.54	684.96	877.22	1030.51	1580.09	1645.62	2237.89	2261.72	2306.33	2467.84	62.88	53.37	49.51	57.14	39.96	39.86	46.80	41.33	47.07
Mumbai North Central	Maharashtra	100.00	100.12	6762.38	7687.07	7891.43	10064.70	10324.77	11168.67	11233.78	11469.40	11161.48	58.38	53.51	55.25	56.31	40.22	45.26	50.03	46.01	46.05
Mumbai North East	Maharashtra	100.00	32.65	21370.72	28056.78	33152.19	45157.37	46436.88	59114.36	59487.32	60959.88	60476.57	60.91	54.44	59.36	59.54	43.35	47.40	53.02	46.70	46.88
Mumbai North West	Maharashtra	100.00	166.41	3869.36	4949.47	5280.04	7359.73	7493.88	9120.92	9159.65	9332.46	9108.50	62.65	49.30	57.97	56.01	42.22	46.59	51.17	45.10	49.33
Mumbai South	Maharashtra	100.00	45.77	14970.42	14926.74	14267.90	15958.68	16372.73	15528.73	15499.78	15715.12	13555.41	58.34	47.09	50.93	53.53	38.21	43.72	47.87	42.13	44.22
Mumbai South Central	Maharashtra	100.00	92.30	7106.58	7435.95	7022.90	8661.01	8822.73	8689.47	8686.24	8803.64	7632.20	58.17	52.88	59.38	55.80	42.02	45.74	49.55	45.24	49.40
Murshidabad	West Bengal	1.83	2282.04	257.25	322.65	353.26	432.26	436.05	498.45	505.73	513.94	524.61	59.95	78.66	83.46	82.03	79.38	85.50	80.37	70.55	84.13
Muvattupuzha	Kerala	12.51	2228.37	251.68	284.83	309.82	401.66	423.15	437.55	448.24	457.80	441.60	80.91	56.67	75.29	81.51	75.49	72.07	65.68	67.47	75.80
Muzaffarnagar	Uttar Pradesh	28.44	1952.83	293.61	335.80	365.18	471.24	473.05	611.14	617.35	623.41	779.27	69.92	67.49	66.82	60.58	57.99	47.81	58.63	56.05	56.67
Muzaffarpur	Bihar	17.26	1337.88	504.83	569.02	601.86	733.82	739.06	789.40	793.48	798.16	924.85	75.08	59.50	68.15	72.87	63.97	60.31	70.17	67.38	63.37
Mysore	Karnataka	44.30	4758.58	125.35	148.37	157.95	221.18	228.31	254.40	260.60	273.77	310.75	61.11	56.04	60.25	65.71	52.67	61.27	68.16	69.05	64.74
Nabadwip	West Bengal	27.44	1489.99	426.48	482.18	574.84	721.22	734.38	876.71	871.44	886.15	932.55	56.79	76.67	79.72	84.17	81.94	85.08	82.99	75.89	84.76
Nagaland	Nagaland	17.23	16579.00	28.55	27.75	35.83	49.04	49.15	52.75	55.89	57.66	62.82	50.96	62.20	65.39	74.07	76.44	86.63	42.85	75.85	91.67
Nagapattinam	Tamil Nadu	23.78	3057.61	216.99	223.80	247.22	304.79	301.63	321.18	333.93	344.93	343.08	77.78	79.86	79.76	74.39	71.42	70.73	62.59	65.00	71.63
Nagarkurnool	Andhra Pradesh	5.01	11278.76	57.07	63.57	71.73	88.69	88.81	106.09	105.27	107.51	114.95	55.00	50.97	64.54	67.27	57.83	63.20	64.74	66.94	68.13
Nagaur	Rajasthan	18.06	12792.27	50.02	58.07	65.65	83.66	84.96	91.45	92.28	96.43	112.26	56.98	62.53	64.66	59.97	54.07	47.89	62.19	57.13	43.97
Nagercoil	Tamil Nadu	65.80	1185.79	545.23	559.39	608.02	803.64	800.37	821.41	867.26	891.99	936.10	66.64	54.97	65.27	57.76	57.14	57.66	57.68	57.87	60.68
Nagpur	Maharashtra	89.52	1635.23	372.41	459.45	517.24	723.86	758.54	926.07	931.63	948.72	997.35	63.40	60.90	65.54	60.30	48.13	51.37	55.67	52.24	48.59
Naini Tal	Uttar Pradesh	31.15	7394.77	73.08	87.25	92.13	129.62	132.06	180.93	182.19	185.02	170.62	58.87	49.98	62.53	49.61	49.88	57.63	56.42	58.03	48.87

(Continued)

Appendix Table (Continued)

Constituency	State	PERCENT_URBAN	AREA	DENSITY_1977	DENSITY_1980	DENSITY_1984	DENSITY_1989	DENSITY_1991	DENSITY_1996	DENSITY_1998	DENSITY_1999	DENSITY_2004	TURNOUT_1977	TURNOUT_1980	TURNOUT_1984	TURNOUT_1989	TURNOUT_1991	TURNOUT_1996	TURNOUT_1998	TURNOUT_1999	TURNOUT_2004
Nalanda	Bihar	7.54	1795.00	417.41	455.90	503.42	604.65	613.50	653.54	656.31	657.39	730.90	70.29	63.27	68.95	64.32	71.34	75.27	75.10	73.86	68.23
Nalgonda	Andhra Pradesh	23.19	8312.33	75.92	88.96	100.41	137.64	139.05	171.68	167.89	170.49	193.11	62.02	62.27	65.75	65.16	57.86	58.51	64.17	67.08	65.28
Nanded	Maharashtra	27.01	7191.92	90.34	104.85	114.08	148.10	150.57	160.59	164.00	165.66	201.00	57.51	49.92	62.32	53.03	45.39	54.55	59.90	61.47	55.35
Nandurbar	Maharashtra	16.06	8834.07	58.92	71.58	78.04	100.21	101.81	117.88	121.42	122.19	137.93	58.88	51.21	56.00	52.11	47.74	48.42	52.85	62.16	52.51
Nandyaal	Andhra Pradesh	13.65	10915.62	61.87	67.57	73.10	91.72	92.03	102.89	101.03	102.29	108.31	71.86	53.38	69.08	68.93	62.53	64.70	63.26	65.35	70.20
Narasaraopet	Andhra Pradesh	13.12	12657.24	53.01	57.02	61.39	73.63	73.76	80.64	79.99	80.62	78.70	68.70	61.25	71.59	71.29	65.53	69.53	71.86	69.04	77.15
Narsapur	Andhra Pradesh	18.46	1939.38	386.85	422.98	456.23	587.23	589.18	657.15	647.63	651.01	647.13	56.46	53.07	66.88	66.33	58.58	56.06	59.58	68.10	71.69
Nashik	Maharashtra	50.53	5867.83	104.21	124.78	134.89	179.25	183.37	222.43	223.51	229.17	259.49	53.37	52.14	55.23	53.49	49.88	47.68	50.84	54.19	43.12
Nawada	Bihar	6.56	3005.91	246.68	282.90	318.65	383.37	384.83	391.69	390.14	390.56	500.84	69.00	51.39	57.00	56.35	69.83	63.17	74.07	72.43	67.09
Nellore	Andhra Pradesh	27.59	6518.72	115.48	125.26	131.70	163.29	163.74	181.46	178.92	178.74	176.90	54.67	50.74	63.81	67.15	55.10	57.51	63.52	66.07	72.54
New Delhi	Delhi	100.00	76.88	3521.10	3916.12	3955.81	5587.08	5932.27	6574.47	6728.92	7063.44	5919.80	65.29	64.41	63.93	54.19	47.32	50.90	49.75	41.76	44.51
Nilgiris	Tamil Nadu	53.84	4670.43	148.93	157.32	177.23	236.62	236.32	256.74	277.09	288.73	282.09	62.24	65.12	68.47	67.02	59.79	63.04	53.66	54.06	59.27
Nizamabad	Andhra Pradesh	20.01	5679.88	100.00	117.76	133.61	169.58	169.74	199.76	200.04	198.94	198.65	62.86	56.36	68.05	67.29	60.09	59.72	64.48	66.72	69.35
Nowgong	Assam	13.84	4274.57	135.20	177.25	177.25	205.57	227.70	260.41	260.46	268.86	53.43	53.43	78.28	78.28	70.80	75.12	57.07	68.42	68.40	68.40
Nowrangpur	Orissa	5.87	13355.96	39.11	42.76	48.50	65.52	65.93	74.26	78.60	81.28	86.94	25.53	27.58	37.18	41.18	43.69	55.61	53.36	60.20	67.24
Ongole	Andhra Pradesh	19.52	9644.74	76.88	84.63	90.76	114.79	114.93	122.86	122.27	123.41	110.32	60.78	57.16	64.57	63.84	59.91	63.85	62.40	65.25	75.10
Osmanabad	Maharashtra	17.94	9640.89	58.77	65.53	70.58	89.78	91.72	95.00	96.36	97.12	111.26	48.25	51.81	58.29	52.14	51.33	51.53	57.19	67.62	59.47
Ottapalam	Kerala	6.75	1458.77	393.85	456.75	483.30	648.51	672.83	710.12	721.50	756.34	748.67	74.69	58.02	75.19	75.69	69.01	65.92	67.98	70.39	73.88
Outer Delhi	Delhi	68.51	894.29	496.32	679.67	955.29	1761.14	1885.38	3155.09	3272.50	3470.38	3766.56	70.28	61.72	58.81	49.31	45.28	47.34	48.56	41.48	46.13
Outer Manipur	Manipur	10.48	20821.64	18.26	21.13	24.01	29.63	29.81	31.91	33.12	34.31	38.22	57.20	78.60	82.70	76.33	77.12	82.77	46.06	63.12	77.80
Padrauna	Uttar Pradesh	4.67	2446.55	253.43	283.88	317.44	381.05	381.40	483.09	485.85	494.74	613.81	50.36	48.55	51.08	47.92	49.32	50.41	56.37	57.45	52.61
Palaghat	Kerala	16.16	3480.35	169.31	202.62	210.20	275.22	282.22	305.17	309.29	325.37	319.84	70.88	58.12	76.04	76.71	70.48	67.65	68.40	71.22	73.74
Palamau	Bihar	6.31	7312.87	79.22	92.15	103.21	124.61	125.24	145.56	147.63	147.71	176.31	44.92	39.67	46.54	41.95	37.65	44.66	54.75	47.12	49.76
Palani	Tamil Nadu	26.17	5307.95	139.04	143.67	152.60	194.80	194.20	201.20	210.55	218.48	205.15	66.50	56.65	70.70	60.48	62.52	66.16	54.41	57.35	63.86
Pali	Rajasthan	21.48	12388.60	49.11	56.47	62.06	77.20	79.61	86.42	83.19	87.22	96.52	52.58	52.99	55.31	55.68	47.07	34.16	54.29	49.32	45.39
Panaji	Goa	45.51	1506.57	161.58	173.65	193.22	221.69	229.15	257.18	262.46	274.56	282.54	62.08	69.46	70.62	71.57	43.98	54.92	61.02	46.17	59.86
Pandharpur	Maharashtra	9.94	8410.76	73.48	84.02	93.42	116.41	118.67	125.83	130.00	131.54	153.90	49.99	51.78	60.11	47.77	47.31	47.86	52.31	70.57	53.24
Panskura	West Bengal	1.11	2179.42	238.53	283.44	325.33	395.82	399.85	431.65	443.58	452.85	486.91	69.88	82.65	84.61	84.36	81.74	88.30	84.83	82.69	82.41
Parbhani	Maharashtra	28.75	7913.20	72.65	81.85	90.15	117.39	121.24	128.59	131.94	133.35	146.04	51.92	48.93	53.67	55.90	45.33	47.34	58.24	62.70	58.49
Parvathipuram	Andhra Pradesh	9.54	4571.47	143.50	135.56	146.36	177.05	177.20	200.14	199.44	199.41	196.07	48.35	57.00	63.96	68.13	65.07	63.25	65.07	67.31	73.74
Patan	Gujarat	19.80	6386.66	89.78	99.34	114.31	145.31	146.75	152.09	152.93	157.18	177.40	52.01	40.71	52.94	53.46	40.96	31.63	64.93	47.72	47.50
Patiala	Punjab	32.00	4338.30	139.73	169.74	190.07	234.45	237.44	272.89	302.69	302.04	328.95	74.66	62.08	68.49	62.08	22.44	57.54	61.43	59.66	61.25
Patna	Bihar	67.14	854.86	871.16	1046.96	1126.91	1372.48	1698.87	1713.06	1713.06	1720.02	2036.85	67.02	46.96	51.45	52.96	53.31	43.96	54.55	51.78	51.78
Peddapalli	Andhra Pradesh	28.28	9083.61	70.25	81.45	93.86	120.68	120.86	144.03	143.98	146.50	152.64	50.13	46.98	55.58	58.44	45.80	53.44	62.15	64.67	67.75
Perambalur	Tamil Nadu	14.36	4440.97	151.34	156.30	167.12	212.02	210.35	221.12	230.83	239.66	225.07	70.70	69.18	74.30	71.10	68.21	68.67	62.35	63.95	70.74
Periyakulam	Tamil Nadu	48.62	4877.49	142.15	150.77	164.32	208.26	207.47	209.57	221.27	229.98	216.68	67.94	67.65	69.21	64.62	60.42	65.11	55.83	58.71	66.28
Phillaur	Punjab	24.28	3407.17	190.57	227.91	246.65	296.47	300.38	309.47	325.95	335.79	346.77	69.86	59.98	65.40	58.74	24.16	58.45	59.49	53.64	61.15
Phoolpur	Uttar Pradesh	4.54	2351.75	259.04	289.10	321.71	404.48	410.63	500.72	504.07	503.26	599.35	51.64	51.92	59.59	52.31	45.86	47.03	56.67	57.46	53.58
Phulbani	Orissa	7.56	14243.76	44.50	47.67	51.29	66.30	67.06	73.63	76.81	79.12	83.11	31.73	37.33	48.04	56.67	49.94	55.29	55.36	55.98	66.51
Pilibhit	Uttar Pradesh	14.74	5008.84	118.51	134.69	142.29	181.73	183.64	220.98	225.60	227.44	256.73	56.38	44.34	61.27	51.55	51.66	59.77	61.70	65.66	52.66
Pollachi	Tamil Nadu	40.33	4422.03	151.61	159.61	173.77	218.51	217.91	219.07	232.03	242.93	235.02	60.00	64.29	71.18	65.95	65.57	67.67	54.02	56.10	61.87
Pondicherry	Pondicherry	63.74	490.00	608.56	651.50	778.30	1172.57	1210.83	1293.13	1358.13	1432.63	1299.32	72.52	77.59	71.00	65.72	66.03	72.65	61.45	63.27	75.99

(Continued)

Appendix Table (Continued)

Constituency	State	PERCENT_URBAN	AREA	DENSITY_1977	DENSITY_1980	DENSITY_1984	DENSITY_1989	DENSITY_1991	DENSITY_1996	DENSITY_1998	DENSITY_1999	DENSITY_2004	TURNOUT_1977	TURNOUT_1980	TURNOUT_1984	TURNOUT_1989	TURNOUT_1991	TURNOUT_1996	TURNOUT_1998	TURNOUT_1999	TURNOUT_2004
Ponnani	Kerala	20.02	1542.07	371.90	435.13	465.69	643.25	655.90	707.61	717.03	743.37	760.05	73.48	59.80	68.64	71.03	63.28	65.51	62.02	60.10	62.31
Porbandar	Gujarat	37.03	8529.94	61.58	69.06	79.85	98.95	100.01	103.37	103.38	104.84	116.65	51.03	47.86	50.12	42.11	42.15	33.70	54.94	36.44	49.29
Pratapgarh	Uttar Pradesh	6.18	2956.98	213.10	233.25	254.24	316.98	318.49	394.83	399.25	402.15	450.53	45.43	42.37	51.88	44.76	38.36	39.99	48.80	47.69	42.98
Pudikkottai	Tamil Nadu	21.20	4798.28	145.94	155.01	168.13	219.72	218.40	234.36	246.88	253.90	257.37	74.85	79.31	77.29	73.82	68.90	70.18	65.29	63.20	66.42
Pune	Maharashtra	94.21	440.78	1376.20	1682.78	1789.95	2429.56	2687.55	3096.78	3159.89	3255.82	3649.47	62.09	57.09	65.34	63.39	47.78	56.51	59.15	51.05	47.81
Puri	Orissa	12.92	4582.55	136.23	150.33	160.98	205.50	211.43	240.32	248.88	256.80	281.07	46.30	48.92	61.64	65.23	58.42	61.83	61.10	56.14	69.02
Purnea	Bihar	10.62	2643.04	230.83	259.59	292.83	349.24		406.69	410.88	410.65	446.26	58.19	48.96	55.88	60.84		62.48	64.30	63.92	60.11
Purulia	West Bengal	9.66	4541.14	128.36	153.56	166.14	196.58	201.48	212.99	219.10	221.99	218.54	50.46	59.54	72.21	75.84	71.29	76.11	73.78	67.57	70.15
Quilon	Kerala	26.19	809.91	719.51	816.36	896.77	1175.26	1209.27	1262.08	1310.94	1344.10	1273.71	76.80	63.12	77.39	80.99	75.07	70.70	71.60	67.57	68.39
Rai Bereli	Uttar Pradesh	11.75	2940.35	215.22	237.75	261.94	325.96	327.22	395.68	398.22	399.46	452.04	52.48	54.97	58.19	48.17	46.12	41.38	56.04	58.27	48.42
Raichur	Karnataka	24.23	10353.58	57.94	65.61	70.97	95.59	96.05	109.26	115.85	118.42	136.48	48.01	39.12	53.41	50.19	37.90	42.50	49.06	55.99	58.39
Raiganj	West Bengal	8.46	2779.67	202.78	249.36	276.06	357.68	365.79	399.74	405.20	411.80	412.74	59.69	67.64	73.25	75.38	72.89	78.73	78.35	76.50	79.98
Raigarh	Madhya Pradesh	12.71	11224.41	47.63	52.27	57.54	72.17	74.80	82.29	82.80	86.95	92.53	46.46	43.47	53.69	54.25	43.50	66.90	72.48	58.40	62.43
Raipur	Madhya Pradesh	45.61	4323.36	120.07	134.52	154.16	205.40	211.17	255.44	259.97	272.28	316.94	59.00	51.90	57.42	56.75	45.75	50.29	62.00	56.15	50.32
Rajahmundry	Andhra Pradesh	34.08	1993.03	355.16	379.73	409.08	488.13	488.34	562.20	562.48	570.60	538.99	67.62	61.96	75.34	74.04	62.91	67.51	69.70	70.02	75.97
Rajampet	Andhra Pradesh	11.66	10003.48	66.66	71.03	77.66	94.53	94.70	98.41	95.63	94.60	99.10	64.25	50.74	63.56	69.40	59.23	58.86	63.36	69.80	69.73
Rajapur	Maharashtra	8.38	7580.84	70.80	77.25	80.76	97.77	99.61	105.03	105.88	104.28	110.24	60.61	56.55	61.62	61.67	48.05	54.27	53.86	54.87	57.50
Rajgarh	Madhya Pradesh	18.58	10930.22	52.83	58.23	65.09	82.40	83.61	95.17	96.73	102.02	116.96	53.16	52.92	61.46	59.93	49.48	56.61	66.47	59.56	46.87
Rajkot	Gujarat	55.94	9152.32	66.01	77.16	90.43	119.37	122.68	147.46	148.81	150.77	180.30	50.45	43.54	49.27	47.02	46.21	30.05	48.77	39.58	32.64
Rajmahal	Bihar	5.90	5278.39	106.37	119.23	131.22	157.06	158.10	179.65	180.12	180.09	203.10	38.85	35.30	44.61	55.08	55.26	58.82	61.48	58.94	64.47
Rajnandgaon	Madhya Pradesh	15.65	11137.03	48.48	51.97	56.49	74.48	75.45	86.92	86.94	91.29	100.71	51.07	46.96	53.35	58.34	45.27	51.47	62.18	58.23	59.37
Ramanthapuram	Tamil Nadu	24.01	5187.57	133.77	141.99	156.23	199.52	198.54	201.37	207.90	214.96	221.25	63.42	65.90	66.39	60.51	57.09	59.80	54.78	56.43	58.76
Rampur	Uttar Pradesh	21.48	3076.30	206.01	227.60	244.51	316.00	318.44	418.14	427.00	429.89	461.79	65.59	53.96	64.18	50.37	54.68	57.07	61.62	61.28	57.06
Ramtek	Maharashtra	22.23	9175.68	63.21	70.90	76.92	97.78	99.64	112.58	114.57	114.52	125.20	62.82	58.88	63.41	63.21	47.27	53.08	59.60	62.41	56.36
Ranchi	Bihar	45.12	4053.64	142.50	171.37	181.95	228.22	230.57	277.81	279.16	279.20	340.23	46.24	39.66	44.66	50.40	49.41	53.18	60.52	50.99	50.45
Rasipuram	Tamil Nadu	30.68	4076.74	175.74	180.29	193.66	247.71	246.47	256.99	271.85	284.90	277.78	61.66	58.86	67.53	62.31	60.78	63.18	52.19	54.16	61.46
Ratanagari	Maharashtra	13.81	6585.29	83.27	90.57	93.71	116.06	121.59	127.03	130.09	132.47	138.91	58.49	60.97	61.92	64.13	50.75	56.18	56.48	61.25	61.32
Rewa	Madhya Pradesh	15.43	6959.85	94.70	103.26	115.12	152.07	154.13	184.06	186.91	196.81	209.92	55.67	55.75	54.80	49.46	41.33	45.94	57.70	54.01	43.17
Robertsganj	Uttar Pradesh	13.34	9269.10	68.73	78.69	86.78	112.01	112.71	150.98	153.01	155.73	179.21	50.47	47.64	47.18	44.35	38.67	44.26	53.93	51.50	43.63
Rohtak	Haryana	22.49	3585.01	161.22	192.47	206.98	253.50	256.59	264.93	261.93	261.89	294.45	67.97	60.89	59.17	66.88	59.60	65.80	70.22	67.46	62.72
Ropar	Punjab	32.53	3913.07	162.81	195.39	221.36	266.59	270.16	299.71	315.01	323.72	343.78	75.66	67.99	71.97	67.32	13.52	57.66	57.04	56.17	58.74
Rosera	Bihar	1.38	1769.23	364.64	420.47	457.08	545.36	546.55	598.85	609.06	608.89	704.11	68.24	62.30	57.54	64.23	62.03	56.52	63.57	67.18	57.30
Sabarkantha	Gujarat	9.96	8669.75	62.72	73.62	83.88	107.95	108.95	126.38	126.27	129.17	146.75	56.15	56.84	60.95	54.15	36.99	39.18	63.86	59.04	51.44
Sagar	Madhya Pradesh	29.21	10242.12	52.68	58.24	66.34	87.65	89.00	101.96	102.89	109.59	122.12	52.99	54.14	56.31	52.21	40.64	44.92	56.05	47.83	38.33
Saharanpur	Uttar Pradesh	29.51	2878.91	206.74	238.11	257.20	332.47	335.36	422.77	429.87	438.32	544.00	65.84	60.49	70.49	61.16	61.34	58.29	66.97	61.17	63.24
Saharsa	Bihar	10.09	2654.02	256.83	302.88	344.10	398.85	400.18	426.15	430.12	430.33	485.18	66.87	61.17	68.62	71.82	71.78	61.89	63.69	63.18	57.33
Saidpur	Uttar Pradesh	2.67	1835.10	357.60	406.34	437.06	560.77	561.56	696.24	706.19	713.83	836.66	54.98	49.48	47.14	39.95	39.29	46.24	53.76	53.72	46.33
Salem	Tamil Nadu	55.12	2101.49	322.60	329.00	364.88	491.11	490.19	514.28	560.64	598.33	595.36	63.85	66.55	67.80	63.84	58.80	61.98	55.93	58.16	59.26
Salempur	Uttar Pradesh	8.20	2179.93	309.50	349.05	373.81	454.15	459.62	574.74	580.12	580.69	681.03	52.14	46.50	47.02	49.05	47.20	40.51	49.46	50.28	45.10
Salumber	Rajasthan	4.35	9952.21	53.97	62.51	71.98	91.58	92.98	109.15	108.81	112.27	128.55	48.85	50.27	49.23	49.10	45.31	39.47	55.36	50.34	49.23
Samastipur	Bihar	4.20	1650.62	445.77	514.85	551.13	651.39	655.99	737.37	738.41	738.58	868.64	69.84	55.33	62.34	64.64	65.18	59.62	64.61	64.89	60.31

(Continued)

Appendix Table (Continued)

Constituency	State	PERCENT_URBAN	AREA	DENSITY_1977	DENSITY_1980	DENSITY_1984	DENSITY_1989	DENSITY_1991	DENSITY_1996	DENSITY_1998	DENSITY_1999	DENSITY_2004	TURNOUT_1977	TURNOUT_1980	TURNOUT_1984	TURNOUT_1989	TURNOUT_1991	TURNOUT_1996	TURNOUT_1998	TURNOUT_1999	TURNOUT_2004
Sambalpur	Orissa	11.24	9141.27	72.22	79.01	85.23	108.47	109.38	121.41	126.50	130.22	135.96	44.87	44.42	52.81	59.57	49.80	58.35	58.73	58.17	65.22
Sambhal	Uttar Pradesh	16.60	3488.08	165.99	179.51	191.10	246.02	248.39	305.54	308.36	310.03	358.08	57.63	44.58	51.09	51.35	52.94	49.65	70.02	57.32	60.80
Sangli	Maharashtra	28.54	5625.66	101.20	117.89	127.53	158.65	163.34	178.59	181.73	183.38	210.89	57.60	64.04	65.05	58.65	51.80	58.04	59.63	68.47	58.41
Sangrur	Punjab	28.77	4180.31	148.85	173.46	189.82	225.82	228.89	253.28	269.19	273.98	290.53	72.54	66.30	68.15	69.94	10.35	70.14	65.70	62.01	68.90
Sarangarh	Madhya Pradesh	2.52	7411.86	84.76	90.35	95.32	121.78	124.44	137.80	139.86	146.78	160.74	35.00	37.96	49.92	55.38	38.56	53.54	60.62	62.04	49.35
Sasaram	Bihar	8.15	5306.26	123.44	141.54	155.71	182.02	184.08	214.64	215.62	215.66	243.45	63.79	51.23	51.99	55.02	48.52	51.41	58.73	57.09	53.98
Satara	Maharashtra	16.71	7074.42	82.01	93.27	100.75	128.90	131.72	134.28	136.52	139.16	162.46	58.80	62.70	64.80	49.45	41.92	56.24	61.82	67.98	58.73
Satna	Madhya Pradesh	19.25	9062.82	65.47	72.87	80.65	106.01	108.77	123.00	125.13	131.27	146.18	59.11	56.70	57.28	49.06	48.19	57.70	63.41	51.93	46.09
Sawai																					
Madhopur	Rajasthan	16.16	9931.07	63.31	72.27	80.92	104.69	106.03	121.61	118.53	118.61	135.01	48.10	48.35	51.79	55.42	40.32	32.65	49.82	43.42	49.64
Secunderabad	Andhra Pradesh	99.59	407.08	1510.87	2075.85	2104.44	2836.35	2908.00	4155.00	4161.27	4348.10	4546.27	53.58	44.45	58.65	56.01	44.51	50.98	52.82	54.85	52.59
Seoni	Madhya Pradesh	12.45	12071.88	45.73	50.58	56.19	73.99	75.00	86.79	87.85	92.40	99.73	48.90	47.84	51.52	49.45	44.70	57.39	61.46	52.59	49.80
Serampore	West Bengal	58.91	768.63	817.32	1007.09	1138.69	1387.57	1458.51	1625.85	1702.00	1724.33	1672.32	60.54	63.15	75.02	75.51	70.76	77.41	75.16	68.76	73.62
Shahabad	Uttar Pradesh	8.89	3783.06	160.52	183.77	191.66	234.25	234.78	294.80	297.06	298.30	332.54	54.34	44.75	53.64	45.31	46.96	44.15	55.30	56.71	46.08
Shahdol	Madhya Pradesh	22.98	14030.47	41.35	45.39	51.03	67.56	67.56	81.47	82.04	85.40	93.03	40.12	40.34	44.01	43.49	34.30	54.40	58.93	48.72	39.02
Shahjahanpur	Uttar Pradesh	25.12	3113.99	205.42	220.14	233.30	299.14	304.35	355.05	358.60	363.15	398.52	55.64	48.55	60.19	50.63	51.22	51.03	55.57	59.60	51.08
Shajapur	Madhya Pradesh	24.73	9108.79	63.76	72.00	80.29	102.57	105.20	122.24	123.14	131.63	145.89	68.66	61.47	63.71	62.84	48.80	54.69	67.56	62.85	54.20
Sheohar	Bihar	7.36	2037.96	343.78	387.78	411.92	472.32	473.83	531.94	528.78	531.47	595.90	61.26	52.54	57.89	65.00	59.44	62.59	64.66	66.10	54.87
Shillong	Meghalaya	24.20	14332.38	23.86		32.78	40.87	41.09	47.63	49.78	50.54	54.78	53.86		54.46	49.99	50.48	55.33	71.84	50.37	46.85
Shimla	Himachal Pradesh	10.95	8964.64	51.95	58.45	63.05	80.15	82.42	98.58	101.47	105.42	113.67	57.40	51.20	54.20	58.56	54.75	52.69	68.63	52.92	51.88
Shimoga	Karnataka	32.95	9058.97	61.78	76.97	82.33	113.12	115.14	119.05	122.55	125.10	138.86	70.98	62.21	69.29	67.75	58.71	66.73	69.89	71.21	70.53
Sholapur	Maharashtra	57.09	4641.35	113.18	129.53	142.88	183.27	193.16	212.44	217.03	221.06	255.79	63.35	63.32	63.28	59.08	55.13	55.24	60.23	58.82	55.32
Siddipet	Andhra Pradesh	32.45	5693.97	108.21	130.66	146.19	200.97	202.88	276.85	275.48	284.88	303.32	58.74	42.60	65.27	63.00	53.55	57.31	62.88	64.27	64.84
Sidhi	Madhya Pradesh	14.25	10495.47	56.31	63.70	70.86	94.54	96.94	114.07	115.31	120.36	103.25	42.92	39.47	48.57	44.65	34.81	53.26	58.60	48.04	42.19
Sikar	Rajasthan	17.09	7549.21	89.43	102.66	116.93	150.06	153.82	172.69	164.78	170.91	195.56	57.46	57.44	63.08	64.00	53.21	46.42	63.36	58.08	52.80
Sikkim	Sikkim	1.12	7096.00	17.48	16.66	21.03	27.14	28.43	32.29	33.33	35.99	39.73	0.00	43.56	55.37	69.41	57.20	75.13	65.91	80.33	77.91
Silchar	Assam	14.47	3653.62	128.98	154.65	171.10		200.62	206.18	226.24	226.56	240.65	52.78	65.47	71.93		71.67	73.96	75.35	71.62	69.18
Singhbhum	Bihar	21.39	8017.17	65.29	71.63	76.65	94.83	94.91	104.55	105.52	105.60	114.72	32.91	28.73	37.71	36.36	44.09	55.12	60.41	55.69	56.56
Sirsa	Haryana	21.22	7089.01	81.27	97.75	110.98	137.75	139.81	151.26	151.41	155.23	172.09	68.70	59.70	64.61	62.68	67.69	76.67	68.12	57.74	68.99
Sitamarhi	Bihar	1.25	1860.67	388.11	437.95	472.18	543.49	546.19	599.50	604.28	605.69	679.93	68.94	57.06	53.49	64.00	64.44	65.97	67.94	65.91	54.61
Sitapur	Uttar Pradesh	17.00	2944.40	200.60	222.67	247.63	299.05	302.40	371.77	374.06	378.15	439.03	52.47	43.75	50.69	50.97	47.61	44.52	58.79	57.20	46.15
Sivaganga	Tamil Nadu	23.32	5334.11	133.16	136.03	146.98	187.97	186.97	198.23	201.76	209.45	203.13	66.94	69.52	70.64	65.16	59.73	61.13	55.20	54.75	61.58
Sivakasi	Tamil Nadu	49.04	3706.15	194.91	204.04	226.12	292.42	290.57	315.02	324.76	339.42	354.44	68.94	67.35	71.96	71.39	61.42	66.33	63.55	61.96	63.23
Siwan	Bihar	6.39	1648.86	396.32	436.58	473.66	585.65	592.17	601.89	599.01	599.81	639.50	66.43	46.37	53.14	57.26	63.00	62.56	67.31	71.01	60.46
Sonapat	Haryana	25.83	3405.33	175.51	208.20	229.79	276.97	278.68	310.97	311.22	310.45	334.41	71.70	65.63	64.11	64.16	62.00	66.12	65.31	61.91	64.73
South Delhi	Delhi	95.22	116.42	3283.10	4337.39	4492.18	7294.42	7769.19	9482.55	9930.21	10257.67	8751.61	68.94	62.37	67.59	56.06	46.20	47.96	48.82	41.86	47.00
Srikakulam	Andhra Pradesh	16.83	2869.18	203.91	225.71	241.45	300.31	300.04	342.72	341.43	343.38	334.11	65.11	61.78	70.93	70.13	64.25	64.71	67.82	66.80	75.50
Srinagar	Jammu and Kashmir	59.11	4708.81	98.11	110.37	136.02	166.22		166.99	181.19	181.38	223.78	67.14	0.00	70.71	0.00		37.89	28.40	11.36	18.57
Sriperumbudur	Tamil Nadu	34.17	3306.91	210.44	217.96	238.18	313.78	312.81	349.72	383.03	409.40	430.48	64.86	61.32	70.90	68.07	62.77	64.46	54.97	53.85	59.22
Sultanpur	Uttar Pradesh	6.07	2912.76	219.03	243.68	260.25	323.05	327.23	418.59	419.94	419.10	503.05	48.50	41.04	53.14	43.43	40.48	46.07	54.33	50.00	49.21
Sundargarh	Orissa	33.76	9426.29	59.86	67.30	71.98	99.82	102.11	116.60	122.94	127.13	128.27	38.16	39.72	45.54	47.96	44.22	55.00	57.16	51.54	60.57

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Appendix Table

CONSTITUENCY	STATE	AREA	DENSITY_2009	DENSITY_2014	TURNOUT_2009	TURNOUT_2014	CONSTITUENCY	STATE	AREA	DENSITY_2009	DENSITY_2014	TURNOUT_2009	TURNOUT_2014
Mahabubabad	Andhra Pradesh	14683.38	86.18	94.48	78.59	81.04	Ongole	Andhra Pradesh	13323.24	103.25	110.37	73.74	82.17
Arunachal West	Arunachal Pradesh	41520.30	10.44	10.75	65.93	75.17	Adilabad	Andhra Pradesh	12726.85	88.88	108.92	76.32	75.44
Arunachal East	Arunachal Pradesh	42222.70	7.13	7.41	71.36	83.51	Tirupati	Andhra Pradesh	9523.97	153.81	165.32	72.20	77.04
Barpeta	Assam	3125.33	396.63	457.61	72.61	84.32	Kadapa	Andhra Pradesh	9646.61	139.71	160.74	75.69	77.43
Chatra	Jharkhand	4858.38	213.58	270.16	45.67	54.32	Nandyal	Andhra Pradesh	10386.40	130.82	151.85	73.08	76.40
Hazaribagh	Jharkhand	6989.57	186.23	217.30	53.08	63.68	Nalgonda	Andhra Pradesh	7840.62	185.57	190.75	73.76	79.53
Purvi Champaran	Bihar	3815.78	311.15	380.78	40.59	56.62	Aruku	Andhra Pradesh	14296.56	82.71	89.02	66.66	71.47
Lohardaga	Jharkhand	9747.18	100.71	114.82	53.21	58.21	Karimnagar	Andhra Pradesh	5758.42	259.83	269.32	65.89	72.59
Kachchh	Gujarat	25328.21	62.92	72.80	42.54	61.69	Narsapuram	Andhra Pradesh	1910.74	613.97	693.52	83.99	82.18
Anand	Gujarat	3392.96	495.05	530.38	48.41	64.86	Nagarkurnool	Andhra Pradesh	11469.70	127.33	128.80	69.97	75.07
Junagarh	Gujarat	7865.30	200.70	227.07	57.88	63.37	Kakinada	Andhra Pradesh	2721.61	464.83	521.12	76.03	77.56
Banaskantha	Gujarat	10502.37	148.46	173.51	49.83	58.50	Kurnool	Andhra Pradesh	7237.64	180.63	204.74	66.47	71.92
Sabarkantha	Gujarat	8911.28	195.92	217.99	49.41	67.70	Anantapur	Andhra Pradesh	9552.50	147.76	160.89	70.59	78.41
Porbandar	Gujarat	9978.15	166.97	185.45	47.66	52.59	Warangal	Andhra Pradesh	5005.76	296.98	307.20	69.21	76.38
Patan	Gujarat	10284.96	165.71	190.37	44.67	58.69	Malkajigiri	Andhra Pradesh	1117.50	2096.69	2848.61	51.43	50.90
Amreli	Gujarat	11042.12	142.93	161.82	39.97	54.42	Rajampet	Andhra Pradesh	11126.67	117.87	133.69	75.63	77.87
Surendranagar	Gujarat	17914.09	99.04	111.18	39.73	57.02	Secunderabad	Andhra Pradesh	112.55	13992.14	16824.91	54.88	53.01
Dahod	Gujarat	5363.66	267.81	316.44	44.73	63.78	Anakapalli	Andhra Pradesh	4116.96	323.47	340.41	78.36	81.92
Kangra	Himachal Pradesh	7797.62	153.91	161.41	55.14	63.52	Hyderabad	Andhra Pradesh	89.86	15505.04	20295.10	52.47	53.27
Mandi	Himachal Pradesh	34013.40	32.71	33.82	64.02	63.12	Guntur	Andhra Pradesh	2401.46	568.48	654.61	76.13	79.19
Ladakh	Jammu & Kashmir	153028.35	1.00	1.09	70.82	70.78	Narasaraopet	Andhra Pradesh	7303.55	186.27	207.41	79.17	84.63
Jammu	Jammu & Kashmir	14882.73	115.56	124.18	49.02	67.83	Srikakulam	Andhra Pradesh	3703.50	331.07	381.80	74.57	74.36
Bijapur	Karnataka	10477.85	131.10	154.86	47.29	59.58	Visakhapatnam	Andhra Pradesh	1395.08	994.55	1235.08	72.67	67.53
Idukki	Kerala	579.84	184.20	200.82	73.81	70.75	Vizianagaram	Andhra Pradesh	3960.45	334.11	354.54	76.72	79.79
Wayanad	Kerala	1307.66	255.80	289.99	74.60	73.23	Bapatla	Andhra Pradesh	4870.90	271.33	285.98	78.63	85.04
Kannur	Kerala	1.09	508.00	555.74	80.52	80.93	Medak	Andhra Pradesh	6156.46	225.73	249.61	76.00	77.51
Pathanamthitta	Kerala	1514.76	354.32	386.59	65.59	65.67	Amalapuram	Andhra Pradesh	2721.57	468.58	498.93	80.01	82.55
Palakkad	Kerala	950.39	413.39	464.91	73.34	75.31	Machilipatnam	Andhra Pradesh	4102.17	304.97	333.80	83.04	83.33
Khajuraho	Madhya Pradesh	13402.90	100.69	127.05	43.20	51.36	Rajahmundry	Andhra Pradesh	2669.27	472.40	532.46	80.38	81.22
Gwalior	Madhya Pradesh	9024.48	157.43	207.99	41.10	52.79	Nizamabad	Andhra Pradesh	5303.60	251.39	282.11	66.53	69.10
Bastar	Chhattisgarh	29535.23	40.40	43.95	47.32	59.31	Eluru	Andhra Pradesh	5711.56	223.33	249.98	84.16	84.17
Gadchiroli-Chimur	Maharashtra	20441.01	62.88	71.90	65.04	69.88	Mahbubnagar	Andhra Pradesh	7016.41	195.10	202.19	67.54	71.53
Ramtek	Maharashtra	9620.63	156.22	174.34	50.85	62.62	Bhongir	Andhra Pradesh	8624.32	171.42	173.03	76.13	81.22
Barmer	Rajasthan	56769.56	25.39	29.55	54.37	72.67	Chelvella	Andhra Pradesh	5292.04	317.77	412.92	64.47	60.22
Bharatpur	Rajasthan	5718.11	251.33	295.01	38.98	57.05	Hindupur	Andhra Pradesh	9634.38	142.99	150.14	74.23	81.39
Bikaner	Rajasthan	32610.84	42.35	48.79	41.24	58.44	Khammam	Andhra Pradesh	8063.64	156.23	178.62	81.68	82.13
Churu	Rajasthan	19006.97	80.62	92.27	52.36	64.49	Vijayawada	Andhra Pradesh	3248.02	431.75	481.68	77.31	76.39
Ganganagar	Rajasthan	13173.17	113.26	130.45	60.91	73.14	Chittoor	Andhra Pradesh	6590.58	196.03	220.34	80.66	82.56
Joynagar	West Bengal	3915.36	292.09	372.56	80.07	81.31	Autonomous District	Assam	15152.69	45.76	46.32	69.36	77.40
Mathurapur	West Bengal	2276.21	539.22	654.06	85.39	85.00	Lakhimpur	Assam	7816.61	170.47	183.07	68.31	77.71
Birbhum	West Bengal	2935.31	416.27	509.35	83.23	85.33	Karimganj	Assam	3102.80	344.47	375.79	64.09	76.07
Andaman & Nicobar islands	Andaman & Nicobar Island	8249.00	32.14	32.65	64.16	70.66	Gauhati	Assam	4519.44	381.43	425.33	64.45	78.64
Nellore	Andhra Pradesh	7884.13	184.03	203.72	68.77	73.94	Kaliabor	Assam	4902.77	275.02	297.36	71.18	80.01
Peddapalli	Andhra Pradesh	8104.66	162.33	175.87	68.62	71.71	Jorhat	Assam	4082.50	289.61	302.38	64.43	75.45
Zahirabad	Andhra Pradesh	7639.68	177.96	189.18	74.54	75.75	Dhubri	Assam	4189.97	327.44	370.54	76.31	88.22
							Tezpur	Assam	6043.31	200.24	208.42	69.62	77.86

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Appendix Table (Continued)

CONSTITUENCY	STATE	AREA	DENSITY_2009	DENSITY_2014	TURNOUT_2009	TURNOUT_2014	CONSTITUENCY	STATE	AREA	DENSITY_2009	DENSITY_2014	TURNOUT_2009	TURNOUT_2014
Nowgong	Assam	4296.42	328.49	354.69	70.83	80.72	Madhepura	Bihar	2481.49	607.84	695.38	50.15	59.97
Silchar	Assam	3820.35	256.13	277.51	70.36	75.44	Darbhanga	Bihar	1433.40	911.86	1043.29	41.75	55.39
Mangaldoi	Assam	4920.42	287.92	308.04	69.84	81.37	Begusarai	Bihar	1917.18	768.45	927.80	48.74	60.60
Kokrajhar	Assam	7086.87	194.42	212.43	73.63	81.29	Samastipur	Bihar	1576.44	832.86	953.42	44.53	57.43
Dibrugarh	Assam	5378.54	207.30	209.04	67.24	79.25	Jahanabad	Bihar	2154.01	592.81	660.74	46.92	57.02
Sasaram	Bihar	5099.98	275.06	315.25	42.70	52.67	Khagaria	Bihar	2331.40	576.04	639.99	46.54	60.07
PALAMAU	Jharkhand	7239.78	195.78	227.35	45.95	59.38	Hajipur	Bihar	1465.95	905.26	1125.24	41.83	54.85
Valmiki Nagar	Bihar	4141.18	308.04	351.73	46.99	61.80	Singhbhum	Jharkhand	7937.03	120.63	145.21	60.57	69.00
Khunti	Jharkhand	8580.52	114.31	129.58	52.03	66.28	Rajmahal	Jharkhand	5225.64	223.51	258.95	55.18	70.32
Godda	Jharkhand	3631.78	388.86	437.97	56.48	65.98	Jamshedpur	Jharkhand	3607.07	382.66	438.49	51.12	66.33
Jamui	Bihar	4012.94	349.87	386.48	38.12	50.01	Chandigarh	Chandigarh	114.00	4600.39	5396.61	65.50	73.71
Arrah	Bihar	2367.71	656.80	773.88	35.77	48.75	Dadra & Nagar Haveli	Dadra & Nagar Haveli	491.00	306.93	400.44	73.23	84.06
Aurangabad	Bihar	3372.76	408.07	455.46	43.47	51.18	Daman & Diu	Daman & Diu	111.00	859.30	1007.45	71.32	78.01
Purnia	Bihar	2759.91	472.99	573.56	53.98	64.29	East Delhi	Delhi	50.11	32027.58	36513.67	53.43	65.39
Kishanganj	Bihar	2750.21	431.37	523.23	52.84	64.52	North East Delhi	Delhi	96.01	17466.81	20389.81	52.38	67.29
Paschim Champaran	Bihar	2015.73	605.67	701.02	42.22	60.49	Chandni Chowk	Delhi	75.08	18826.40	19275.14	55.21	67.84
Kodarma	Jharkhand	6154.50	225.92	266.41	56.14	62.51	West Delhi	Delhi	376.28	4485.31	5419.94	52.38	66.10
Nawada	Bihar	2689.90	519.54	622.99	41.62	52.78	New Delhi	Delhi	198.77	6908.22	7496.84	55.70	65.08
Banka	Bihar	3383.86	395.41	457.90	48.74	58.04	North West Delhi	Delhi	442.53	4063.37	4958.76	47.69	61.79
Gopalganj	Bihar	2011.90	670.55	821.50	37.40	54.67	South Delhi	Delhi	244.21	6315.85	7177.10	47.41	62.90
Araria	Bihar	2782.27	471.28	570.52	55.71	61.47	South Goa	Goa	2164.18	246.66	251.98	50.90	75.25
Sitamarhi	Bihar	1719.83	788.34	915.74	42.54	57.18	North Goa	Goa	1537.82	316.67	335.18	59.97	78.89
Gaya	Bihar	2572.10	516.77	583.47	42.45	53.93	Ahmedabad West	Gujarat	144.66	11893.53	12752.20	48.22	62.87
Jhanjharpur	Bihar	2406.14	589.73	686.06	42.84	57.02	Vadodara	Gujarat	2094.74	874.70	940.27	49.02	70.90
Dumka	Jharkhand	5203.86	216.83	239.66	55.13	72.41	Surat	Gujarat	989.54	1726.39	1803.05	49.01	63.87
Giridih	Jharkhand	3854.27	349.36	393.11	45.98	64.02	Ahmedabad East	Gujarat	1525.85	1112.33	1262.09	42.34	61.52
Katihar	Bihar	2546.47	499.82	568.03	56.93	67.60	Navsari	Gujarat	2035.88	958.66	1042.04	46.66	65.78
Buxar	Bihar	2673.66	501.52	613.60	46.50	54.14	Gandhinagar	Gujarat	2505.05	746.62	832.17	50.80	65.49
Siwan	Bihar	1643.46	780.35	951.57	50.03	56.53	Mahesana	Gujarat	4865.22	344.46	370.22	49.73	67.03
Saran	Bihar	1486.12	853.45	1035.41	45.81	56.10	Kheda	Gujarat	4924.58	353.64	390.48	41.58	59.76
Bhagalpur	Bihar	2138.39	670.29	788.13	43.89	57.79	Chhota Udaipur	Gujarat	8385.71	202.48	220.25	54.19	71.64
Patna Sahib	Bihar	575.47	2853.30	3382.04	33.64	45.33	Panchmahal	Gujarat	6289.18	272.09	301.39	42.64	59.20
Dhanbad	Jharkhand	2019.30	894.60	935.96	45.03	60.52	Bardoli	Gujarat	7538.45	229.68	257.42	57.80	74.73
Maharajganj	Bihar	1695.22	774.07	970.10	45.70	51.48	Bhavnagar	Gujarat	7921.37	209.69	242.00	45.15	57.53
Patalipura	Bihar	1811.60	842.48	958.31	41.16	56.37	Rajkot	Gujarat	7579.33	230.80	262.63	44.63	63.84
Muzaffarpur	Bihar	1479.57	905.63	1048.52	46.41	61.16	Valsad	Gujarat	6714.30	247.14	270.74	56.11	74.22
Vaishali	Bihar	1947.16	656.80	815.14	48.86	58.34	Bharuch	Gujarat	9131.72	172.67	186.63	57.14	74.79
Karakat	Bihar	2693.27	514.85	582.93	41.58	50.31	Jamnagar	Gujarat	13015.32	119.95	135.87	45.79	57.97
Supaul	Bihar	2843.85	449.93	536.45	54.52	63.62	Kurukshetra	Haryana	4366.53	267.19	343.17	75.03	75.80
Nalanda	Bihar	2350.35	731.59	830.50	33.04	47.22	Rohtak	Haryana	4130.97	308.64	379.45	65.53	66.62
Madhubani	Bihar	1564.39	893.16	1040.64	39.83	52.85	Sirsa	Haryana	7169.35	182.65	231.62	74.91	77.03
Sheohar	Bihar	1737.95	730.20	857.17	37.97	56.58	Hisar	Haryana	5833.10	204.81	260.17	69.32	76.17
Munger	Bihar	2857.39	547.56	593.74	41.64	53.89	Faridabad	Haryana	2097.24	525.95	829.83	56.65	64.97
Ranchi	Jharkhand	4013.13	404.96	410.77	44.56	63.68	Sonipat	Haryana	3507.06	313.65	404.10	64.73	69.55
Ujarpur	Bihar	1510.60	813.80	945.61	45.89	60.13	Karnal	Haryana	3868.09	314.62	435.44	66.64	70.86

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Appendix Table (Continued)

CONSTITUENCY	STATE	AREA	DENSITY_2009	DENSITY_2014	TURNOUT_2009	TURNOUT_2014	CONSTITUENCY	STATE	AREA	DENSITY_2009	DENSITY_2014	TURNOUT_2009	TURNOUT_2014
Gurgaon	Haryana	3564.39	349.13	517.80	60.78	71.55	Thrissur	Kerala	1872.03	883.40	959.48	69.37	72.18
Ambala	Haryana	3717.42	340.27	455.22	68.50	72.03	Ponnani	Kerala	2620.14	1082.36	1281.78	77.07	73.81
Bhiwani-Mahendragarh	Haryana	5957.84	203.52	247.39	71.27	69.91	Kasaragod	Kerala	4585.38	436.18	487.02	75.98	78.33
Hamirpur	Himachal Pradesh	4897.35	242.45	254.77	58.74	66.94	Mavelikkara	Kerala	3341.27	889.77	975.15	70.10	70.97
Shimla	Himachal Pradesh	8964.63	123.44	128.66	55.72	63.97	Vadakara	Kerala	4089.27	816.76	901.65	80.20	81.13
Srinagar	Jammu & Kashmir	5188.67	213.30	232.28	25.55	25.90	Ernakulam	Kerala	5427.32	1988.84	2248.20	72.70	73.57
Anantnag	Jammu & Kashmir	7696.36	152.83	169.04	27.10	28.84	Lakshadweep	Lakshadweep	30.00	1532.77	1664.07	85.90	86.61
Baramulla	Jammu & Kashmir	11750.33	89.74	101.34	41.84	39.13	Damoh	Madhya Pradesh	14577.89	93.15	113.26	44.10	55.24
Udhampur	Jammu & Kashmir	29689.56	45.91	50.19	44.86	69.91	Sarguja	Chhattisgarh	15718.13	83.14	96.90	61.62	77.96
Raichur	Karnataka	9743.87	152.54	170.53	45.90	58.31	Sidhi	Madhya Pradesh	12898.85	105.30	134.59	49.74	56.99
Mysore	Karnataka	5917.50	279.51	291.19	58.82	67.30	Kanker	Chhattisgarh	15635.62	82.93	92.59	57.16	70.24
Koppal	Karnataka	9033.56	150.93	169.93	55.39	65.57	Morena	Madhya Pradesh	11540.34	116.11	147.53	53.03	50.18
Uttara Kannada	Karnataka	12847.43	100.14	112.91	59.05	69.01	Guna	Madhya Pradesh	13873.86	86.69	115.73	53.98	60.83
Udupi Chikmagalur	Karnataka	8478.07	144.41	163.63	68.15	74.54	Rajgarh	Madhya Pradesh	10587.27	119.11	149.12	51.48	64.02
Bangalore Central	Karnataka	323.21	5882.61	5976.41	44.54	55.63	Mandla	Madhya Pradesh	19636.75	77.82	92.91	56.21	66.79
Tumkur	Karnataka	7076.95	196.24	214.57	64.77	72.54	Sagar	Madhya Pradesh	10126.07	117.04	150.13	48.12	58.67
Bellary	Karnataka	7432.37	188.53	200.20	61.43	70.28	Shahdol	Madhya Pradesh	13308.86	95.60	117.31	49.49	62.03
Bangalore South	Karnataka	118.81	17095.02	16832.85	44.74	55.69	Dhar	Madhya Pradesh	9253.79	129.37	180.30	54.67	64.54
Davanagere	Karnataka	6013.98	223.63	253.20	67.46	73.22	Rewa	Madhya Pradesh	6300.84	198.18	245.16	48.33	53.73
Gulbarga	Karnataka	9551.83	161.62	180.28	49.19	57.94	Betul	Madhya Pradesh	16156.05	79.65	99.52	49.47	65.16
Dakshina Kannada	Karnataka	4820.72	283.08	324.70	74.42	77.14	Raipur	Chhattisgarh	4282.48	368.68	444.66	46.98	65.69
Chamarajanagar	Karnataka	9079.49	157.92	171.35	67.90	72.83	Korba	Chhattisgarh	14799.46	86.25	95.92	58.41	74.16
Shimoga	Karnataka	9650.46	148.79	161.88	66.44	72.27	Satna	Madhya Pradesh	7464.97	161.76	195.32	54.60	62.65
Dharwad	Karnataka	5060.06	278.95	312.06	56.53	65.94	Khandwa	Madhya Pradesh	13278.77	102.07	132.50	59.98	71.46
Bangalore Rural	Karnataka	5019.12	379.38	436.41	57.91	66.44	Chhindwara	Madhya Pradesh	11812.75	97.71	118.62	71.86	79.03
Kolar	Karnataka	5559.20	241.21	268.56	69.06	75.51	Bilaspur	Chhattisgarh	6682.41	220.40	258.49	52.28	63.13
Chitradurga	Karnataka	10963.42	139.94	151.53	54.44	66.00	Khargone	Madhya Pradesh	10601.23	119.21	160.67	60.16	67.67
Bidar	Karnataka	8390.60	175.26	190.80	52.98	59.93	Hoshangabad	Madhya Pradesh	11802.46	109.93	132.86	54.72	65.76
Chikkodi	Karnataka	5444.22	235.92	264.92	67.51	74.26	Bhopal	Madhya Pradesh	3674.76	397.77	532.53	45.04	57.75
Hassan	Karnataka	7929.83	178.72	196.89	69.16	73.47	Rajnandgaon	Chhattisgarh	12257.37	115.12	129.56	58.86	74.20
Chikkballapur	Karnataka	5490.23	261.77	302.05	68.07	76.18	Mandsour	Madhya Pradesh	10842.02	126.46	150.02	55.81	71.40
Belgaum	Karnataka	5369.36	256.69	294.45	54.68	68.22	Bhind	Madhya Pradesh	7247.98	188.25	220.50	38.39	45.62
Haveri	Karnataka	7376.81	185.96	211.30	63.56	71.59	Indore	Madhya Pradesh	2808.66	559.02	753.14	50.73	62.25
Bangalore North	Karnataka	668.81	3205.83	3590.66	46.71	56.50	Balaghat	Madhya Pradesh	13181.78	101.60	123.64	56.46	68.31
Bagalkot	Karnataka	7842.57	173.84	200.01	63.08	68.81	Raigarh	Chhattisgarh	13026.17	109.99	123.28	65.31	77.60
Mandya	Karnataka	6110.68	245.43	273.17	68.81	71.45	Ujjain	Madhya Pradesh	7412.90	169.12	205.79	53.24	66.63
Chalakudy	Kerala	1384.53	574.08	614.17	73.56	76.84	Durg	Chhattisgarh	5129.76	315.88	361.77	55.87	67.81
Alathur	Kerala	2441.71	429.89	474.99	75.11	76.23	Janjgir-Champa	Chhattisgarh	7174.51	211.65	242.18	48.57	61.77
Kollam	Kerala	1661.21	672.76	739.95	67.57	72.09	Ratlam	Madhya Pradesh	9303.68	134.53	183.01	50.91	63.59
Attingal	Kerala	1553.42	711.78	816.10	66.04	68.67	Dewas	Madhya Pradesh	8859.13	146.44	182.55	59.98	70.74
Thiruvananthapuram	Kerala	642.36	1831.20	2077.15	65.50	68.63	Vidisha	Madhya Pradesh	14996.77	82.24	108.98	45.06	65.68
Malappuram	Kerala	1221.97	874.06	1027.26	76.63	71.21	Tikamgarh	Madhya Pradesh	8898.58	135.93	171.83	43.39	50.12
Alappuzha	Kerala	867.92	1472.31	1631.66	78.84	78.46	Mahasamund	Chhattisgarh	11286.42	121.31	134.30	56.68	74.63
Kozhikode	Kerala	1007.20	1160.54	1302.24	75.41	79.75	Jabalpur	Madhya Pradesh	5042.08	286.86	339.48	43.80	58.55
Kottayam	Kerala	1782.55	660.78	700.73	73.55	71.60	Chandrapur	Maharashtra	11897.67	129.13	147.40	58.42	63.28

(Continued)

Appendix Table (Continued)

CONSTITUENCY	STATE	AREA	DENSITY_2009	DENSITY_2014	TURNOUT_2009	TURNOUT_2014	CONSTITUENCY	STATE	AREA	DENSITY_2009	DENSITY_2014	TURNOUT_2009	TURNOUT_2014
Hingoli	Maharashtra	10149.99	134.95	156.28	59.67	66.27	Outer Manipur	Manipur	20915.89	43.48	43.94	83.13	83.98
Dindori	Maharashtra	8873.34	161.49	172.44	47.57	63.40	Inner Manipur	Manipur	1411.11	585.89	606.16	70.53	74.92
Bhandara–Gondiya	Maharashtra	7577.26	191.43	218.59	70.96	72.28	Tura	Meghalaya	8097.03	62.46	72.43	67.65	78.10
Beed	Maharashtra	10401.20	157.41	172.35	65.59	68.74	Shillong	Meghalaya	14331.97	53.86	68.43	62.22	63.22
Amravati	Maharashtra	8918.39	159.65	180.68	51.43	62.31	Mizoram	Mizoram	21081.00	29.86	33.31	50.68	61.69
Osmanabad	Maharashtra	10816.60	148.74	159.64	57.44	64.75	Nagaland	Nagaland	16579.00	79.73	71.35	89.98	87.82
Kalyan	Maharashtra	278.26	5708.64	6907.28	34.31	42.88	Sundargarh	Orissa	9430.04	132.44	149.58	61.29	71.65
Yavatmal–Washim	Maharashtra	10447.31	148.75	166.88	54.01	59.25	Keonjhar	Orissa	10336.41	122.40	130.29	70.44	80.48
Parbhani	Maharashtra	9984.84	161.25	180.65	54.08	64.43	Nabarangpur	Orissa	12580.35	96.63	103.11	65.13	78.80
Mumbai North	Maharashtra	132.78	12117.39	13434.98	42.60	53.06	Mayurbhanj	Orissa	7713.63	152.15	172.10	70.11	79.35
Solapur	Maharashtra	6260.50	254.63	271.98	46.61	55.86	Kalahandi	Orissa	11775.36	120.76	125.19	68.70	75.81
Mumbai North West	Maharashtra	80.01	20061.11	22191.42	44.05	50.44	Bolangir	Orissa	8782.88	164.35	177.96	70.10	74.88
Latur	Maharashtra	6991.30	215.98	240.67	54.91	62.83	Bargarh	Orissa	7861.69	167.94	181.99	69.64	78.51
Jalgaon	Maharashtra	5835.02	265.53	292.70	42.36	57.98	Sambalpur	Orissa	13306.95	92.68	97.48	64.88	75.89
Mumbai North Central	Maharashtra	55.16	30491.09	31522.74	39.51	48.61	Balasore	Orissa	3305.93	383.96	413.26	70.27	76.81
Mumbai South	Maharashtra	45.35	35057.50	32764.94	40.36	52.54	Puri	Orissa	4659.88	283.87	301.42	68.80	74.00
Mumbai South Central	Maharashtra	65.59	23111.12	22074.19	39.50	53.12	Aska	Orissa	4404.47	292.02	319.85	54.57	63.62
Baramati	Maharashtra	7972.24	199.88	227.48	45.97	58.81	Bhadrak	Orissa	3556.72	385.85	413.16	67.68	73.59
Mumbai North East	Maharashtra	95.91	16400.13	17395.54	42.46	51.65	Kandhamal	Orissa	14913.37	71.43	76.68	66.40	73.40
Buldhana	Maharashtra	8746.22	158.10	182.51	61.64	61.31	Dhenkanal	Orissa	7245.32	177.16	188.19	66.73	76.43
Bhiwandi	Maharashtra	4231.82	350.48	400.91	39.39	51.61	Jagatsinghpur	Orissa	3124.89	465.75	479.91	67.56	75.48
Dhule	Maharashtra	6084.00	258.91	275.23	42.48	58.71	Kendrapara	Orissa	3256.85	440.43	477.59	68.53	73.36
Thane	Maharashtra	362.33	4986.56	5722.46	41.50	50.84	Cuttack	Orissa	3176.58	404.07	431.79	63.37	71.35
Shirur	Maharashtra	5854.96	278.48	311.55	51.37	59.73	Berhampur	Orissa	6478.58	186.39	205.95	58.89	67.85
Hatkanangle	Maharashtra	3963.20	368.03	411.44	66.96	72.91	Jajpur	Orissa	2972.72	412.78	438.57	66.52	75.20
Nandurbar	Maharashtra	9639.91	150.99	173.52	52.63	66.76	Bhubaneswar	Orissa	2225.11	650.30	686.60	49.13	58.37
Nagpur	Maharashtra	208.62	8335.44	9111.34	43.40	57.08	Koraput	Orissa	14599.26	83.41	89.08	62.64	76.09
Aurangabad	Maharashtra	5473.96	259.04	290.36	51.56	61.84	Pondicherry	Pondicherry	490.00	1556.00	1839.50	79.81	82.10
Ratnagiri–Sindhudurg	Maharashtra	9784.13	127.99	139.75	57.30	65.55	Anandpur Sahib	Punjab	3610.84	370.72	433.34	67.61	69.44
Wardha	Maharashtra	9590.51	146.89	163.14	54.55	64.78	Hoshiarpur	Punjab	3999.04	324.89	371.41	64.89	64.72
Nashik	Maharashtra	3967.25	365.09	401.60	45.42	58.84	Khadoor Sahib	Punjab	4729.51	283.36	330.53	70.63	66.56
Palghar	Maharashtra	4516.41	337.23	349.41	48.10	62.90	Gurdaspur	Punjab	3114.12	423.54	481.79	70.76	69.50
Satara	Maharashtra	6797.67	227.45	253.03	52.79	56.78	Faridkot	Punjab	4752.76	271.02	306.15	72.29	70.93
Nanded	Maharashtra	5762.92	249.70	292.74	53.80	60.07	Ludhiana	Punjab	1568.01	835.02	995.66	64.68	70.49
Jalna	Maharashtra	8652.80	164.83	186.30	55.88	66.14	Ferozpur	Punjab	5753.25	233.34	264.57	71.26	72.62
Sangli	Maharashtra	7156.06	208.30	230.45	51.98	63.47	Fatehgarh Sahib	Punjab	3562.06	339.01	392.18	69.41	73.80
Shirdi	Maharashtra	6632.47	198.70	220.09	50.36	63.89	Amritsar	Punjab	2091.71	593.34	706.25	65.63	68.18
Pune	Maharashtra	435.09	4153.02	4219.40	40.64	54.10	Patiala	Punjab	4624.25	290.83	341.74	69.60	70.93
Maval	Maharashtra	3281.91	489.01	595.31	44.65	60.11	Bathinda	Punjab	6017.87	222.14	253.46	78.49	77.15
Kolhapur	Maharashtra	5321.94	297.45	330.39	64.74	71.68	Sangrur	Punjab	3777.54	331.27	377.16	74.39	77.17
Akola	Maharashtra	7348.94	201.47	224.04	49.82	59.43	Jalandhar	Punjab	2761.04	485.27	561.92	67.13	67.08
Madha	Maharashtra	10848.34	143.66	159.22	59.01	62.50	Kota	Rajasthan	8840.17	169.56	197.34	45.47	66.20
Raver	Maharashtra	7054.82	201.10	225.86	50.74	63.34	Udaipur	Rajasthan	11323.24	138.14	160.55	48.45	65.63
Raigad	Maharashtra	8608.76	157.96	178.05	56.27	64.44	Jalore	Rajasthan	15750.35	96.57	115.87	37.96	59.58
Ahmadnagar	Maharashtra	10447.63	145.29	162.66	51.84	62.51	Jodhpur	Rajasthan	25366.43	59.40	68.10	44.99	62.44

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