

# **Nagaland's Demographic Somersault: An Empirical Investigation**

Ankush Agrawal

Vikas Kumar

## **Abstract**

Nagaland's population decreased during 2001–11 after growing at abnormally high rates during the past few decades. This is the first time since independence that a state in India has witnessed an absolute decline in population. In this context, the paper examines the census population estimates for internal consistency. It also tries to validate the census estimates using information on birth and death rates from other demographic surveys and information on gross school enrolment (6–14 years population) and the electorate (adult population). The paper also checks if illegal/unaccounted international immigration and politically-motivated manipulation could explain the abnormal changes in Nagaland's population. The paper shows that the Census substantially overestimated Nagaland's population during 1981–2001 and, by implication, questions the sanctity of the Census.

Keywords: Census, India, migration, Naga, over-count, political economy of statistics

JEL Codes: J11, J13, O15, R23

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Ankush Agrawal is Assistant Professor, Institute of Economic Growth, Delhi.

Email: [ankush@iegindia.org](mailto:ankush@iegindia.org)

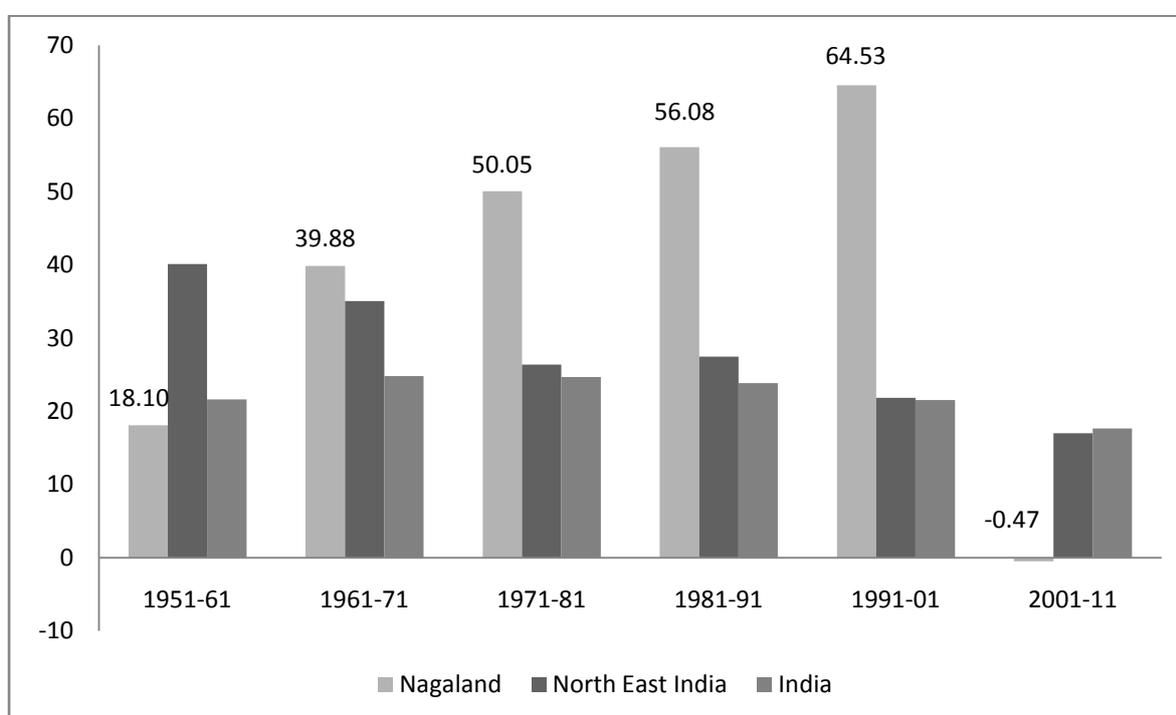
Vikas Kumar is Assistant Professor, Azim Premji University, Bangalore.

Email: [vikasprithvipur@gmail.com](mailto:vikasprithvipur@gmail.com)

## 1. Introduction

The population of Nagaland grew at the decadal rate of 56.08 per cent during 1981–91 and of 64.53 per cent during 1991–2001. These growth rates were the highest in India and among the highest in the world.<sup>1</sup> In the subsequent decade, however, the state’s population decreased by 0.47 per cent (Figure 1).

**Figure 1:** Decadal population growth rates (in per cent)



*Note:* The growth rates of Nagaland and North East India for the period 1951–61 are computed after excluding Tuensang, which was incompletely canvassed in the 1951 Census.

*Sources:* 1951-61 Nagaland, 1951-61 and 1991-2011 North East (Authors’ computations, see Footnote 34), 1961-2011 Nagaland, 1951-2011 India (Govt of India 2011a), and 1961-91 North East (Sharma and Kar 1997).

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<sup>1</sup> A comparison of Nagaland’s growth rate with countries across the world is revealing. In 1980–90, there were only six countries (Qatar, UAE, Equatorial Guinea, Djibouti, Saudi Arabia, and Oman) whose population grew faster than Nagaland’s population, whereas in 1990–2000 this number decreased to two (Afghanistan and UAE). But the number of such countries increased to over 150 in 2010 (UN 2011). Comparison of Nagaland’s growth rate with growth rates of provinces of other countries, which would have been more appropriate, could not be carried out for want of data.

This is the first time that a state in independent India<sup>2</sup> has witnessed an absolute decline in population in the absence of war, famine, natural calamities, epidemical diseases, political disturbance, or any significant changes in the socioeconomic correlates of fertility (Table 1).<sup>3</sup>

Observers drew attention to Nagaland's high growth rate and its developmental consequences as early as the 1970s (Means 1971: 1028; von-Furer Haimendorf 1977: 2–4), but the State government took note only recently when it rejected the 2001 Census (Govt of India 2011b: viii). And, long after the State government rejected the 2001 Census of Nagaland (Assam Tribune 2009),<sup>4</sup> many state and non-state organisations continue to use the flawed population statistics. For instance, the Economic Survey of 2010–11 (Govt of India 2011e: A125) used the wrong population series for Nagaland, which resulted in erroneous estimates of a few development indicators. In fact, even the State government uses the rejected population estimates (see for example, Govt of Nagaland 2012: 30).

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<sup>2</sup> The population of Punjab decreased between 1941 and 1951 (Govt of India 2011a). The 1941 Census over-enumerated the population of Punjab due to competition between communities. The error was corrected in the 1951 Census (Natrajan 1972: vii; Govt of India 1954: 5). Other reasons for the decline of Punjab's population include population transfer and unprecedented bloodshed following the partition of British India. Also, there was a decrease in the population of two union territories, the Andaman and Nicobar Islands (during 1941–51) and Daman and Diu (during 1951–61) (Govt of India 2011a), most likely due to out-migration.

<sup>3</sup> Key socioeconomic correlates of fertility include income, literacy, urbanisation, female work participation, and access to public health services (Anker 1978; Barro and Sala-i-Martin 2004: 407–8; Bongaarts and Watkins 1996; Dreze and Murthi 2001). In the case of Nagaland, fertility has been shown to be inversely related to female literacy and the standard of living and directly related to child mortality (Dey and Goswami 2009; Narendra Singh 2005). Table 1 does not indicate any change in the above correlates that could support the abrupt decline in Nagaland's population through a decline in fertility. To the contrary, Nagaland's Human Development Index rank improved steadily over the past four decades. Nagaland ranked second among Indian states during 2002–06 (Suryanarayana and Agrawal 2011). However, the possibility of increase in fertility despite a contrary trend of the socioeconomic and developmental indicators cannot be ruled out entirely. For instance, in the late 1970s and early 1980s, an increase in fertility was recorded in Malaysia (Hirschman 1986).

<sup>4</sup> On 18 August 2005, the State Legislative Assembly passed a resolution that demanded a fresh census in Nagaland. On 22 August 2005, the Chief Secretary of Nagaland informed the Registrar General of India of 'the decision of Govt of Nagaland rejecting 2001 Census Report' (*Chakhesang Public Organisation & Ors. vs. Union of India & Ors., W.P. No. 67 of 2006*). In a consultative meeting held on 30 September 2009, the State Government canvassed the support of political parties, a wide range of civil society organisations, and organisations of religious bodies, students, tribal bodies, and village elders to make a fresh start with regard to the Census of Nagaland. All the parties involved in that consultative meeting agreed that 'previous censuses conducted in Nagaland were defective and inaccurate' and that the next census 'should be conducted properly' (Govt of Nagaland 2009b). Another fact that bears noting here is that while the Census department published Provisional Population Tables for Nagaland after the 2001 Census, it did not publish the General Population Tables for Nagaland. But, surprisingly, long after the State Assembly's 2005 resolution, the central government continued to insist that the 2001 Census was correct (*Chakhesang Public Organisation & Ors. vs. Union of India & Ors., W.P. No. 67 of 2006*).

Similarly, others uncritically refer to the Census of Nagaland as a benchmark (see, for instance, Lokniti 2008: 3; Nachane 2011: Table A12).

**Table 1:** Socioeconomic correlates of fertility

Growth rate/ socio-economic correlate	Nagaland				India			
	1981	1991	2001	2011	1981	1991	2001	2011
Population growth rate	50.05	56.08	64.53	-0.47	24.66	23.86	21.54	17.64
Income per capita	10560	14103	16582	17898	8793	11579	16684	24304
Human Development Index	0.328 (20/32)	0.468 (11/32)	NA	0.609 (2/27)	0.302	0.381	NA	NA
Female literacy	40.39	54.75	61.46	76.49	29.76	39.29	53.67	65.46
Literacy (All)	50.28	61.65	66.59	80.11	43.57	52.21	64.83	74.04
Female work participation rate	33.2	38	38.1	NA	19.7	22.3	25.7	NA
Infant Mortality Rate	NA	42	38	NA	NA	68	57	NA
Urbanisation	15.52	17.21	17.23	28.97	23.31	25.71	26.33	31.16

*Notes:*

1. 'Population growth rate' for India includes the estimated populations of Assam for 1981 and Jammu and Kashmir for 1991, where the Census could not be conducted.
2. 'Income per capita' is measured at constant 1999–2000 prices. The values for 1981, 1991, and 2001 are three-year averages (central) for the financial years; the value for 2011 corresponds to the period 2007–08.
3. The Human Development Index for 2011 pertains to the 2002–06 period. It is not directly comparable with the Index for 1981 or 1991 because of differences in data sources and methodology. However, the ranks for 2011 are likely to be better indicators of human development because of methodological improvements (for instance, the education dimension in the 2011 Index comprises of mean years of schooling and expected years of schooling, whereas for earlier years it was based on the gross enrolment ratio). The numerals in parentheses for Nagaland indicate the state's rank (out of 32 states and union territories or 27 states).
4. 'Female literacy' corresponds to those aged 'seven years and above'; the figures for India exclude Assam in 1981 and Jammu and Kashmir in 1991.
5. 'Female Work Participation Rate' for India excludes Assam, Jammu and Kashmir, and Paomata, Mao Maram, and Purul sub-divisions of Senapati district of Manipur in all the years.
6. 'Infant Mortality Rate' for 1991 corresponds to the 1996–98 period and for 2001 to the 2003–05 period.
7. 'NA' indicates that comparable data is not available.

*Sources:*

1. Population growth rate and female literacy: *Govt of India (2011a, b)*
2. Income per capita: *Reserve Bank of India (2005, 2011) and Govt of India (2011c)*
3. Human Development Index: *Govt of India (2002) and Suryanarayana and Agrawal (2011)*
4. Female work participation rate: *Govt of India (1999a, 2008a)*
5. Infant Mortality Rate: *IIPS and MI (2007, 2009)*
6. Urbanisation: *Govt of India (1985a, 1992, 2011a, 2011b).*

Anomalies in the head count of sub-groups of population in censuses are, however, not unheard of in India. For instance, the proportion of Punjabi (Hindi) speakers in the state of Punjab registered a substantial increase (decrease) between 1971 and 1991 because those who incorrectly returned their mother tongue as Hindi in earlier censuses reverted to Punjabi during the 1991 Census (Gill 2007). The error can be primarily attributed to the ethno-political struggle for power in Punjab. Similarly, the 1941 Census conducted before the religious partition of British India over-enumerated the population in Punjab and Bengal. These two provinces suffered most due to ethnic competition, and were also the only provinces to be directly affected by partition in 1947. Their growth rates decreased sharply in the 1951 Census (Natrajan 1972: vii).<sup>5</sup> Horowitz (2000) discusses related cases from Nigeria, Kenya, Pakistan, Mauritania, Iraq, Lebanon, Belgium, Trinidad, Guyana, and the Indian provinces of Punjab and Assam. Others study these cases in depth. For instance, Ahonsi (1988: 555) suggests that the 1952–53 Census of Nigeria undercounted the actual population by 18 per cent as '[m]any people erroneously associated the census with taxation; [M]oslems in the Islamic North opposed the counting of women in purdah; and difficult terrain alongside inadequate transportation led to the omission of many villages'. However, the Censuses of 1963 and 1973 in Nigeria were believed to be over-counts because of ethno-regional competition. Slack and Doyon (2001) discuss the demographic aspects of the Bosnian conflict, whereas Kaufmann (2011) and Anderson et al. (nd) examine the interaction between ethnic conflict and demographic change in Northern Ireland.<sup>6</sup>

In another case of misreporting, the population of the Halba tribe in the state of Maharashtra increased from 7,205 to 2,42,819 between 1971 and 1981 owing to misreporting of the members of the Halba Koshti caste as that of the Halba tribe (Kulkarni 1991). The error in Maharashtra can be traced to the political economy of state support for certain communities, which tempts others to misreport their ethnic identity. But correct enumeration of Scheduled Tribes has long been a problem for Indian censuses because of the ambiguity in the definition of tribes (Nongkynrih 2010) and, in a few cases, the

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<sup>5</sup> See Agrawal and Kumar (2012d) for a detailed discussion of these cases.

<sup>6</sup> For a formal model of the political economy of fertility, see Janus (forthcoming).

inaccessibility of their habitats (Govt of India nd3).<sup>7</sup> Similar problems have been noticed in censuses in other parts of the world as well. For instance, enumeration of marginalised communities has long been a problem in the US (Siegel 1973), where the problem of under-enumeration sparked political and legal controversies after the 1990 Census on the desirability of the use of post-enumeration surveys to correct censuses (Breiman 1994; Freedman and Wachter 1994).

In most of the above cases, either censuses under-enumerated the population or there was a content error (information was misreported). Content errors—as in the cases of Punjab and Maharashtra—affect the composition of population without necessarily affecting the overall head count. However, the trend of population change in Nagaland stands apart because of the sheer magnitude and the persistence of anomalies across, at least, three censuses (1981, 1991, and 2001). Despite the developmental challenges posed by Nagaland’s demographic somersault—decades of very high population growth (1971-2001) followed by a sudden contraction (2001-11)—the anomalies in the Census have not received the attention of social scientists. It evoked a lot of interest in the North Eastern media in the run-up to the 2011 Census, though (for example, Nagaland Post 2009).

Three possible explanations have emerged from debates in popular media and quasi-social-scientific discussions. First, some argue that net out-migration could account for the decline in population between 2001 and 2011 (Chaurasia 2011; Jeermison 2011; also Kundu and Kundu 2011). Others argue that net in-migration was responsible for the high population growth rate between 1991 and 2001 (Amarjeet Singh 2009; Rio 2010). Second, the prevalence of HIV/AIDS and drug addiction has been invoked to explain the population decline between 2001 and 2011 (Jeermison 2011). But Agrawal and Kumar (2012b: 8) have argued that deaths due to these factors are far fewer than the drop in Nagaland’s population. Third, Nagaland Chief Minister Neiphiu Rio cited the struggle among tribes for political power and development funds as the reason for the high population growth between the 1991 and 2001 Censuses (Hazarika 2005).

But, to our knowledge, neither these nor other plausible explanations have been systematically, empirically investigated yet (for exceptions see Agrawal and Kumar 2012a, b,

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<sup>7</sup> See Agrawal and Kumar (2012d) for detailed discussion of these and other cases.

c, and d). This paper examines the plausibility of Nagaland's demographic somersault during the 1971–2011 period. While this paper is primarily related to demography, it also throws light on the political economy of conflicts (Horowitz 2000) and on the political economy of statistics (Pitre 2007; Wade 1985, 2012).

The rest of the discussion is organised as follows. The next section draws attention to the discrepancies between the actual and projected populations of Nagaland over the past four decades. It also throws light on other sources that question the validity of the Census of Nagaland. In Section 3, we examine internal consistency of the Census. Section 4 externally validates the Census using information from the Sample Registration System (SRS) and National Family Health Surveys (NFHS) and also compares these with information on school enrolment and the size of the electorate. Since both internal and external validations indicate that the pre-2011 Censuses overestimated the population of Nagaland, in Section 5 we discuss the possibility of incomplete coverage and related mistakes in earlier censuses. The next section examines if other factors such as the indigenisation of illegal/unaccounted international immigrants and political-economic competition among ethnic groups can explain the changes in Nagaland's population. The final section offers concluding remarks.

## **2. Growing Concerns about the Census of Nagaland**

During the past three decades, Nagaland's population repeatedly defied projections (Table 2). To begin with, the Expert Committee of 1974 underestimated the 1991 population by about 20 per cent. The underestimation indicates that the dynamics of population growth between 1981 and 1991 was inconsistent with the fertility and mortality conditions in the 1960s and 1970s that formed the basis of the Expert Committee's projections. Again, the Technical Group of 1988, which based its projections on the socioeconomic and demographic conditions in the 1980s and used the 1991 Census as the baseline, underestimated the 2001 population by 14 per cent.

Underestimation for 2001 despite an inflated baseline (1991 Census) means that the population growth between 1991 and 2001 was very high. Also, note that the discrepancy persists even if adjusted for the coverage error detected in the post-enumeration surveys

(PES). While the PES excluded Nagaland in 1981 and 1991, in 2001 the state was included along with other North Eastern states en bloc. The 2001 PES revealed a net omission rate of 7.6 per 1000 persons in the North Eastern region compared to 23.3 for the country as a whole (Govt of India 2006b: 9).<sup>8</sup> If we assume that the 2001 PES for the North East is representative for individual states of the region such as Nagaland, then the forecast error in 2001 after adjusting for the PES omission rate is (-) 14.17 per cent compared to the unadjusted figure of (-) 13.52 per cent in [Table 2](#).

Other sources also cast doubt on the veracity of the 2001 Census of Nagaland. For instance, leading politicians of the region suggested figures for the population of Nagaland that differ substantially from the 2001 Census estimates: Nagaland Chief Minister Neiphiu Rio estimated the state's population in 2001 at only 1.4 million (Hazarika 2005) and the erstwhile Manipur Chief Minister Radhabinod Koijam at 1.6 million (Koijam 2001). More importantly, a comparison of the 2001 Censuses of Assam and Nagaland with regard to 62 disputed villages along the Assam-Nagaland border can be used to validate the Census of Nagaland, albeit for a small area. According to the Registrar General of India, in 2001, '[the] population [of the disputed villages] enumerated by Assam is consistently lower than that enumerated by Nagaland' (Govt of India 2005: 24). While this indicates overestimation of the head count in the Census of Nagaland, we cannot entirely rule out the possibility that the villagers did not cooperate with the Census officials from Assam, either voluntarily or under threat from supporters of 'Greater' Nagaland that includes parts of Assam. A similar problem was reported from the Naga-dominated areas of Manipur, where villagers refused to cooperate with enumerators during the 2001 Census (Laithangbam 2004).<sup>9</sup>

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<sup>8</sup> PES is more likely than not to reveal undercount 'as the count has necessarily to be taken over an extended period; and the people move about during the period, one cannot be absolutely sure that the same person was not counted in two different places by two different enumerators, even though very careful precautions had been taken in advance to guard against this contingency. Over-enumeration is, therefore, possible though far less likely than under-enumeration' (Govt of India 1953a: 1).

<sup>9</sup> Here it bears noting that studies based on the Census data found a declining trend in crude birth rates (Govt of India 1997c; Guilmoto and Irudaya Rajan 2002). This is in agreement with the improvement in human development indicators ([Table 1](#)) but contrary to the Census, which records progressively increasing rate of growth of Nagaland's population until 2001 ([Figure 1](#)) despite limited in-migration([Section 3](#)).

**Table 2:** Actual and projected populations of Nagaland

Year	Source	Population (in '000)		Error (in per cent)*
		Projected	Actual	
1981	Expert Committee (1974)	714.5	774.9	-7.80
1991	Expert Committee (1974)	957.9	1209.6	-20.80
2001	Technical Group (1988)	1721	1990.0	-13.52
2011	Technical Group (1988)	2185	1980.6	10.32
2011	Technical Group (2001)	2249	1980.6	13.55
2011	PFI-PRB (2006)	2426-2439**	1980.6	22.49-23.14**

Notes:

\* 'Error (in per cent)' is the difference between projected and actual populations normalized by actual population. A negative (positive) error is indicative of under (over) projection.

\*\* PFI-PRB (2006) provides two projections, corresponding to low and high fertility scenarios.

Sources:

1. Expert Committee (1974): *Govt of India (1978a:158–59)*
2. Technical Group (1988): *Govt of India (1996: 64)*
3. Technical Group (2001): *Govt of India (2006a: 35)*
4. PFI-PRB (2006): *Population Foundation of India–Population Reference Bureau (2006: 7, 11)*.

While the forecasts for 1991 and 2001 happened to be underestimates vis-à-vis the corresponding censuses, the forecasts for 2011 were overestimates (Table 2). The Technical Groups on Population Projections constituted in 1988 and 2001 overestimated the 2011 population of Nagaland by 10 per cent and 14 per cent, respectively. Still later, in 2006, the Population Reference Bureau and Population Foundation of India overestimated the 2011 population by 23 per cent. But a sample survey conducted in six districts of Nagaland in 2009 found fewer people in almost all parts of Nagaland than the 2001 Census (Nagaland Post 2009) and added to growing doubts.

In short, over the past four decades, experts consistently failed to make reasonable forecasts for Nagaland's population. But, interestingly, this did not force demographers and policy-makers to revisit their presumptions regarding the demographic dynamics of Nagaland.

### 3. Internal Validation

In light of the discrepancies between the actual and projected populations of Nagaland over the past three decades, it is imperative to assess the reliability of the population estimates of the Census of Nagaland. This section examines whether births, deaths, and lawful migration can explain the abnormal changes in Nagaland's population. Note that the State of Nagaland came into existence in 1963, and that the pre- and post-1963 decennial censuses cannot be compared directly because of the sustained increase until 1963 of both the reach of census operations (Govt of India 2011b, also see Section 5.2) as well as the area of the Naga Hills (the precursor to the State of Nagaland) (Govt of India 1975a: 4). Even otherwise the population figures for areas covered fully during the pre-1961 period were based on estimates rather than direct enumeration (Govt of India 2011b: xii). So, the analysis is restricted to the 1971–2011 period.

The information on birth, death, and migration is combined here to check if together these factors can explain the changes in the census population estimates for Nagaland. The population change between two years, say, ' $t - \tau$ ' and ' $t$ ', is given by the following fundamental equation (Preston et al. 2001: 2):

$$\Delta N(t - \tau, t) = B(t - \tau, t) - D(t - \tau, t) + NI(t - \tau, t) = NG(t - \tau, t) + NI(t - \tau, t) \quad (1)$$

where  $\Delta N(t - \tau, t)$ ,  $B(t - \tau, t)$ ,  $D(t - \tau, t)$ ,  $NG(t - \tau, t)$ , and  $NI(t - \tau, t)$ , respectively, denote population change, number of births, number of deaths, natural growth, and net in-migrants between the years ' $t - \tau$ ' and ' $t$ '. Natural growth and net in-migration in Eq (1) can be decomposed between '0–9' and '10+' years age groups as follows:

$$\Delta N(t - \tau, t) = NG_{0-9}(t - \tau, t) + NG_{10+}(t - \tau, t) + NI_{0-9}(t - \tau, t) + NI_{10+}(t - \tau, t) \quad (2)$$

Between the years ' $t - \tau$ ' and ' $t$ ', the sum of natural growth and net in-migration for the '0–9' years age group equals their population at time ' $t$ ' (let it be denoted by  $N_{0-9}(t)$ ). Moreover, there are no births in the age group '10+' years. So, Eq (2) simplifies to:

$$\Delta N(t - \tau, t) = N_{0-9}(t) + 0 - D_{10+}(t - \tau, t) + NI_{10+}(t - \tau, t) \quad (3)$$

where  $D_{10+}(t - \tau, t)$  denotes the number of deaths within '10+' years age group. Eq (3) can now be reorganised as follows:

$$D_{10+}(t - \tau, t) = N_{0-9}(t) + NI_{10+}(t - \tau, t) - \Delta N(t - \tau, t) \geq 0 \quad (4)$$

**Table 3** compiles information on changes in population, net in-migration, and population of the '0–9' years age group. The number of 'deaths' in **Table 3** is the number of deaths in the '10 +' years age group if the fundamental equation, which is an identity, is balanced. If the population figures reported by the Census since 1971 are reliable, then until 2001 the number of deaths among those aged 10 years and above must have been negative for both Nagaland as a whole as well as for the rural and urban areas of Nagaland separately.<sup>10</sup> For Nagaland as a whole, the discrepancy, defined as the ratio of the unaccounted population to the end-of-the-decade population, increases from 4 per cent in 1971–81 to 17 per cent during the 1991–2001 period. So, internal consistency checks reveal that three successive censuses between 1981 and 2001 overestimated Nagaland's population. But note that the discrepancy figures are arrived at under the assumption of zero deaths among those aged 10 years and above. The actual discrepancy in, say, 1991 will be 128,749 plus the total deaths between 1981 and 1991 in the '10+' years age group. In other words, **Table 3** provides the lower bounds for discrepancy. **Table 3** also lists the discrepancy-adjusted population growth rates.

Since in-migration is often cited as the main reason for abnormal changes in the population of the North East (Sharma and Kar 1997), a closer examination of census data on migration is in order. Migration is indeed a contentious issue in Nagaland as the majority community—the Nagas—is committed to the Inner Line system that bars outsiders from entering large parts of the state without official permission (Kumar 2005).<sup>11</sup>

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<sup>10</sup> We carried out a similar exercise for Andhra Pradesh and found the number of deaths for the population aged 10 years and above to be significantly greater than zero during 1971-2001. Sharp deceleration in Andhra Pradesh's population growth was reported between 1991 and 2001 (Kumar and Sharma 2006), which was incommensurate with the changes in the socioeconomic correlates of fertility.

<sup>11</sup> Fearing corruption of the Naga society by 'illegal immigrants particularly the Mias (Bangladeshis)', the Naga Students' Federation is planning to conduct its own census of illegal immigrants in the state (Northeast Today 2012a, b). More recently, on the Gandhi Jayanti 2012, the Naga Council, Dimapur (NCD) launched a non-violent movement against illegal Bangladeshi immigrants (Northeast Today 2012b).

**Table 3: Population changes in Nagaland**

Population/Change	Total			Rural			Urban		
	1971–81	1981–91	1991–01	1971–81	1981–91	1991–01	1971–81	1981–91	1991–01
The end of decade population	774930	1209546	1990036	654696	1001323	1647249	120234	208223	342787
Total population change, all ages	258481	434616	780490	189641	346627	645926	68840	87989	134564
Net in-migrants, all ages	38227	13797	-16511	24023	5657	-22291	14461	8355	7542
Net in-migrants, 0–9 years	0	3092	-6738	0	1532	-4930	0	1560	-1808
Net in-migrants, aged 10 years and above	38227	10705	-9773	24023	4125	-17361	14461	6795	9350
0–9 years population (end of the decade)	189739	295162	445190	158436	243268	371715	31303	51894	73475
Deaths (among those aged more than 10 years)	-30515	-128749	-345073	-7182	-99234	-291572	-23076	-29300	-51739
Discrepancy (%)	3.94	10.64	17.34	1.10	9.91	17.70	19.19	14.07	15.09
Actual population growth rate	50.04	56.08	64.53	40.78	52.94	64.51	133.95	73.18	64.62
Adjusted population growth rate	44.14	39.47	35.99	39.23	37.79	35.39	89.04	48.81	39.78

*Notes:* The estimates of discrepancy for 1971–81 are not accurate because we could not find information on out-migrants in the 0–9 years age group and, therefore, assumed zero net in-migration in that age group. However, if we replace ‘Net in-migrants, 0–9 years’ (0 in the above table) with ‘In-migrants, 0–12/0–7 years’ (6700/3443), the estimate of discrepancy in case of ‘Total’ population changes to 4.80/4.38 per cent. The corresponding figures for ‘In-migrants, 0–12/0–7 years’ and the discrepancy are, respectively, 4169/2133 and 1.73/1.42 per cent for the ‘Rural’ population and 2531/1310 and 21.30/20.28 per cent for the ‘Urban’ population. ‘Adjusted population growth rate’ is ‘Actual population growth rate’ adjusted for the ‘Discrepancy’.

*Sources:* Govt of India (1976b: 28, 24; 1977: 84–85; 1985b: 34, 48, 50; 1988a: 318–19; 1997a: 52–53; 1997b: 6, 40, 52; nd2)

If in-migration was the dominant cause of population growth between 1981 and 2001, then substantial net out-migration from the state could have caused the subsequent absolute decline in population. Chaurasia (2011: 15), for instance, implicitly assumes no abnormality in the 2001 Census population estimate and uses SRS (2004–09) birth and death rates to project the 2011 population of Nagaland. He overestimates the actual population by 14 per cent and attributes the discrepancy between the projected and actual figures to ‘very heavy out-migration (almost 14 per cent) between 2001 and 2011’. While the 2011 Census migration data are not available yet, out-migration is unlikely to explain the absolute decline in Nagaland’s population after decades of very high growth, as the number of out-migrants during 2001–11 would have to far exceed 83,083, the number of out-migrants during the entire 1971–2001 period (Govt of India 1977: 84–85; 1988a: 318–19; nd1; nd2).

Though ad hoc invocation of migration as the root cause of Nagaland’s population change can be rejected straightaway, a *political–geographic explanation*—people migrate to cope with arbitrary post-colonial boundaries leading to otherwise unexpected shifts in population dynamics—would bear closer scrutiny. It has often been argued that post-colonial international and intra-national boundaries have divided seamless communities and their homelands on the one hand and corralled unwilling partners within rigid boundaries on the other.<sup>12</sup> While claims about the age-old ethno-cultural and political unity of Naga tribes spread across the hilly border between India and Myanmar and their political isolation from the outside world do not hold, several Naga and other related tribes are indeed distributed across Myanmar and North Eastern states such as Nagaland, Manipur, Assam, and Arunachal Pradesh. We, therefore, need to check if conflicts rooted in colonial (between Myanmar and India) and post-colonial (between North Eastern states of India) boundaries have indeed generated demographic gradients that have pushed people from neighbouring states and countries into Nagaland.

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<sup>12</sup> Englebert et al. (2002: 1094) trace to Clifford Geertz the idea that modern boundaries have caused *suffocation* (heterogeneous groups contained within a state) and *dismemberment* (partitioning of homogenous groups by borders). The debate has mostly focused on Africa, where a number of national and sub-national boundaries are straight lines, and is polarised between those who are appalled at the artificiality of these boundaries (Alesina et al. 2006; Englebert et al. 2002) and those who argue that the discourse of artificiality betrays ignorance of ground realities (Herbst 2000; Nugent and Asiwaju 1996).

To begin with, one could argue that ethnic conflict and/or economic hardship is pushing Nagas from other jurisdictions (particularly, Myanmar) into Nagaland. (Even other tribes could be fleeing from conflict hotspots in Nagaland's neighbourhood.) But in the 1980s and 1990s the level of conflict and economic development did not vary substantially across Nagaland's neighbourhood (Myanmar, Assam, Arunachal Pradesh, and Manipur) to support an influx into Nagaland on a scale that can explain the dramatic increase in Nagaland's population. Exceptions like the Naga–Kuki conflict in the hill districts of Manipur during the 1990s sent Kukis away from Naga-dominated areas rather than towards those. Even if it is assumed for the sake of argument that an influx can explain the abnormal increase in population, the complementary assumption—there was a reverse flow in the following decade—is highly implausible because in the latest census decade Nagaland did not witness any significant increase in conflict relative to its neighbourhood (South Asia Terrorism Portal nd1). On the contrary, if anything, in-migration should have increased during the 2001–11 period because of the ceasefire between various insurgent groups and the government, which created an unprecedentedly peaceful environment in the state (South Asia Terrorism Portal nd2).

So far we have argued that (lawful) migration recorded in the census cannot alone explain *both* very high population growth rates in Nagaland for three decades (1971–2001) *and* the negative growth in the subsequent decade (2001–11). But we have not rejected a qualified variant of the migration-based explanation that could arguably explain high growth rates between 1971 and 2001 if there was massive in-migration from other states and countries. The statistics on in-migration indicate that even the restricted explanation is implausible for two reasons.

First, migrants constituted about 5 per cent of Nagaland's population in both 1991 and 2001 and only 40 per cent of these migrants were from outside the state (Table 4).<sup>13</sup> Therefore, the migrants from outside Nagaland constituted about 2 per cent of its population in both these years. Second, the share of in-migrants from other states and

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<sup>13</sup> The migration figures correspond to 'migration by place of last residence'. We have taken into account the migrants with a reference period of 0–9 years so that only those individuals who changed residence between the inter-censal periods are considered.

countries in Nagaland's population has been falling over time, making in-migration an unlikely cause of increasing population growth rate during 1981–2001 (Table 4). But note that while census data clearly suggest that lawful migration cannot help explain the abnormal demographic changes in Nagaland, it cannot help us examine if illegal/unaccounted international migration can explain the high growth rates (see Section 6 for further details).

**Table 4:** Migrants in Nagaland's Population

Type of migrant	1971	1981	1991	2001
All in-migrants*	65,260 (12.64)	1,18,800 (15.33)	69,375 (5.74)	86,708 (4.36)
<i>Intra-state**</i>	31,507 (48.29)	74,107 (62.38)	42,821 (61.96)	51,362 (59.24)
<i>Inter-state**</i>	27,507 (42.16)	40,396 (34.00)	24,404 (35.31)	33,594 (38.74)
<i>International**</i>	6,238 (9.56)	4,296 (3.62)	1,888 (2.73)	1,752 (2.02)
In-migrants from outside the state*	33,753 (6.54)	44,693 (5.77)	26,554 (2.20)	35,346 (1.78)

*Notes:* Figures in parentheses are the percentage shares; \* as proportion of state's total population; \*\* as proportion of in-migrants

*Sources:* Please see the sources to Table 3.

#### 4. External Validation

So far, we have shown that the Census of Nagaland is internally inconsistent. In this section, we check whether other sources corroborate the above conclusion. We first check the validity of the Census estimates using the NFHS and the SRS. We then use information on gross school enrolment (GSE), which is an alternative source of information for the population aged 6–14 years, and information on the size of the electorate from the Election Commission of India (ECI), which allows us to cross-check estimates of the adult population.

Note that the last two sources are complementary and together they cover almost the entire population.

#### 4.1 NFHS and SRS

Demographic data from NFHS and SRS can be used to validate the Census estimates of population growth rates. Table 5 compiles estimates of crude birth rate (CBR) from these sources for the 1971-2011 period.<sup>14</sup> For each decade between 1971 and 2011, Table 5 also provides estimates of natural growth rate (NGR) corresponding to NFHS and SRS birth rates for two scenarios: one assuming zero death rate, NGR (0), and the other assuming death rate equal to the SRS death rate, NGR (SRS). The SRS (NFHS) estimates of CBR for Nagaland are lower (higher) than the estimates for the whole of the country.<sup>15</sup> The population growth observed for the country as a whole lies within the range spanned by NGR (SRS) and NGR (0), whereas for Nagaland the CBRs cannot support the observed population growth even when the crude death rate is assumed to be zero, which is impossible. Furthermore, neither the SRS nor the NFHS reported substantial changes in birth or death rates between 1991–2001 and 2001–11, which rules out the possibility of explaining the decline in population between 2001 and 2011 by transition to a low birth-and-death rates regime.<sup>16</sup>

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<sup>14</sup> The NFHS estimates of CBR are based on information on the number of children ever born during a reference period of three years prior to the day of survey to the women in the reproductive age group (15–49 years). Unlike the NFHS, the SRS is a dual record system that compiles information on births based on continuous enumeration in sample units (Govt of India 2012b: 1). So, CBRs from these sources are not directly comparable owing to difference in methods of data collection and reference periods. Nevertheless, they can be used to verify broad trends.

<sup>15</sup> A study comparing fertility estimates from NFHS 1 and SRS for India as a whole and its major states points out three possible reasons for the former being higher: (1) under-registration of births in SRS; (2) backward displacement of births in the NFHS; and (3) omission of births in the NFHS in some years before the survey (Narasimhan et al. 1997).

<sup>16</sup> The inferences based on the NGR derived from SRS and NFHS birth rates (Table 3) are supported by evidence from other studies. For instance, in 1961, the CBR was 49.77 per 1000 population among the Zemi Nagas of Benreu village in the present district of Peren (Bhowmik et al 1971: 74–75), which compares with the corresponding figure for India as a whole, viz., 41.7 during 1951–60. Similarly, Murry et al. (2005) found that the CBR was 28.35 per 1000 population among the Lotha Nagas in a village in Wokha district (the survey period is not mentioned in the study though it appears to be sometime during 1991–2001). This figure is quite close to the CBR estimates for Nagaland (viz., 30.4 for 1996–98 from NFHS–2 in Table 3) and for rural India (viz., 29.4 for 1995–97 from SRS (Govt of India 1999c)).

**Table 5: Birth, death and natural growth rates**

Period	Data Source	Nagaland				India			
		Birth rate	Death rate	NGR (0)	NGR (SRS)	Birth rate	Death rate	NGR (0)	NGR (SRS)
<b>1971–1981 (Census decadal growth rates: 50.05 (Nagaland) and 24.66 (India))</b>									
1976–1981 (average)	SRS	21.88	6.87	24.16	16.07	33.67	13.67	39.26	21.90
<b>1981–1991 (Census decadal growth rates: 56.08 (Nagaland) and 23.86 (India))</b>									
1983–1991 (average)	SRS	21.41	5.02	23.60	17.65	28.82	10	32.86	20.50
<b>1991–2001 (Census decadal growth rates: 64.53 (Nagaland) and 21.54 (India))</b>									
1991–94 (average)	SRS	19.45	4.02	21.24	16.54	24.65	8.95	27.57	16.86
1990–92	NFHS-1	31.3	NA	36.10	30.88	28.7	NA	32.71	21.60
1996–98	NFHS-2	30.4	NA	34.91	29.74	24.8	NA	27.76	17.03
<b>2001–2011 (Census decadal growth rates: -0.47 (Nagaland) and 17.64 (India))</b>									
2004–09 (average)	SRS	16.61	4.25	17.91	13.07	23.3	7.45	25.90	17.03
2003–05	NFHS-3	28.5	NA	32.45	27.07	23.6	NA	26.27	17.38

*Notes:*

1. Birth rate is the number of live births per 1000 population and death rate is the number of deaths per 1000 population.
2. The natural growth rate NGR (0) denotes the decadal NGR of 'closed' (no migration) population assuming zero death rate. NGR (SRS) denotes the decadal NGR of 'closed' population, assuming SRS death rate for the corresponding decade.
3. The figures for 1976–81 for Nagaland are based only on the rural sample. However, the share of rural population in the state's population was 90 and 85 per cent, respectively, in 1971 and 1981.
4. 'NA' indicates non-availability of data.

*Sources:*

*Srivastava (1987); Govt of India (1999b; 2011b); IIPS and MI (2007: 78; 2009: 36). SRS birth and death rates for 2004–09 (average) have been compiled from SRS Bulletins for the respective years.*

So, the decline in population has to be explained almost entirely by either substantial out-migration during 2001–11 and/or overestimation of population in earlier censuses. Since we have already ruled out the former in Section 3, the latter possibility remains to be explored.

Here, a few words are in order on verification of census estimates using state-level household surveys. Certain districts of Nagaland reported an increase in the average household size in 2001, and there was tremendous variation in household size even within districts. The Chakhesang Public Organisation used household surveys conducted by ministries of the state government to validate the results of the 2001 Census (Chakhesang Public Organisation’s letter to the Office of the Registrar General of India dated 8 January 2007 in *The Chakhesang Public Organisation & Ors. vs. Union of India & Ors.*, W.P. No. 67 of 2006). The comparison of households as per the 2001 Census and the *Basic and Vital Health Statistics Survey* conducted by the State Health and Family Welfare Department in 2004 shows that the former reports 48,776 additional households in Nagaland, which translates into an additional population of 2,96,070 (assuming 6.07 persons per family).<sup>17</sup> A similar survey carried out by the State Rural Development Department suggested that the Census overestimated the number of rural households by 48,671, which translates into a population overestimation of 2,94,432.<sup>18</sup> Note that these estimates of population overestimates compare with our estimates of lower bounds of discrepancy in [Table 3](#).

#### 4.2 Gross school enrolment

Gross school enrolment (GSE) data (1963–2009), which provide information on the total number of children enrolled in primary and middle standards (Classes I-VIII), allows us to build an alternative data series for the population aged 6–14 years<sup>19</sup> and validate the census

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<sup>17</sup> As per the 2001 Census the average family size in Nagaland was 5.99 (Govt of India nd2) rather than 6.07, the figure mentioned in the Chakhesang Public Organisation’s Writ Petition.

<sup>18</sup> The average household size according to this computation turns out to be about 6.05, which is marginally lesser than 6.07, the figure mentioned in the Chakhesang Public Organisation’s Writ Petition.

<sup>19</sup> The National Policies on Education 1968 and 1992 lay down guidelines to implement free elementary schooling (up to class VIII) for children. *The Right of Children to Free and Compulsory Education Act 2009*, recently included in the Constitution as Article 21 A under Fundamental Rights, provides for ‘free and compulsory elementary education to all children of the age six to fourteen years’. *The Directive Principles of*

population of the corresponding age group (*cf.* Steel and Poulton 1988; Black 1985: 288). We will first discuss a few limitations of the enrolment data and examine its internal consistency (by comparing growth in enrolment in Nagaland with that in the country as a whole) before comparing it with the Census of Nagaland.

The gross enrolment figures underestimate the 6–14 years population to the extent that all the children of school going age may not have been enrolled, and even some of those enrolled would have dropped out, *inter alia*, due to poor performance, lack of interest, poverty, prevalence of child labour, or gender bias. On the other hand, children who spend more than a year in any given class, children enrolled late in schools, and children whose age has been underreported (making them eligible for more attempts in competitive examinations and government jobs interviews) bias the 6–14 years population upwards. More importantly, state governments have an incentive to inflate enrolment figures to meet targets and also to attract federal funds linked to student head counts, which can bias the enrolment figures upwards. But *a priori* the net effect of these effects is ambiguous and, in any case, we do not have reliable data to estimate their relative effect.

We now compare state and national level enrolment figures. In 1961, the literacy rate in the state was 17.91 per cent, lower than the national average of 24.02 per cent (Govt of India 1973a). But since then growth in enrolment has been higher in Nagaland than the national average (Table 6), resulting in a much higher literacy rate in Nagaland than the rest of the country (Table 1). Both in Nagaland and India, growth in enrolment during 1971–81 was lower than in 1964–71, but increased during 1981–91 before tapering off in the subsequent decade and picking up again after 2001. Thus, the enrolment data for Nagaland are broadly consistent with that for the rest of the country.

The information on GSE can now be compared with the census estimates for the '0–14' years population. At the national level, the ratio of GSE to the census population (0–14 years)<sup>20</sup> increased from 32 per cent to 45 per cent between 1971 and 2001 (Table 6).

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*State Policy* (Art 45) stipulates provision of 'early childhood care and education to children below the age of six years' (Govt of India 2009; 2011d). So, the 6–14 years age group corresponds to the primary and middle standards.

<sup>20</sup> The ratio of gross school enrolment to the Census population (0–14 years) is *not* the same as the *Gross Enrolment Ratio*—the ratio of the 6–14 years population in school to the overall 6–14 years population—because of the difference in denominators.

However, the contrary is true of Nagaland, where the ratio decreased from 58 per cent to 35 per cent. Given the importance of education for individuals and the numerous initiatives taken by government and non-government organisations to universalise primary education, this is surprising, because it indicates that a state which was ahead of the rest of the country in terms of the aforesaid ratio as early as 1971 now ranks among the worst-performing states. Add to this the fact that since the early 1980s Nagaland has been among the most literate states of India (Table 1). So, the fall in the enrolment–population ratio appears to be an artefact of the abnormality in the Census. The extent of abnormality in the census population estimates is so much that despite a higher rate of growth of enrolment than the national average (Table 6), the trend in enrolment–population ratio for Nagaland is contrary to that for India as a whole (Figure 2). This becomes clearer once the figures for 2008 are compared with the pre-2002 figures. While the enrolment–population ratio for the country as a whole continues to improve gradually until 2008, in the case of Nagaland the ratio declines steeply and before reverting to the pre-1991 level (about 50 per cent). The decrease in the enrolment–population ratio in Nagaland is largest during the 1991–2001 decade. The ratio attains its minimum value in 2001, the year of maximum discrepancy in the Census (Table 3). In short, GSE data suggest that the Census overestimates the population of the ‘0–14’ years age group until 2001.

**Table 6:** Population (0–14 years) and Gross School Enrolment (GSE)

Period	Nagaland				India			
	GSE	GSE growth	Population (0-14)	GSE/ Population (0-14)	GSE	GSE growth	Population (0-14)	GSE/ Population (0-14)
1971	112184	8.48	195056	57.51	73173500	3.24	230334822	31.77
1981	136484	2.96	285535	47.80	95468300	2.53	263107050	36.28
1991	209963	3.79	451044	46.55	137501000	3.65	312364662	44.02
2001	252677	1.57	728409	34.69	163896800	0.13	363610812	45.07
2008	362646	5.50	725863	49.96	191220060	2.28	407464130	46.93

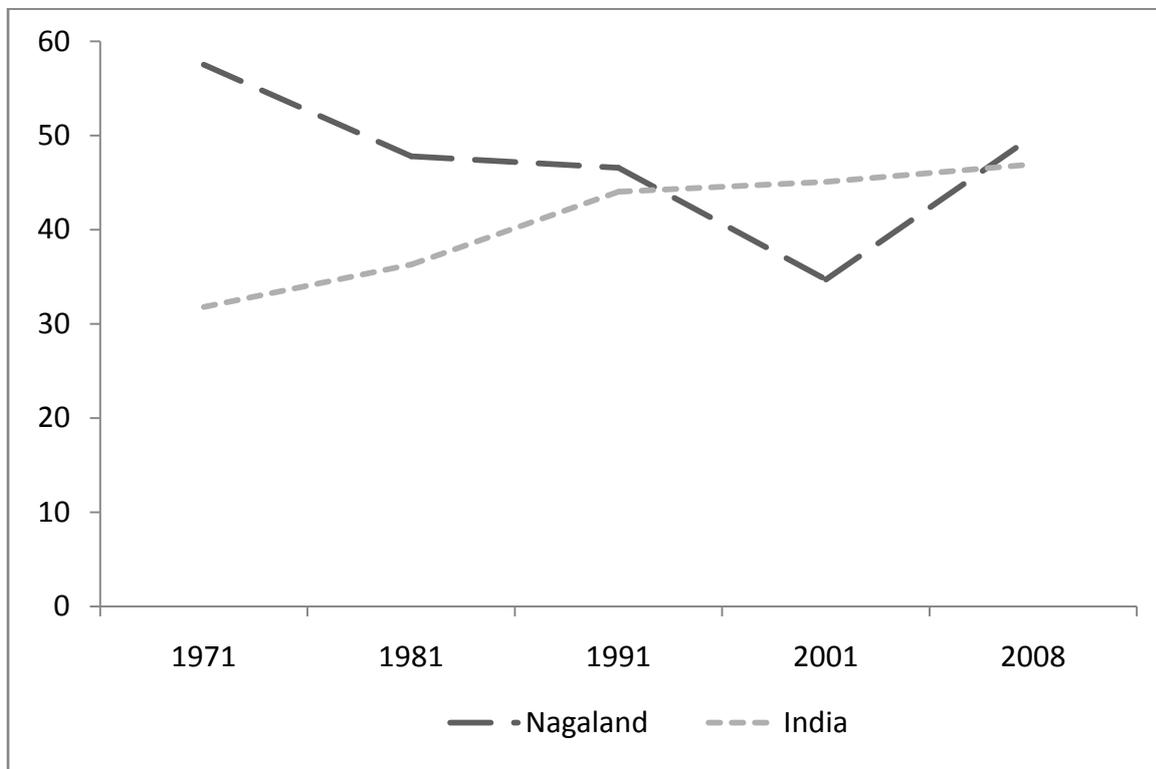
*Notes:*

1. 'GSE' pertains to enrolment in primary and middle standards (classes I–VIII) and is the three year (central) average.
2. 'GSE growth' is the compounded annual growth rate of GSE and has been estimated using a semi-log trend function for the corresponding decade (except for 1971 and 2008, where the reference periods are 1964–71 and 2001–08, respectively).
3. 'Population (0–14)' refers to the census population aged 14 years or below. The 'Population (0–14)' for 2008 have been extrapolated using the growth of total population between 2001 and 2011 since the figures on 'Population (0–14)' from the 2011 Census are not yet available. The population figures for India exclude Assam in 1981 and Jammu and Kashmir in 1991.

*Sources:*

1. *Indiastat (nd)* for GSE
2. *Govt of India (1976a: 8–9; 1987a: 46–47; nd1; nd2)* for Population (0–14 years)

**Figure 2:** The ratio of the population enrolled in schools (I-VIII) to the census population aged 0–14 years



Source: Table 6

### 4.3 Electoral rolls

The ECI archives provide information on the size of the electorate and number of voters—both disaggregated by gender—for the State Legislative Assembly and parliamentary/general elections, which can be compared with the corresponding census population estimates. Ideally, the size of the electorate should be smaller than the comparable census population because of two reasons. First, electoral rolls are built through voluntary enumeration—unlike the census estimates, which are based on compulsory enumeration. Second, electoral registration requires citizens to produce documentary evidence of identity and residence.<sup>21</sup> Before checking the electoral data for

<sup>21</sup> An electoral roll is a list of electors, i.e., all citizens eligible to vote in an election. According to Section 14(b) of the *Representation of the People Act 1950*, any citizen who fulfils the minimum age

internal consistency and comparing it with the census data, a brief discussion on the evolution of Nagaland's electoral constituencies is in order.

When the state of Nagaland was formed in 1963, a separate unicameral state legislative assembly was constituted, the seats of which are filled through direct election. Nagaland was also assigned a seat each in the lower and upper houses of the Parliament. The seat in the lower house is filled through direct election, whereas the seat in the upper house is filled through indirect election. We will use data on direct elections to the State Legislative Assembly and the lower house of the Parliament. Note that pre- and post-November 1973 elections are not directly comparable because of the extension of direct elections to the district of Tuensang of Nagaland in 1974 and redistribution of seats among other districts.<sup>22</sup> So, the analysis will be restricted to the post-1974 period. Between 1974 and 2012, the people of Nagaland participated in nine assembly (1974–2008) and ten parliamentary (1977–2009) elections, which provide us with 19 comparable observations. But we need to account for the change in the minimum age for voting, which was reduced from 21 years to 18 years through the *Constitution (Sixty-first) Amendment Act, 1988* with effect from March 1989 (Govt of India 1989; ECI nd2).

#### **4.3.1 Internal consistency of election data**

The internal consistency of the election data can be checked in at least four different ways. First, consistency can be checked by comparing sex ratios drawn from data on the electorate (registered voters) and on the electors who cast their votes (actual voters). Under the assumptions that women have not been systematically excluded at any stage of the election process and that the propensity to vote is gender-invariant, the sex ratio calculated using electorate and voter information should be identical. We found that voter sex ratios

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requirement and a few other requirements by the first day of the year in which the electoral roll is prepared or revised is eligible to register as an elector (ECI 2006).

<sup>22</sup> Between 1963 and 1973, Tuensang did not participate in direct elections because of its socioeconomic backwardness. It was directly governed by the Governor of Nagaland with the assistance of a Regional Council that in turn elected members who represented it in the State Legislative Assembly (Article 371A, Govt of India 2011d). This arrangement lasted until 1974, when Tuensang was fully assimilated into Nagaland. Until then Nagaland's Legislative Assembly had 40 directly elected members. In 1974, Tuensang was assigned 20 newly created assembly seats, whereas the existing 40 seats were redistributed between the then districts of Kohima and Mokokchung.

generally lie within 5 per cent of electorate sex ratios.

Second, on three occasions—1977, 1989, and 1998—assembly and parliamentary elections were held in the same year.<sup>23</sup> In 1977, the parliamentary election was held in March and the assembly election in November. The size of the parliament electorate was 4,73,257 and of the assembly electorate 4,03,454—a substantial difference of 70,000 (Table 7). However, the size of the parliamentary electorate decreased from 4,73,254 in 1977 to 4,60,110 in 1980. This suggests that in the parliamentary election held in March 1977, the electoral roll might have been inflated due to a delay in summary revision to drop the names of deceased and (out)-migrant electors or due to the registration of bogus electors, which were verified and deleted only before the assembly election that was held in November 1977. In 1989 too, there is a substantial difference (2,30,595) between the assembly and parliamentary electorate sizes. Though both elections took place on the same day, it seems that the reduction in the minimum age requirement was followed only in the parliamentary election because of which those aged between 18 and 21 became eligible to vote.<sup>24</sup> In 1998, the assembly and parliamentary electorates were identical in size.

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<sup>23</sup> Electoral rolls are prepared for each state assembly constituency separately. Except in the state of Jammu and Kashmir, where voter eligibility differs between parliamentary and assembly elections, the electoral roll of a parliamentary constituency aggregates the electoral rolls of its constituent assembly constituencies (ECI 2006). Hence, the assembly and parliamentary data for the same year can be compared.

<sup>24</sup> The effect of reduction in age may not reflect immediately in electorate size, especially in a state where the majority of population lives in rural areas. This is because it is the voters' *duty* to find out whether his/her name has been registered (ECI nd1), and in places where the population is sparsely distributed over remote areas, the spread of information (about the revision of electoral rolls) may take time. Even otherwise, electoral officers may not be easily accessible. However, the magnitude of the difference in assembly and parliamentary electorate sizes for the 1989 elections suggests that, for some reason, the revised minimum age for voting was only implemented in the parliamentary election. Two facts enhance the plausibility of the preceding claim. One, from the next assembly election onwards, the sizes of the electorate in assembly and parliamentary elections are comparable. Two, in 1989 Nagaland was not the only state where there was a serious mismatch between the two rolls. In 1989, assembly and parliamentary elections were held together in eight states, including Nagaland. While the size of the electorate was same in both elections in Sikkim, it was larger in parliamentary elections in Uttar Pradesh, Mizoram, Nagaland, Andhra Pradesh, Tamil Nadu, and Goa, whereas it was smaller in parliamentary elections Karnataka. The difference is less than 1 per cent in all but three cases (Tamil Nadu—12 per cent, Mizoram—20 per cent, and Nagaland—40 per cent).

Table 7: Electorate size and voter turnout in assembly and general elections in Nagaland

Year	Electorate			Voter turnout (%)		Comments
	Assembly election (A)	General election (G)	Electoral rolls (E)	Nagaland	India	
1974 (A)	412068	-	-	74.35	-	2 candidates won unopposed (from Akuluto and Tobu)
1977 (G)	-	473257	-	52.83	60.49	Some North Eastern states recorded higher turnout than Nagaland
1977 (A)	403145	-	-	83.26	-	1 candidate won unopposed (from Southern Angami II)
1980 (G)	-	460083	-	63.90	56.92	Some North Eastern states recorded higher turnout than Nagaland
1982 (A)	596453	-	-	74.44	-	-
1984 (G)	-	594062	-	66.46	63.56	Some North Eastern states recorded higher turnout than Nagaland
1987 (A)	581953	-	-	85.65	-	-
1989 (A)	582416	-	-	85.65	-	-
1989 (G)	-	813011	-	74.71	61.95	Turnout higher than all other North Eastern states except Tripura
1991 (G)	-	814836	-	77.07	56.73	Turnout highest in the North East
1993 (A)	810127	-	-	91.53	-	1 candidate won unopposed (from Northern Angami I)
1996 (G)	-	874518	-	88.32	57.94	Turnout highest in the North East
1998 (G)	-	926569	-	45.41	61.97	Turnout lowest in the North East due to the boycott call given by the Naga Hoho
1998 (A)	926569	-	-	78.95	-	43 candidates won unopposed due to the Hoho's boycott call
1999 (G)	-	955914	-	76.25	59.99	Turnout higher than all other North Eastern states except Sikkim

Year	Electorate			Voter turnout (%)		Comments
	Assembly election (A)	General election (G)	Electoral rolls (E)	Nagaland	India	
2003 (A)	1014841	-	-	87.85	-	-
2004 (G)	-	1041433	-	91.67	58.07	Turnout highest in the North East
2007 (E)	-	-	1286694	-	-	-
2008 (A/E)	1302266	-	1300507	86.19	-	-
2009 (G/E)	-	1317729	1317725	89.99	58.19	Turnout highest in the North East
2010 (E)	-	-	1327224	-	-	-
2011 (E)	-	-	1339559	-	-	-

*Notes:*

1. The figures prior to (after) 1993 for Assembly and 1989 for parliament correspond to the population aged 21 (18) years and above.
2. In Nagaland, the last intensive revision of Electoral Rolls was carried out in 2005.
3. The figures reported for India correspond to the average turnouts in general elections.
4. The size of the electorate of Nagaland is calculated by aggregating the electorate of all the 60 assembly constituencies. Since the ECI report for 1974 does not mention the size of the electorate of Tobu constituency, where only one candidate contested election, we have used the 1977 figure. For the same reason, the size of the electorate for the constituency 'Northern Angami I' is not available for 1993 and has been substituted by the average of the size of the electorate in 1989 and 1993. The share of these two constituencies in total electorate of the state was, however, less than 2 per cent.

*Sources:*

1. Election reports from [http://eci.gov.in/eci\\_main1/ElectionStatistics.aspx](http://eci.gov.in/eci_main1/ElectionStatistics.aspx)
2. Electoral Rolls from [http://eci.gov.in/eci\\_main/eroll&epic/ER0112011.pdf](http://eci.gov.in/eci_main/eroll&epic/ER0112011.pdf), [http://eci.gov.in/eci\\_main/eroll&epic/ER0112010.pdf](http://eci.gov.in/eci_main/eroll&epic/ER0112010.pdf), [http://eci.gov.in/eci\\_main/eroll&epic/ER0112009.pdf](http://eci.gov.in/eci_main/eroll&epic/ER0112009.pdf), [http://eci.gov.in/eci\\_main/eroll&epic/ER0112008.pdf](http://eci.gov.in/eci_main/eroll&epic/ER0112008.pdf), [http://eci.gov.in/eci\\_main/eroll&epic/ER0112007.pdf](http://eci.gov.in/eci_main/eroll&epic/ER0112007.pdf).

Third, two assembly (1987 and 1989), two parliamentary (1998 and 1999), and an assembly and parliamentary (1998 and 1999) elections were held within a year or two of each other (Table 7). The difference between the numbers of electors in the 1987 and 1989 assembly elections was merely 463, which strengthens our suspicion (see second point above) that obsolete rolls were used in the latter elections. The size of the electorate increased by 29,345 between 1998 parliamentary/assembly and 1999 parliamentary elections, which is not implausible.

Fourth, the number of voters should always be less than or equal to the size of the electorate. Of the 60 assembly constituencies and the only parliamentary constituency being examined for the period 1974–2009, the number of voters never exceeded the size of

the electorate, except in one case: in the 1993 Assembly Election to Tenning constituency, where the number of women voters (8595) exceeded the women electorate (8534).

The preceding discussion indicates that even though the size of the electorate may not provide accurate point estimates of the adult population prior to the 1990s, the trend estimated with suitable control variables over the entire period can be compared with the growth of the corresponding census population because electoral rolls are revised periodically, though belatedly. In fact, the Election Commission itself carries out comparisons of this kind to weed out bogus voters. For instance, Nagaland's Chief Electoral Officer pointed out that 'there has been an 'abnormal increase' of more than 3 per cent in the electorate during the special revision in most of the constituencies [in the late 1990s], contrary to the national average annual increase of 2.5 per cent' (Prakash 2007: 2167).

#### 4.3.2 The census population and the electorate

If there is no systematic omission of eligible voters from the election process, then until (after) 1988 the ratio of the size of the electorate to the census population estimate should approximate the proportion of population aged 21 (18) years and above.<sup>25</sup> Moreover, Nagaland does not have a large migrant population (Section 3). So, the ratio should remain stable or change smoothly across election years unless one or both the data series are flawed. In other words, the ratio would show abnormality with respect to its trend as we approach the years in which the electoral roll and/or the census estimates were flawed.

Figure 3 shows the ratio of the size of the electorate to the census population in election years. On average, the size of the electorate during 1974–2011 is 62 per cent of the census population.<sup>26</sup> Though the ratio has not behaved smoothly over time, it dropped below the average only twice. It was 57 per cent in the 1987 Assembly Elections and 52 per

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<sup>25</sup> In fact, some scholars and policy-makers have even suggested substituting the census with electoral rolls (Black 1985, for instance).

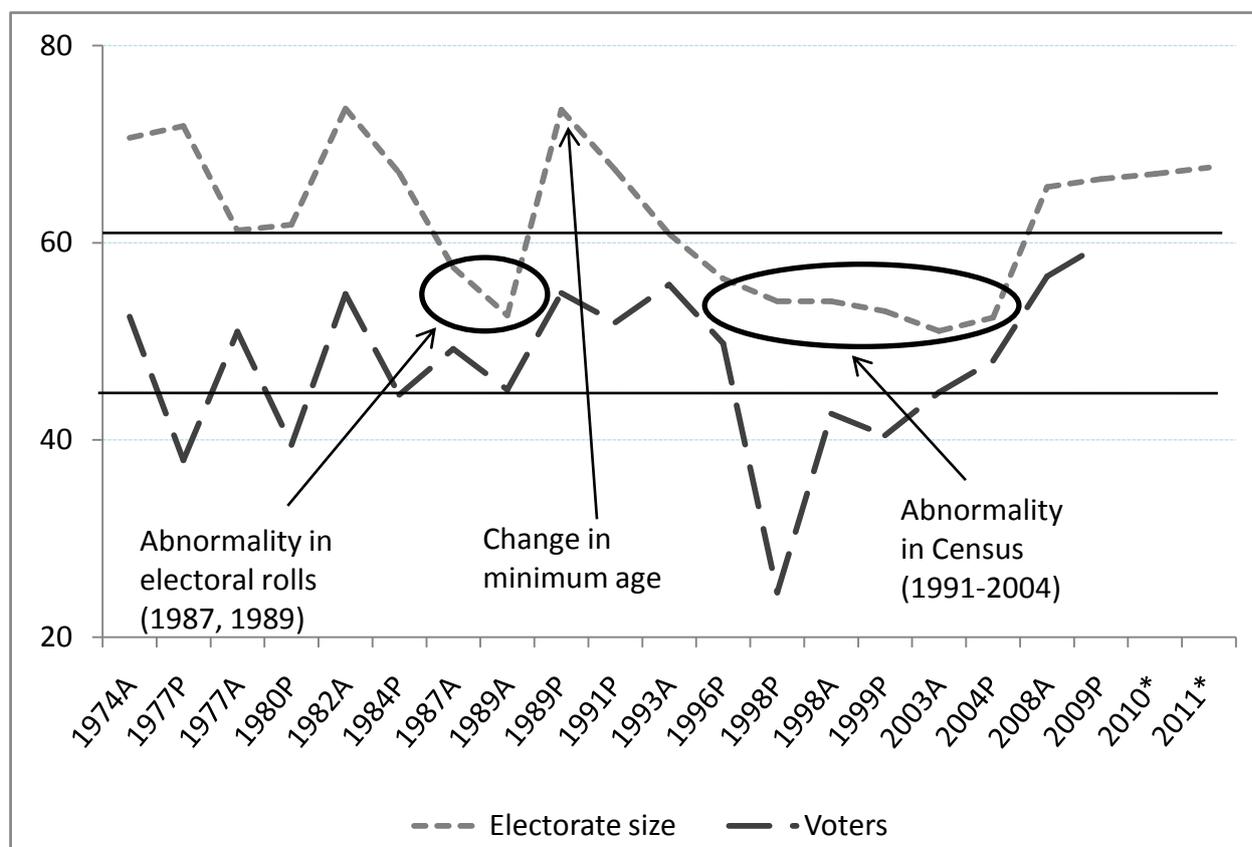
<sup>26</sup> Note that the census population has been interpolated for elections held in the inter-censal years. Also, it would be more appropriate to use the Census population aged 21 (or 18) years and above as the denominator. But since the age profile of the 2011 Census population is not yet available, we have used the entire population in the denominator. Unless the age profile of the population has changed substantially, using the 21/18+ years population in place of the entire population will only shift the curves in Figure 3 upwards without affecting the overall trend.

cent in the 1989 Assembly Elections. Since the size of the electorate in both these elections was smaller than the size in the preceding assembly elections (Table 7), the abnormality in the ratio could possibly be attributed to a discrepancy in the respective electoral rolls (see Section 4.3.1 for details). The other period when the ratio fell below 62 per cent is 1991–2004. Since the analysis in Section 3 indicated substantial discrepancy in the censuses conducted in 1991 and 2001 (Table 3), and there is a high degree of internal consistency in the electoral rolls of this period (Table 7), the abnormality for this period could be attributed to discrepancy in the corresponding censuses. Further, as we move closer to 2001, the census year with maximum discrepancy, the ratio approaches 50 per cent.<sup>27</sup> Recall that analysis of schooling data also highlighted discrepancies in the censuses of 1991 and 2001 (Section 4.2) and now another external source corroborates the conclusions regarding discrepancies in the 1991 and 2001 Censuses identified through internal consistency checks (Section 3).

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<sup>27</sup> If we correct the Census population series for the discrepancy estimated in Table 3, then the ratio falls below the 60 per cent threshold only in two assembly election years: 1989 (there was some problem in revision of electoral rolls, also see Footnote 24) and 2003 (the first election held after the Census with the greatest discrepancy).

**Figure 3:** Ratios (in per cent) of electorates and voters to census population in Nagaland



Notes:

1. Suffixes 'A' and 'P' to the years, respectively, indicate assembly and parliamentary elections and \* indicates that there were no elections in 2010 and 2011. The figures for 2010 and 2011 are based on summary revisions of the Electoral Rolls for the respective years.
2. The solid horizontal lines correspond to the averages of ratios of the size of the electorate (62) and voters (46) to census population, respectively.

Sources: Table 7, Govt of India (1976a: 8–9; 1987a: 46–47; nd1; nd2).

We can also validate the census data by comparing trend growth rates of the size of the electorate and the corresponding census population. Since the census estimates include migrants, the growth of the census population may exceed the growth of the electorate if the population of migrants grew faster than the rest. However, as discussed in Section 3, the share of migrants in the state is too small to have a considerable impact on the growth of the population. We estimate the annual growth of the size of the electorate using three different series: assembly, parliamentary, and both assembly and parliamentary elections. In the first (assembly election) case, we use the following semi-log trend function:

$$\ln(\text{Electorate size}_t) = \alpha + \beta t + \gamma_1 D_{1993} + \varepsilon_t \quad (5)$$

where  $D_{1993}$  is a dummy which assumes a value of unity 1993 onwards, when the change in minimum age for voting (from 21 to 18 years) became effective. In the second (parliamentary) case, the following equation is estimated in which the dummy for 1993 is replaced with a dummy for 1989:

$$\ln(\text{Electorate size}_t) = \alpha + \beta t + \gamma_1 D_{1989} + \varepsilon_t \quad (6)$$

In the third (assembly and parliamentary combined) case, we estimate the following:

$$\ln(\text{Electorate size}_t) = \alpha + \beta t + \delta \text{Type} + \gamma_1 D_{1989} * \text{Type} + \gamma_2 D_{1993} * (1 - \text{Type}) + \varepsilon_t \quad (7)$$

where 'Type' is a control for type of the election (Type = 1 for parliamentary and 0 for assembly elections), and  $D_{1989}$  and  $D_{1993}$  are the dummies as defined in Eqs (6) and (5), respectively. Here the dummy 'Type' is different from the year dummy. The latter is a unit step function-type dummy typically used to test structural change in a time series that allows us to control for the change in minimum voting age requirement. The coefficient  $\beta$  provides an estimate of instantaneous rate of growth. But,  $(\exp^\beta - 1) * 100$ , the compounded (over a period) annual growth rate given instantaneous rate of growth (Gujarati 2005: 180), is used for comparison with the census growth rates.

The regressions indicate that the growth in the size of the electorate has been less than 3 per cent per annum irrespective of the specification of the trend equations, which implies a 2.4-times increase in population in three decades compared to the much higher growth rate recorded in the Census (4.42 per cent per annum) that leads to 3.66 times increase in population between 1971 and 2001 (Table 8).<sup>28</sup> We can conclude that the Census

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<sup>28</sup> We also estimated Eq (7) by replacing the size of the electorate with the number of voters. Between 1974 and 2009, the annual growth rate of voters was 3.43 per cent (Table 8), which would imply a population increase of 2.75 times in three decades. However, the growth so computed will also capture the effect of changes in voter turnout. If, for example, the voting rate shows a general upward trend due to, say, deepening

overestimates the adult population of the state. Note that our analysis presumes that electoral data is not inflated. But if the electoral data has been inflated by vested political interests, then the gap between the population estimates based on the Census and electorate will grow.

**Table 8:** Electorate size and voters: results of the trend regressions

Variable/ description	Electorate			Voters	Census (20+ years)
	Assembly	General	Both	Both	
Trend	0.0287***	0.0241***	0.0263***	0.0337***	
Year 1989 dummy		0.205**			
Year 1993 dummy	0.141				
Type of election dummy			0.356	-0.235*	
Dummy89*General			0.185**	0.258	
Dummy93*Assembly			0.167**	0.113	
No of observations	9	10	19	19	
R-square	96.64	97.75	97.03	89.27	
Time period	1974-2008	1977-2009	1974-2009	1974-2009	1971-2001
<i>Compounded Annual Growth Rate</i>	<i>2.90</i>	<i>2.44</i>	<i>2.66</i>	<i>3.43</i>	<i>4.42</i>

*Notes:* 'Type of election dummy' assumes the value of 1 for General (Parliament) Elections and 0 for Assembly (State Legislature) Elections. The annual growth rate for census (20+ years) population is estimated by applying the compound growth rate formula for the census years 1971 and 2001. \*\*\*, \*\* and \*, respectively, indicate a coefficient statistically significant at the 1, 5 and 10 per cent levels of significance.

## 5. Could the Census be faulty?

So far we have shown that the Census of Nagaland is neither internally consistent, nor can it withstand external scrutiny. This casts doubt on the reliability of the Census. The question, then, is if there are genuine reasons because of which the Census exercise may have been compromised. We examine three such possibilities here: (1) insurgency and war; (2) the gradually increasing reach of the Census; and (3) enumeration errors. But before we do so, it is worthwhile to note that the 2011 Census is possibly the first reliable census in the case of

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of democracy or ethnic polarisation in elections (see discussion in [Section 6.2](#)), then the growth of voters may not be comparable with that of the population. This, in fact, has been the case in Nagaland, which has recorded growing turnouts over the years ([Table 7](#)). Also, note that the growth rate of the electorate estimated above is much lower than the migration-adjusted population growth rate ([Table 9](#)).

Nagaland. The government canvassed the support of the opposition parties, the bureaucracy, and a wide range of organisations of churches, civil society, students, tribes, and village elders (Govt of Nagaland 2009b; Assam Tribune 2009). The government impressed upon all concerned that a reliable and accurate census is necessary 'for proper planning of development and also establishing political and social harmony' (Assam Tribune 2009; Indian Express 2011).<sup>29</sup>

## 5.1 Insurgency and war

Unlike other parts of the country where the Census was cancelled during periods of extreme political disturbances (for instance, Assam in 1981 and Jammu and Kashmir in 1951 and 1991 [Govt of India 1953b: 3; Govt of India 2011a: x]), in Nagaland the Census was never cancelled or postponed despite the four decades-long armed insurgency that subsided only in 1999. But one could argue that if during a period an area was out of bounds for security forces then it could have been inaccessible to census enumerators as well. After all, even six decades after India's independence the reach of the National Sample Surveys—one of the most comprehensive, reliable and widely used sources of information on Indian households—is restricted to 5 kilometres from bus routes in rural areas of Nagaland (Govt of India 2012a: 5), while a number of other surveys completely ignore Nagaland.<sup>30</sup>

Five decennial censuses have been conducted since 1963, when the state of Nagaland was formed, and of these at least three overestimated the population (Table 3). Insurgency was not intense at the time of the 1971, 2001, and 2011 Censuses. But the 1981 and 1991 Censuses may have been affected by insurgency. Moreover, even the 1971 Census

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<sup>29</sup> Former finance minister of Nagaland K. Therie has questioned even the 2011 Census (Times of India 2012b). According to his estimates, the latest census overestimates the state's population by about half a million.

<sup>30</sup> In fact, most national level surveys either do not cover the smaller states of the North East India (for instance, various waves of *Rural Economic and Demographic Surveys*) or cover them irregularly (for instance, *District Level Household and Facility Survey* did not cover Nagaland in 2007-08). Even the surveys that cover the region regularly do not have sufficiently representative samples to generate reliable estimates for the smaller states (*National Sample Surveys* and, until recently, *SRS*). A similar picture emerges if we look at non-demographic surveys. For instance, '[a]bout 48 per cent of the area could not be covered by systematic geological mapping on 1:50,000 scale owing to inaccessibility' (Geological Survey of India 2011: 2, 76; emphasis added).

had to be rushed due to mid-term parliamentary elections and the Bangladesh War, which most affected Eastern and North Eastern India (Govt of India 1975a: 1).<sup>31</sup> But disturbed conditions during censuses due to insurgency or war are unlikely to explain the sustained increase in population growth rates over three decades. If anything, reduced coverage due to disturbances should have resulted in under-enumeration<sup>32</sup> and then a greater increase in population in the first post-disturbance census. So, the 2011 Census, the first Census of Nagaland to be conducted in the absence of war and insurgency,<sup>33</sup> ought to have recorded an increase in the population growth rate rather than an absolute decrease in the population.

## 5.2 Expanding reach of Census

It can be argued that the reach of census operations must have expanded gradually across the remote areas that fall under the present state of Nagaland. Between 1881 and 1901, the Census covered only the western parts of the districts of Kohima and Mokokchung and, thereafter, the whole of these districts. Tuensang, where permanent administrative presence dates to only 1948 (Govt of Nagaland 2009a: 4), was not covered until 1951 (Eaton 1984: Table 2). In 1951, the Census covered only 129.5 sq km of Tuensang. In the next census, the coverage increased to 5356.1 sq km of Tuensang and the population increased from 7,025 in 1951 to 134,275 in 1961 (Govt of India 2011a: x).<sup>34</sup> It appears that even the

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<sup>31</sup> One could alternatively argue that until 1971 Nagaland was under the jurisdiction of the Ministry of External Affairs and, therefore, the Census could not be conducted properly leading to under-enumeration (Toshi Wungtung, personal communication). But we do not have independent verification for this claim.

<sup>32</sup> During our field work civil society organisations and census officials suggested that in some earlier censuses— pre-2011, according to some and pre-2001, according to others—complete enumeration was not possible in strongholds of partisans of independence (for instance, parts of districts along the Myanmar border like Phek and Tuensang), who did not want to legitimate the state by cooperating with state officials. But anecdotal evidence suggests that such instances of non-cooperation are not sufficient to explain the abnormally high growth rate in 2001. In this context it is worth recalling that non-cooperation with civil authorities did affect some of the earlier censuses in other parts of the country. For instance, as pointed out by Natrajan (1972: vii), during the British period there was ‘under-enumeration of population in the Census of 1931 mainly in Gujarat due to [the] non-cooperation movement’.

<sup>33</sup> The durability of the ceasefires of 1997 and 1999 between the government and insurgents, which may have influenced the peace and stability of the state during the Census, was not unambiguous in 2001. However, even if the 2001 Census is treated as the first insurgency-free census, it can only explain the high population growth rate recorded in that year but not the negative growth rate recorded in the 2011 Census.

<sup>34</sup> Even for the districts that were covered by the colonial censuses we only have estimates: ‘Due to

1961 Census did not cover Tuensang entirely because later census records show its area to be 6014 sq km (Govt of India 1984a: 13) even though no new areas were added to it. Thus, the expanding reach of the state and, by implication, the Census could have resulted in higher recorded population growth rates initially. For instance, between 1951 and 1961, Nagaland's population grew by 73.35 per cent according to the Census (Govt of India 2011a: 165), by 79.29 per cent according to Eaton (1984: 18), and by 14.07 per cent according to Sharma and Kar (1997: 77). But the adjusted growth rate for the state (after excluding Tuensang) is only 18.10 per cent.<sup>35</sup> In the subsequent decades all the sources agree that the growth rate was 39.88 per cent and growth rates increased steadily until 2001 (Figure 1).

But, in any case, the expanding reach of the Census can explain only one spike in the growth rate, which should decrease subsequently with socioeconomic progress (growing income and access to better healthcare and education; also see Footnote 3). Also, had incomplete coverage been responsible for the high rate of growth, the abnormality would not have been pervasive across all major ethnic and socioeconomic groups and districts of the state (see Agrawal and Kumar 2012d for details). Therefore, the expanding reach of the Census and consequent reduction in gross omission can explain neither the *sustained* increase in the growth rate of Nagaland's overall population over three decades until 2001, nor the subsequent decline.

### 5.3 Enumeration errors

Almost everyone we met during our fieldwork suggested that until 2001 it was very common for people to get enumerated (in the Census) and enrolled (in the electoral rolls) in each location where they had some property or at least in the town where they were currently staying as well as their native village. This was possible because of the structure of

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non-availability of Census data the figures for the decades, from 1901 to 1951 have been estimated for the Districts of Kohima, Phek, Wokha, Zunheboto, and Mokokchung of Nagaland. Estimation however could not be done for Tuensang and Mon as they were not fully censused prior to 1961.' (Govt of India 2011b: xii)

<sup>35</sup> The Census population estimates for Nagaland in 1951 and 1961 are 205,950 and 369,200, respectively. After excluding Tuensang in both the years the corresponding estimates are 198,925 and 234,925, respectively, which implies a decadal growth of 18.10 per cent. Sharma and Kar (1997: 77) adjust only the 1961 population.

village authority in Nagaland (see Agrawal and Kumar 2012d for further discussion). So, multiple counting inflated the rural population in 2001, which declined in 2011 possibly because, given the vigilance of the Census department and community monitoring, people could not report themselves in more than one places.

Note that if this line of argument is taken to its logical conclusion, we can arrive at the true population of the pre-2011 Census years by addressing the possibility of double counting of rural–urban migrants. Two points are worth noting in this regard. First, in cases of counting of the same person (a migrant) in more than one location, fewer people will be reported in more than two locations than the people reported in two locations and so forth. Second, some of the migrants will be reported only in one location. Together, the two suggest that a reasonable approximation of over-count due to multiple counting can be obtained if we subtract the internal in-migrant as well as the out-migrant populations of the state from the state’s total population. The aforementioned correction results in the decadal growth rate of 53, 62, and 63 per cent during 1971–81, 1981–91, and 1991–2001, respectively (Table 9). The growth rate continues to be high; suggesting that double counting is insufficient to explain the abnormal growth.

**Table 9:** Growth (in per cent) of population with and without adjustment for migration

Census decade	Migration-adjusted growth rate		Observed growth rate	
	<i>Decadal</i>	<i>Annual</i>	<i>Decadal</i>	<i>Annual</i>
1971–1981	53.42 (40.14)	4.37 (3.43)	50.05	4.14
1981–1991	61.68 (51.01)	4.92 (4.21)	56.08	4.55
1991–2001	62.60 (57.32)	4.98 (4.64)	64.53	5.11

*Notes:* ‘Migration-adjusted growth rate’ for a decade is arrived at by subtracting the number of intra-state in-migrants and out-migrants from total population of the state in each of the years. Computation of growth rate adjusted in the aforesaid manner requires the adjustment of total population in both initial and terminal years. Figures in parenthesis correspond to the case in which only the latter (terminal) year population (for instance, 2001 in case of 1991–2001) is adjusted for the migrants.

*Sources:* Figure 1; computations based on Govt of India (1976b; 1977; 1985b; 1988a; nd1; nd2)

## 6. Beyond Demography

In Sections 3 and 4, we established that the trend of population growth in Nagaland

between 1971 and 2011 was abnormal and cannot be explained by births, deaths, or lawful migration. Then, in Section 5, we argued that enumeration errors due to political disturbances during earlier censuses, the expanding reach of the Census, and/or double counting cannot explain the dramatic changes in Nagaland's population. So, the puzzle posed by Nagaland's demographic somersault persists. This section examines two alternative explanations of changes in Nagaland's population—unaccounted international migration and manipulation of the Census due to competition for state resources.

### **6.1 Unaccounted International Migration**

In Section 3, we ruled out a political–geographic explanation based on lawful intra-national and international migration. We also noted that the Census data does not allow us to investigate the contribution of illegal/unaccounted international migration. Recall that immigration in the state is predominantly intra-state in nature and the proportion of migrants from outside the state is too small to affect the growth rate of overall population (Table 4). Now if unaccounted international migration is to be blamed for the abnormal increase in the population reported in the Census, then we have to assume that unaccounted international migrants get reported as natives rather than as migrants. There are two possibilities here that are not mutually exclusive and are, in fact, in all likelihood complementary. First, international immigrants lured by opportunities in the state might try to influence officials and politicians to record them as natives in official records. Second, given the intensity of ethno-political competition driven by the numerical strengths of different groups, it is not inconceivable that some indigenous communities might find it beneficial to encourage outsiders—Nagas and non-Nagas—to settle in their respective areas of influence and get them registered as native-born members of their community.

If only intra-national boundaries are considered, then the number of potential settlers belonging to the Naga tribes and related tribes of Arunachal Pradesh and Assam are too few to account for changes in Nagaland's population. In Assam, such population is limited to a few villages (Singh 1998). In Arunachal, the concerned population is limited to a

few small tribes of the districts along the Nagaland border, whose population did not register lower growth between 1991 and 2001.<sup>36</sup> Migration of North Manipur's large tribal population related to Nagas could possibly account for a part of Nagaland's unaccounted population (Table 3). But the relevant districts of Manipur—Senapati, Tamenglong, and Ukhrul—recorded very high growth rates<sup>37</sup> despite the out-migration of Kuki tribes due to ethnic conflict. Moreover, we have not come across media or official sources referring to large-scale movement of Naga and related tribes from North Eastern states like Manipur into Nagaland. This leaves us with unaccounted international migration from other countries (Hazarika 2000; Bezboruah 2006: 47; Gogoi 2001; Amarjeet Singh 2009; Sharma and Kar 1991; Rio 2010).

We can group unaccounted international immigrants according to the country of origin—Myanmar<sup>38</sup> and Bangladesh—and identity assumed in India—Naga tribal, non-Naga tribal, and other. While it is commonplace to trace the problem to Bangladesh, Myanmarese immigrants are often ignored because they can easily inter-mingle with kindred tribes (*cf.* Jeermison 2011; Sharma and Kar 1997: 87).<sup>39</sup> There are many Naga tribes in Myanmar (Shimray 2007: Appendix II). According to one source, until 1991, conflict pushed as many as 100,000 Myanmarese Nagas into Nagaland (Banerjee 1992: 1525; also see Nag 2002: 286 who quotes Banerjee 1992; Lwin 2003, more recently, puts the number of Myanmarese

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<sup>36</sup> The population growth of all Scheduled Tribes in Tirap—the only district of Arunachal Pradesh bordering Nagaland—was 22 per cent during 1991–2001 (Govt of India nd1; nd2) compared to the overall population growth rates of India and Arunachal Pradesh—21.54 and 27 per cent, respectively (Govt of India 2011a).

<sup>37</sup> The growth rate of all Scheduled Tribes in Ukhrul was 32 per cent during 1991–2001 and the Tangkhul tribe in the district registered a growth of about 40 per cent (Govt of India nd1; nd2). The growth of tribes in Tamenglong district was 28 per cent (Govt of India nd1; nd2). The population growth in some divisions of Senapati district was, in fact, so high that the government had to reject the Census and report estimated figures (Govt of India 2011a).

<sup>38</sup> Racially similar migrants from Bhutan, Nepal, and Tibet are either too few (Govt of India nd1; nd2) or their presence is not contentious (Govt of Nagaland 2009a: 24). They should not be reluctant to register as genuine international migrants. But note that India has a large indigenous Nepali-speaking population and Nepali is recognized by the Eighth Schedule of the Constitution as a major language of India.

<sup>39</sup> We do not have the information to cross-check the census data of the countries of origin of unaccounted international migrants in Nagaland. The Census of Myanmar is unreliable for tribal areas. Bangladesh's population is almost hundred times larger than that of Nagaland. So, even if the entire abnormal growth in Nagaland's population is due to Bangladeshis, it will not reflect in the Census of Bangladesh. Even otherwise, it may be difficult to trace the abnormal change to Bangladesh. Bangladeshi migrants generally settle among ethnically close communities close to the Bangladesh-India border before moving deeper into the Indian territory after acquiring the readily available insignia of Indian citizenship, which makes them that much more difficult to detect.

immigrants at more than 100,000).<sup>40</sup> The figure cited by Banerjee (1992) is about one-tenth of the Naga population of Myanmar, estimated at about one million (Assam Tribune 2012; Kojiam 2001).<sup>41</sup> Myanmarese immigrants have no incentive to register themselves as non-Naga and non-tribal in a state dominated by Naga tribes when they can easily pass as Nagas. In this context, it is noteworthy that the Anghs, traditional village heads based in the Mon district of Nagaland, continue to enjoy traditional authority over a number of villages across the border in Myanmar (Govt of Nagaland 2011). So, it is not unexpected that in the case of conflict kindred Myanmarese Nagas take shelter in Konyak villages in Nagaland, where their Anghs live. Also, it is well-known that the NSCN (Khaplang), the second most important underground organisation in Nagaland, which is headed by a Myanmarese Naga, enjoys support from sections of Naga tribes close to the India-Myanmar border. This is one of the main reasons why the rival Tangkhul-dominated NSCN (IM) has been unable to monopolise the Naga underground. So, the indigenisation of Myanmarese Nagas who cross the border is not inconceivable. Indeed, between 1981 and 1991, the decadal population growth rate of Konyaks—the largest tribe in the districts along Myanmar border—was a phenomenal at 63 per cent, which contrasts sharply with their growth in the preceding decade (16 per cent) (Table 10). Similarly, during 1981–91, the population of Mon district—their stronghold

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<sup>40</sup> We also checked if the Myanmarese immigrants in Nagaland have been counted as refugees in, say, United Nations High Commissioner for Refugees (UNHCR) reports (since the early 1990s). But we have not been able to find any reliable information regarding Myanmarese Naga refugees. A publication at the UNHCR website (Refworld 2004) inter alia estimates that 1,000 Myanmarese Naga refugees crossed into Nagaland during two weeks of January 1992.

<sup>41</sup> But it bears noting that a number of our interviewees in Nagaland (as well outside observers) disagreed with the possibility of such a large influx from Myanmar on grounds of carrying capacity of the eastern districts of the state. One of our interviewees from the eastern districts pointed out that there was an influx during the late 1980s and early 1990s; but most people returned to Myanmar. We need to probe the issue of Myanmarese immigration further because (a) Sumanta Banerjee (1992), our source, did not withdraw his claim (personal communication), (b) many of the interviewees did not deny the possibility of an equally significant Myanmarese tribal influx into Mizoram and southern Manipur, which are comparable in terms of area as well as population, and (c) while denying the possibility of a large Myanmarese influx, some interviewees simultaneously stressed that 100,000 if not more Bangladeshi Muslims have settled along the western *fringe* alone. In other words, there seems to be a mismatch between the way Myanmarese and Bangladeshi influxes are viewed. This reminds of a similar pan-Indian phenomenon. The Bangladeshi Hindus and Christians are invisible in India compared to their Muslim counterparts. The argument that helps overlook the former group is that they are persecuted in their home country and India has a special responsibility being the successor state to British India. A similar argument is made in Nagaland with regard to Myanmarese Nagas, who are viewed as 'Eastern' Nagas—Myanmar being incidental to their identity.

bordering Myanmar—grew 57 per cent.<sup>42</sup>

In the absence of authoritative official figures on the number of unaccounted international immigrants, we can only indirectly verify popular estimates. As discussed above, Myanmarese Nagas have no incentive to identify themselves as non-Nagas or non-Christian in a Christian Naga-majority state or to join the ranks of miscellaneous Nagas as they can join the closely related Naga tribes in the Tuensang division.<sup>43</sup> In short, if Myanmarese Nagas are being indigenised, then among other things the population of Christians and Naga tribes close to the international border should show abnormality around, say, 1991.<sup>44</sup> Tables 10 and 11, respectively, show the changes in the populations of different tribes and religions in Nagaland. During 1971–81, the growth rate of other groups exceeded that of the Naga tribes; the converse holds for the period 1981–2001 (Table 10). The growth of the Naga population accelerated from 42 per cent during 1971–81 to 63 per cent in 1981–91 and to 69 per cent in 1991–2001. Similarly, during 1971–81, all the major religions, including Christianity, recorded very high growth rates (Table 11). The high growth rate of Christianity can be partly accounted for by the rapid decline in the population of those with ‘Other’ religions. Because of its large population base, the growth of Christianity stands out as it contributed to a large increase in the overall population of the state. But the large base also makes the growth of Christians less susceptible to changes due to migration. Although there is an abnormality in both Naga and Christian populations after the 1981 Census (viz., 1991 Census), the abnormality persists in 2001 as well. Thus, the empirical evidence neither clearly supports, nor does it entirely rule out the possibility indigenisation of Myanmarese Nagas, who may have entered the state in the late 1980s.

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<sup>42</sup> We do not have separate figures for Mon for the decade of 1971–81, when it was part of Tuensang. The population growth rate of undivided Tuensang increased from 33.68 per cent in 1971–81 to 65.44 per cent in 1981–91 (Govt of India 1973b; 1984a; nd1).

<sup>43</sup> Note that a majority of the state’s population is Naga (87.48 per cent in 2001) (Table 11) and 99 per cent of them follow Christianity.

<sup>44</sup> But note that both the Naga and Christian populations could show abnormality for a variety of other reasons, particularly, in the districts close to the Myanmar border. For instance, fertility rates could be higher among the socio-economically backward Christian Nagas of these districts.

**Table 10:** Tribal population in Nagaland

Classification	Population				Decadal growth		
	1971	1981	1991	2001	1971-81	1981-91	1991-2001
All Population	516449	774930	1209546	1990036	50.05	56.08	64.53
All Scheduled Tribes	457602	650885	1060822	1774026	42.24	62.98	67.23
Garo	934	1473	2272	1582	†	54.24	-30.37
Kachari	4329	7212	8244	7807	66.60	14.31	-5.30
Kuki	6206	9839	16100	20195	58.54	63.63	25.43
Mikir	519	440	703	106	†	†	†
Naga etc.	445266	630970	1029589	1741692	41.71	63.18	69.16
Angami	43994	62557	97408	124696	42.19	55.71	28.01
Ao	74016	104578	165893	231823	41.29	58.63	39.74
Chakhesang and Pochury	43438	60771	99205	150554	39.90	63.24	51.76
Chang	16075	22375	30370	60885	39.19	35.73	100.48
Khiemnungan	14338	18079	21665	38137	26.09	19.84	76.03
Konyak	72319	83652	136458	243758	15.67	63.13	78.63
Lotha	36638	58030	82586	148210	58.39	42.32	79.46
Phom	18019	24426	65339	115389	35.56	167.50	76.60
Rengma	8174	15312	32368	50966	87.33	111.39	57.46
Sangtam	19315	29016	51975	83714	50.23	79.13	61.07
Sema	64918	95312	150780	241806	46.82	58.20	60.37
Yimchunger	14146	22054	35461	75983	55.90	60.79	114.27
<i>Chirr#</i>	692	1560	2067	19	†	32.50	†
<i>Tikhir#</i>	2800	3587	9177	10377	28.11	155.84	13.08
<i>Makware##</i>	2501	612	863	††	-75.53	†	†
Zeliang	13883	21084	36012	71871	51.87	70.80	99.58
Other Nagas	0	7965	11962	93504	†	50.18	681.67
Unclassified/ unspecified	348	951	3914	2644	†	†	-32.45

*Notes:*

1. 'Other Nagas' include 'Unclassified Nagas', whereas 'Unclassified/ unspecified' include 'Generic Tribes etc' (whose population was only reported in 2001 Census and was 2644) and other miscellaneous communities.
2. † The growth rate has not been computed as the population in one of the terminal years of the reference period is less than 1000. †† Not reported in 2001. ‡ Chirr and Tikhir are dialects of Yimchunger (Lewis 2009). ‡‡ The status of Makware is disputed. Lewis (2009) reports it as a dialect of Khiemnungan, while one of our informants claimed that it is a dialect of Yimchunger.

*Sources: Govt of India (1975b; 1988b; nd1; nd2)*

**Table 11:** Religious Composition of Nagaland's Population

Year	Total	Christians	Hindus	Muslims	Others	Rest
<i>Population</i>						
1971	516449	344798	59031	2966	108159	1493
1981	774930	621590	111266	11806	27852	2413
1991	1209546	1057940	122473	20642	5870	7653
2001	1990036	1790349	153162	35005	6108	4601
<i>Population shares</i>						
1971	100	66.76	11.43	0.57	20.94	0.29
1981	100	80.21	14.36	1.52	3.59	0.31
1991	100	87.47	10.13	1.71	0.49	0.63
2001	100	89.97	7.70	1.76	0.31	0.23
<i>Decadal growth rates</i>						
1971-81	50.05	80.28	88.49	298.04	-74.25	61.62
1981-91	56.08	70.20	10.07	74.84	-78.92	217.16
1991-2001	64.53	69.23	25.06	69.58	4.05	-39.88

*Notes:* (i) 'Rest' includes Buddhists, Jains and Sikhs, (ii) 'Others' include those who do not belong to any of the religions mentioned in the table.

*Sources: Govt of India (1973a; 1988c; nd1; nd2)*

As regards Bangladeshis, they should be reporting themselves as native non-Naga; it is indeed difficult to believe that thousands of relatively dark-complexioned, Bengali-speaking plainsmen from Bangladesh could get registered as Nagas in the Census without being noticed in a state populated largely by fiercely territorial Mongoloid tribes. However, a recent criminal case has highlighted the indigenisation of Bangladeshi Muslims as Nagas.

[T]he ‘audacity’ of the [assault] incident, served as another reminder about the ‘danger’ of ‘patronising’ migrant mians [Bangladeshis] by Nagas who employ them as cheap labour . . . local Nagas were not only employing mians as cheap labour but even ‘accommodating’ them as ‘citizens’ in most ‘rural villages of Dimapur district’ . . . it has become a rule that some local Nagas who have adopted mians as ‘sons and daughters’ and naming them with Naga names . . . such adopted mians have proved effective in ‘pitting one Naga against the other’ and thrive in Dimapur under the ‘patronage of local dadas [strongmen]’. (Nagaland Post 2012; also Times of India 2012a)<sup>45</sup>

The above news excerpt is among the spate of media reports that refer to the deepening roots of immigrants through indigenisation on the sly – through adoption or inter-marriage, something we heard often during our fieldwork. The following throws more light on the process of indigenization.

As a result of rising intermarriage, a community called ‘Sumias’ has reportedly emerged in the state . . . The ‘Sumias’ are the children of intermarriage between the Sumi Naga tribe and immigrants . . . In this regard, a student leader asserted: “These children are also confused about the religion they should adopt. In most cases, they are given Naga names. So, they cannot be detected by the authorities concerned when they apply for advantages like jobs, which are meant only for the indigenous people of Nagaland”. (Amarjeet Singh 2009, p. 22-23, 40)

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<sup>45</sup> But this concern is not new. More than a decade ago *Nagaland Page* (10 August 1999) complained in similar terms (Shimray 2007: 36): ‘In Dimapur, all the rickshaw pullers are Bangladeshis and *they are highly aggressive lot in a land where the non-tribals are living a second class living* (emphasis added). All these are signs of a growing and highly visible problem – the virtual colonization of Nagaland by Bangladeshi Muslims, locally known as *Miyan*. But sadly in Nagaland very little attention is being given to this problem, which is much more serious than even the sovereignty issue.’

The Bangladeshi influx could potentially lead to one or more of the following abnormalities.

First, it could cause abnormality in the Muslim population despite potential indigenisation as Nagas because indigenised immigrants are 'confused about the religion they should adopt' (Amarjeet Singh 2009: 40). There has indeed been explosive growth in the state's Muslim population since 1971 (Table 11). The Chief Minister of the state had voiced concerns over the increase in 'the influx of illegal Bangladeshi immigrants' and the increase in the numbers of madrasas and mosques (Rio 2010). But given its relatively smaller base, it is easy to show that the sharp increase in the Muslim population is not one of the major sources of high population growth rates in Nagaland.

Second, it could reflect in the form of abnormal increase in the population of dominant tribes along the Assam border, which have the capacity and opportunity to absorb migrants—notably, Semas of Dimapur and Lothas. But the growth rate of both tribes was lower than that of all Naga tribes during 1981–91 and comparable to that of other major tribes in the state in the subsequent decade (Table 10). There was a different kind of abnormality for the Sema population during 1991–2001, though: while the tribe head count indicates that their population increased by 60 per cent (Table 10), the population of Sema language speakers shrunk by 38 per cent (Govt of India 2008b: Statement 7).

Third, illegal Bangladeshi immigrants could allegedly claim to be Bengali/Assamese Muslims of Indian origin from the state of Assam or, to a lesser extent, Hindi-speaking Muslims from other states. If this is true, and in addition it is also true that such immigrants are being enumerated and reported as migrants from other parts of India, then the population of Bengali/Assamese speakers should show an abnormal increase. But the Bengali-speaking population grew by 54 per cent during 1991–2001, from 38280 to 58890, comparable to the rate at which other language groups grew, and is insufficient to explain the overall high growth rate. Also, note that the share of Bengali speakers in the state's population has declined between 1991 and 2001 (Table 14). Similar observations hold regarding Assamese. In short, as shown in Table 14 (and Table 15), (1) the population of speakers of Assamese and Bengali has not shown an abnormal increase; (2) the population of Muslims is growing relative to the population of speakers of Assamese and Bengali; and

(3) the ratio of Muslims to the population of Hindi speakers shows a gradual increase (Table 14).

Fourth, it could reflect in an abnormal increase in the population of Dimapur, which continues to be the most preferred destination for migrants, for two reasons: (1) it is the only district not completely beyond the Inner Line; and (2) it is the economic hub of the state and generates the maximum employment outside the public sector. But Dimapur's population growth has not shown any abnormality with respect to its trend.

Fifth, it could reflect in the Unclassified/Other Naga population, who do not belong to any specific Naga tribes.<sup>46</sup> Between 1991 and 2001, the population of 'Other Nagas' increased by more than 600 per cent from 11,962 to 93,504 (Table 10), almost entirely in districts bordering Assam. 'Other Nagas' are predominantly Christians (about 98 per cent) (Govt of India nd2). It is worth noting that Sema dominated Zunheboto district is the only district away from Assam order that records a significant increase in the population of 'Other Nagas' (Table 12). Since the growth of all major tribes was already high, the abnormally high growth of 'Other Nagas' indicates that immigrants, more than direct absorption into the larger tribes, could possibly be getting absorbed under this miscellaneous category. But we do not of any conclusive evidence in this regard.

Finally, note that if as alleged in a number of news reports it is indeed the case that there is a large Sumia community (Sema mother and Bangladeshi father), then the sex ratio of Semas should have dropped faster than the rest of the Naga tribes. But a comparison of sex ratios of Semas with the rest of the Naga tribes rules out this possibility (Table 13). In fact, the sex ratios also suggest that it is not the case that the Sema tribe has excess girls, which in turn could have made them preferred targets of Bangladeshi Muslims in search for a toehold in a tribal-dominated state.

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<sup>46</sup> Note that we did not check for this in the case of the Myanmarese influx, because the absolute growth of Unclassified/Other Nagas is negligible along the Myanmar border (Table 12).

**Table 12:** Changes in 'Other Nagas' population

District	Population		Decadal growth rate
	1991	2001	
Tuensang (1971)	32	6466	†
Mon	0	2358	
Tuensang	32	4108	
Mokokchung (1971)	1034	51131	5374.41
Mokokchung	601	20279	
Zunheboto	0	13099	
Wokha	433	17753	
Kohima (1971)	10896	35907	229.54
Kohima and Dimapur	10894	33440	
Phek	2	2467	
<b>Nagaland</b>	<b>11962</b>	<b>93504</b>	<b>681.67</b>

Notes: Please see notes to Table 10. † The growth rate has not been computed as the population in one of the terminal years of the reference period is less than 1000.

Sources: Govt of India (nd1; nd2)

**Table 13:** Sex ratio of Select Groups in Nagaland

Census year	All Naga tribes	Sema tribe	Muslims
1971	976	988	290
1981	957	972	498
1991	947	968	605
2001	942	962	614

Notes:

1. Sex ratios are computed as number of females per 1000 number of males.
2. 'All Naga tribes' include 'Other Nagas' but not 'Unclassified/ unspecified' (please see notes to Table 10).

Sources: Govt of India (1975b; 1984b; 1988b; nd1; nd2)

**Table 14: Ratios of Select Language groups to Overall Population and Religious groups in Nagaland**

Census Year	Ratio of populations								
	Assamese speakers/all population (%)	Bengali speakers/all population (%)	Hindi speakers/all population (%)	Naga languages speakers/all population (%)	Bengali speakers/Muslims	Bengali and Assamese speakers/Muslims	Hindi-speakers/Muslims	Hindi speakers/Hindus	Bengali, Assamese and Hindi speakers/Hindus
1971	1.27	1.66	3.38	85.72	2.89	5.11	5.88	0.30	0.55
1981	1.62	3.45	3.13	73.05	2.27	3.33	2.05	0.22	0.57
1991	1.09	3.16	3.36	86.96	1.86	2.49	1.97	0.33	0.75
2001	0.84	2.96	2.86	79.88	1.68	2.16	1.63	0.37	0.87

Notes:

1. The population of the following language speakers was less than 10,000 and was not reported in Govt of India (2008b): Chakhesang (1971 and 1981), Chakru/ Chokri (1971 and 1981), Pochury (1971 and 1981), Rengma (1971), Zeliang (1971 and 1981). The population of each of them is assumed to be 10,000 to calculate the total number of 'Naga languages speakers'.
2. Note that the first four columns—where the ratio is computed with respect to the overall population—report percentage shares, whereas the last five columns report absolute ratios.

Sources: Govt of India (1973a;1978b; 1978c; 1978d; 1987b; 1988c; nd1; nd2)

**Table 15: Ratios of Population for Select Social, Religious, and Language Groups in Nagaland**

Census Year	Ratio (in per cent) of populations						
	All tribes/all population	Naga tribes/all tribes	Naga tribes/all population	Naga language speakers/all population	Christians/all population	Naga Christians/all population	Non-Christian tribes/all tribes
1971	88.61	97.30	86.22	85.72	66.76	65.10	22.34
1981	84.17	96.94	81.42	73.05	80.21	76.61	5.80
1991	87.70	97.06	85.12	86.96	87.47	84.43	1.38
2001	89.15	98.18	87.48	79.88	89.97	86.62	1.34

Notes: Please see notes to Table 14.

Sources: Table 11 and Govt of India (1973a; 1975b; 1988b; 1988c; 2008b; nd1; nd2)

Thus, it is not implausible that Myanmar (entering the state from the east) and Bangladeshi (entering from the west) immigrants are being reported as natives. It is now imperative to check whether the available estimates of the unaccounted immigrant population could explain the abnormality observed in the state's population. But in the absence of reliable data on unaccounted international immigration into Nagaland, we have to rely upon the estimates available in media reports and statements of politicians and government officials. The erstwhile Chief Minister Hokishe Sema estimated the number of illegal Bangladeshis in the early 1970s at about 5,000 (Sema 1986: 151). NSCN-IM General Secretary Muivah suggested that there were 200,000 Bangladeshis in Dimapur alone in 1999 (The Northeast Daily 1999), whereas in the same year the then Chief Minister S. C. Jamir claimed that about 60,000 Bangladeshis were illegally staying in Dimapur (Amarjeet Singh 2006). In 2000, the union home ministry's estimate for the whole state was 75,000, whereas three years later in 2003 the state government's corresponding estimate was 100,000 (Amarjeet Singh 2009, The Telegraph 2003). A year later, in 2004, the union home ministry revised the figure to 59,500 (Telegraph 2004). To conclude, a comparison of different sources suggests that in 1999–2004 the lower bound to the estimates of the number of Bangladeshis in the state was between 60,000 and 100,000 (Amarjeet Singh 2009).

In the absence of accurate figures for the build-up of illegal Bangladeshi immigrants inside Nagaland, we assume a doubling of their numbers in each decade; accordingly, in 1991, the overall nativised illegal Bangladeshi immigrant population must have been about 30,000–50,000.<sup>47</sup> From Table 3 we know that the lower bound to the discrepancy (*without* accounting for deaths among those aged 10 years or more) in the 1991 Census population estimate is 128,749. Thus, even lower bound of estimates of illegal Bangladeshi immigration – assuming the immigrants were reported as natives – seems to account for as much as half of the discrepancy observed in the 1991 Census. After accounting for 30,000/50,000 illegal migrants, the decadal population growth rate between 1981 and 1991 reduces from 56.08 per cent (Figure 1) to 52.21/49.63 per cent. However, if we assume that all the

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<sup>47</sup> One could question why we restrict focus to 1991 and 2001, as we have shown in Section 3 that there are discrepancies even in the 1981 Census. There are two reasons for abstracting from 1981. First, the magnitude of the discrepancy revealed by internal consistency check is very small for 1981 (Table 3). Second, external consistency checks using electoral and schooling data suggest that the magnitude of the problem was serious only in 1991 and 2001 (Figures 2 and 3).

60,000/100,000 Bangladeshi immigrants entered Nagaland before (after) 1991, then the adjusted decadal population growth rate would be 48.34/43.18 (56.08/56.08) per cent.

The adjusted growth rate further declines if we account for possible Myanmarese influx. Estimates in this case are even more difficult to obtain due to racial similarity and sympathy for kin divided by the international border. Sumanta Banerjee (1992) cites an unidentified official estimate of 1,00,000. But as noted above (see **Footnote 40**) while almost all our interviewees admitted that the Myanmarese influx, if any, is largely undocumented and understudied, Banerjee's figure is implausible. The alternative estimates suggested by some of our interviewees indicate that at present the numbers could be around 20,000-25,000. It is not clear if all these immigrants came in the late 1980s and early 1990s or in various waves. If we assume that the former scenario is more likely, then the estimate of Myanmarese influx in the late 1980s and early 1990s ranges between 20,000 and 1,00,000 and the corresponding adjusted growth rates for the period 1981–91 are 47.05 and 36.73 per cent, respectively.<sup>48</sup> The unaccounted international immigration-adjusted estimates of population growth rate compare favourably with discrepancy-adjusted growth rates estimated in **Table 3**). But it bears noting that positive results arrived at in this section using anecdotal evidence does not conclusively prove that international immigrants are indeed being indigenized.

## **6.2 Politics as a zero-sum game**

Horowitz's global survey of ethnic conflicts draws attention to the inter-relationship among ethnic conflict, elections, and politicisation of censuses, which reduces politics and census in ethnically divided societies to zero-sum number games. He notes:

As an entitlement issue, the census is a splendid example of the blending of group anxiety with political domination. On the one hand, it is common to encounter anxiety-laden perceptions of fecundity or illegal immigration of competing groups; these produce considerable overestimates of the population of

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<sup>48</sup> In addition to the Myanmarese immigrants, each of these growth rates account for 50,000 Bangladeshi immigrants as well.

outgroups. ... On the other hand, since numbers count in the quest for political domination, the hope of a group is to enlarge its relative share of the population .... Disputes over census results in ethnically divided societies are common .... In a severely divided society, we have seen that an election can become an ethnic head count. Now it is clear that a census needs to be 'won.' So *the election is a census, and the census is an election.* (Horowitz 2000: 194–196, 326; emphasis added)

Horowitz's argument can be referred to as a *political–economic* explanation of manipulation of census, which relates to the Nagaland Chief Minister Neiphiu Rio's claim that inter-community struggles for political representation and public resources were responsible for abnormal population growth recorded in the 2001 Census. Horowitz (2000: 194–196, 326) suggests that in such cases politicisation of the head count can manifest itself in one or more of the following: (1) movements against 'outsiders'; (2) very high voter turnouts; (3) separatism (demands for partition of state); (4) demands for proportional representation in bureaucracy and legislature; and (5) manipulation of census results. The first four manifestations are evident in the case of Nagaland. There have been movements against 'outsiders' in the state (Northeast Today 2012a; Amarjeet Singh 2009; Nag 2002). **Table 7** shows that Nagaland's voter turnouts have exceeded the national average by a wide margin in the past decades. The third, namely, demand for partition, manifests itself as demands for separate states for backward and/or minority ethnic groups like the Eastern Nagas, Zeliangrong Nagas, and Kacharis (Hindustan Times 2011; NENA 2011a). In addition, there has been stiff ethnic competition for quotas in educational institutions and government jobs (NENA 2011a; Sentinel 2012; Assam Tribune 2010; Morung Express 2011; Means 1971). The last—manipulation of census—is demonstrated below first through the admissions of key political players in the state and then through computations based on the last three decennial censuses.

In 2005, Mr. Rio admitted that the population was inflated in the 2001 Census due to struggle for political representation:

All this is because of competition among the tribes, between districts .... *The delimitation commission process [of distributing seats in proportion to population] is also creating problems because some districts are losing seats and Dimapur is*

*gaining five seats.* Mokokchung seats are dropping by three, Phek will have one less and so on. (Hazarika 2005, emphasis added; also see The Assam Tribune 2011; Nagaland Post 2009; Delimitation Commission of India 2008: 50, 1060)

The Naga Hoho, the apex tribal council, admitted as much when it noted that ‘the Census has been a much misunderstood exercise in Nagaland with the people equating it with the electoral roll listing’ (Eastern Panorama 2011). The Director of Census Operations, Nagaland throws more light on the causes of inflation and adds an economic aspect to the political aspect highlighted by Rio:

Many equate it with electoral rolls and saw the decennial Census exercise as an opportunity to ... increase [the] vote bank .... [The d]evelopmental model followed in the State in which allocation of funds ... is made on the basis of population ... naturally led many to try and increase the fund flow into their villages by showing non-existing population and households in the Census records. (Govt of India 2011b: viii)

It bears noting that during the last delimitation of electoral constituencies in the 1970s, two assembly seats were transferred to Dimapur from the hill districts. Since then, the disparity in the sizes of constituencies has grown tremendously. In 2003, the last assembly election before Hazarika (2005) interviewed Rio, the largest constituency Ghaspani I (Dimapur district) had 54,402 voters, whereas the smallest Mokokchung Town (Mokokchung district) had 4,963 voters. This disparity indicates the excessive political power wielded by voters in the hills. Since most ethnic communities are geographically concentrated, the disparity in voting power gives an idea of the scale of inter-community disparity and the potential for ethnic conflict due to delimitation between the groups favouring status quo and those demanding rectification of imbalances. Until the late 1990s, conditions were not conducive for the growth of the private sector and the state was the biggest actor in Nagaland’s economy; these intensified the competition for public

resources.<sup>49</sup> In a state generally lacking in economic development, Dimapur, the only plains district of the state, was the locus of competition because historically it has been the most developed district and transport hub of Nagaland.

Now it is understandable why the Chief Minister believes the conflict between Dimapur district and the hill districts was the driving force behind the manipulation of census. The hills–plains dichotomy is coterminous with the Naga–non-Naga divide. Our analysis shows that based on the 1991 Census, the 2002 Delimitation would have transferred five seats to the district of Dimapur (Table 16).<sup>50</sup>

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<sup>49</sup> Nagaland continues to be a special category state that receives as much as 90 per cent of its plan assistance as grants from the central government. In 2006–07, central grants and loans and debt from RBI, etc. accounted for 86.36 per cent of the state’s receipts (Govt of Nagaland nd).

<sup>50</sup> The Delimitation Commission had awarded nine seats to Dimapur, which is equivalent to a gain of four seats compared to five seats as per our calculations (see Annexure to the letter of Sumit Mukherjee, Under Secretary, Delimitation Commission, dated 4 August 2005 addressed to the Commissioner of Nagaland) (*The Chakhesang Public Organisation & Ors. vs. Union of India & Ors.*, W.P. No. 67 of 2006: 48, 80–81). The difference of one seat can be explained by the fact that we have used the population above 18 years, whereas the Delimitation Commission has used the entire population in its calculations. Since Dimapur has a large migrant population compared to other districts and most of these migrants are economic migrants (and are, therefore, more likely than not to be above 18 years of age), Dimapur’s share in the state’s above-18 years population exceeds its share in the overall population.

**Table 16:** Estimated number of seats and loss therein in State Legislative Assembly (SLA)

Characteristic	Dimapur	Rest of the state
Existing seats in SLA	5	55
<b>Census Year 1991</b>		
Population (18+)	97768	575803
Population share	0.15	0.85
Projected seats in SLA	9	51
Loss of seats	-4	4
<b>Census Year 2001</b>		
Population (18+)	175579	931394
Population share	0.16	0.84
Projected seats in SLA	10	50
Loss of seats	-5	5
Growth of total population (1991-2001)	73.66	62.95
<b>Census Year 2011</b>		
Population (18+)	215774	886469
Population share	0.20	0.80
Projected seats in SLA	12	48
Loss of seats	-7	7
Growth of total population (2001-2011)	22.89	-4.77

*Notes:* 'Existing seats in SLA' are the number of seats in the present SLA allotted on the basis of the 1971 Census. 'Projected seats in SLA' for a census year is the number of seats estimated using the 'Population share' from the corresponding census. 'Loss of seats' for a census year is the difference between 'Existing seats' and 'Projected seats in SLA' for that year. For 2011, detailed population estimates by age are not yet available hence the same is derived assuming the share of population aged 18 years and more in 2001.

*Sources:* *Delimitation Commission of India (2008)* for 'Existing seats in SLA' and *Govt of India (nd1; nd2)* for 'Population (18+)'.

So, threatened by the possibility of loss of political representation, the hill tribes inflated their numbers in the 2001 Census; the Dimapur-based tribes also inflated their population. While hill districts like Tuensang and Wokha were able to increase their seats, the hill districts as a whole did not gain from inflation. Since the tribes were not all equally successful at false enumeration, the Census triggered conflict and litigation (for instance, Chakhesang Public Organisation & Ors. vs. Union of India & Ors., W.P. No. 67 of 2006; Telegraph 2008). In 2008, an Ordinance deferred delimitation in Nagaland (and Manipur, Assam, and Arunachal Pradesh) to until after the first census after 2026, i.e., 2031 (Govt of India 2008). So, after 2008 there was no incentive to inflate population count in Nagaland. Moreover, the government was alert to the possibility of subversion of its data collection exercises.

As pointed out earlier, a sample survey in 2009 revealed that population fell across the hill districts, where the 2001 population was heavily inflated (Nagaland Post 2009). This was confirmed later in the 2011 Census that recorded a negative growth rate of 5 per cent in the hill districts, whereas growth remained positive in Dimapur (Table 16). In other words, the deflation in Nagaland's 2011 population is restricted entirely to the hills. So, while the inflation in the 2001 Census can be attributed to the expected loss of political representation due to the impending delimitation, the deflation of population in the 2011 Census too is related to the inflation in the preceding decade insofar as only the hills witnessed a negative growth rate. Interestingly, if delimitation is conducted as per the 2011 Census, then Dimapur will gain seven seats at the expense of the hill districts.

In Table 3, we showed that after accounting for discrepancies Nagaland's population had grown at the decadal rate of 39.47 per cent during the 1981–91 decade. Since socioeconomic correlates of fertility continued to improve (Table 1) a decrease rather than further increase in growth rate was expected in the next census decade (1991–2001). Assuming that the entire increase in the population growth rate during 1991–2001 over and above the discrepancy-adjusted growth rate observed in the preceding decade can be attributed to the politically-motivated manipulation of the Census (i.e., the actual population growth rate in 1991–2001 was equal to the adjusted growth rate for 1981–91), the true population in 2001 should have been 1,686,957. (If we adjust this figure for Bangladeshi immigration, then the true population would lie between 1,716,957 and 1,786,957.)<sup>51</sup> This revised estimate for Nagaland's population in 2001 is close to erstwhile Manipur Chief Minister Radhabinod Koijam's estimate of 1.6 million (Koijam 2001). Under the above assumption, the discrepancy in the 2001 Census works out to be 303,079 (or, 2,73,079 and 2,71,079, respectively, if adjusted for Bangladeshi immigrants), which is a lower bound to the actual discrepancy because improvements in socio-economic conditions, by reducing fertility, should have translated into a lower population growth rate

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<sup>51</sup> The estimates of the number of Bangladeshi immigrants vary between 60,000 and 100,000. The immigrants could have entered into the state's territory either entirely before 1991 or continuously. In the latter case, it is assumed that the immigrant population doubles every year. Thus, the following four scenarios are possible: (i) 100,000 immigrants, all before 1991, (ii) 60,000 immigrants, all before 1991, (iii) 50,000 immigrants each in the pre- and post-1991 periods, and (iv) 30,000 immigrants each in the pre- and post-1991 periods. The growth estimates given above correspond to the extreme scenarios.

during 1991–2001 compared to 1981–91. The discrepancy calculated here is comparable to the estimate of discrepancy for 1991–2001 (viz., 345,073) computed based on internal consistency checks (Table 3).

## 7. Concluding Remarks

Developing countries like India need information on the socioeconomic division of their populations to design redistributive policies. And, given their obsession with global rankings, they also need information to compare themselves with other countries. But India's official statistics are not free of errors (Agrawal and Kumar 2012a). The Census of India is a case in point. This paper examined a largely ignored surprise thrown up by the 2011 Census of India, one of the biggest data collection exercises in the world, which shows that after decades of abnormally high growth the population of Nagaland decreased in absolute terms during 2001–11. This is unprecedented in the history of independent India.

Internal consistency checks revealed that the Census overestimated the state's population between 1981 and 2001. We also verified the Census estimates using information on birth and death rates from other surveys like NFHS and SRS, the child population from gross school enrolment data, and the adult population from the archives of the Election Commission of India. But the Census population estimates did not withstand external scrutiny either. We concluded that births, deaths, and lawful migration alone are insufficient to explain Nagaland's demographic somersault and, therefore, other factors need to be examined. We then ruled out enumeration errors due to insurgency and war, the growing reach of administration and the Census in remote areas, and multiple counting as potential explanations.

So, there are genuine reasons to believe that earlier censuses overestimated Nagaland's population. We then explored other explanations of abnormalities in the Census of Nagaland. Our analysis indicated that the discrepancy in the census population estimate of 1991 could possibly be accounted for mostly by unaccounted international immigrants from Bangladesh and, possibly, Myanmar. On the other hand, a substantial portion of the discrepancy in the 2001 Census could possibly be attributed to the deliberate inflation of

population figures to avoid potential loss of seats due to the impending delimitation of electoral constituencies.

While we discussed only the case of Nagaland in the context of politicisation of the Census, the Naga-dominated hill districts of the neighbouring state of Manipur also witnessed manipulation of its Naga population in the 2001 Census (Laithangbam 2004). Furthermore, Nagaland was not the only state in which the 2002 Delimitation proved to be contentious—it could not be conducted in the North Eastern states of Arunachal Pradesh, Assam, or Manipur, and could not be implemented in Jharkhand although it was conducted. In all these states, the government was forced to defer delimitation to 2031 ('on the basis of the first census after the year 2026'). Future work should examine the political economy within which official statistics are generated and disseminated, which in turn will help better understand the interaction between census and electoral processes and the process through which the manipulation of census could be affected.

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