

Quality of Demographic Dividend among the Scheduled Tribes Living in North Eastern States of India

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Abstract

Disparity in demographic dividend exists among the states in India. After independence, many policies and programmes are being implemented for upliftment of the Scheduled Tribes (ST), the status of these need critical examination. This study wants to analyse the age-structural transition and examine the quality of demographic dividend among the Scheduled Tribes (ST) living in North Eastern India (excluding Sikkim). The study finds that Scheduled Tribes in seven North Eastern states have increased with more than 10% average decadal growth rate from 1961 to 2011 and the highest increase is registered in Nagaland (496%) followed by Manipur (468%). This population is weighted towards childhood; its share has been declining and less than benchmark of 40% child population which marks point for transition. Except Meghalaya, the share of child population has drastically declined. The shift in share of child population is absorbed mainly by the working age population (WAP), especially early and middle WAP for these states. This population is in transition stage; working age population is more than 55%; dependency rate decreasing (65%) whereas crude literacy rate is increasing continuously during 1961-2011.

Keywords: Demographic dividend, Transition, Working Age Population

1. Introduction

The change in age structure is a critical dimension of population dynamics. There is an important stage in the demographic transition before

population ageing, in which fertility declines leading to reduce proportions of dependent children, while the share of population in the working ages rises, and the population share of elderly remains low. This phase can last for many decades, and the rate of increase in the support ratio during this period gives rise to what is called the 'demographic dividend' (Lee, 2012). According to Bloom, et. al. (2003), the emerging structures have implications for both development and policy in general, as there has been unprecedented accelerating growth over the last three decades. In most part of the world, today, the age-structural transitions are being produced primarily by changes in fertility resulting from the demographic transition (Pool and Wong, 2005).

Pool and Wong (2005), Bloom, et.al (2003) and Coale-Hoover (1958) perceive societies as going through a series of broad age-structural changes over a long period of time. These phases are determined by the relative weights of each of the major life-cycle stages, measured by the sizes of the young, intermediate or older ages. At an early stage, the population is disproportionately weighted towards childhood; at the middle phase, the working ages dominate; and at the late state, the oldest ages dominate. The demographic dividend arises when the society is at a middle phase and dependency ratios are low. Bloom, et. al. (2014) define the demographic dividend as the economic growth potential that results from a shift in age-structure of the population, mainly when the share of the working-age population (15 to 64) is larger than the non-working-age share of the population (14 and younger, and 65 and older).

The demographic dividend phase in a country may last for many years. As Lee (2012) states, it can last for many decades, and the rate of increase in the support ratio during this period gives rise to the dividend. UN (2014) estimates and projections show that the dividend phase of China is just about to get over; that of Costa Rica may have another decade or two; India somewhat more than that; and that Nigeria's dividend phase is projected to last through 2100 (Lee, 2012). According to Registrar General of India (2011), at present, India is identified as undergoing the demographic transition with median age over 23 years and a dependency ratio of just a little above 0.4, implying that 'demographic dividend' in India is under certain changes. Interestingly, there is disparity among the states in India in attainment of the dividend phase and socio-economic growth (Aiyar and Mody, 2011). This even varies more for North Eastern States and among various social categories- Scheduled Tribes (ST), Scheduled Caste (SC) and others living in the country (Mohanty and Ram, 2011).

Indian population constitutes- tribal, non-tribal and scheduled castes. The 2011 census records a 10.5 crore Scheduled Tribes (ST) population throughout the country. Broadly Scheduled Tribes (ST) inhabits in two distinct geographical areas in India- the Central India and the North- Eastern Area (Hasnain, 1996). As recorded in 2011 census, more than 50% Scheduled Tribes(ST) population is concentrated in Central India and 12% in the North East region. North East India refers to the geographical region consists of eight states of India namely Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim. Marbaniang and Warjri (2010), state that the region is having more than 213 tribal communities almost equal number of non-tribal communities and more than 175 languages.

After independence, although many policies and programmes (mainly related to health and education) are being implemented for upliftment of the Scheduled Tribes (ST), yet the success of these policies are frequently found to be critically examined in many forums. The questions that are mainly raised are: if the Scheduled Tribes (ST)s are really better placed and their status improving over the years? Are they placed in better jobs/ works? Do they have better qualification and skills to reach the top jobs? The answers to these questions require specific studies targeting the Scheduled Tribes (ST) alone.

Based on this background, this study wants to analyse the age-structural transition and examine the quality of demographic dividend among the

Scheduled Tribes (ST) population living in North Eastern states of India (excluding Sikkim).

2. Methodology

The study is a descriptive one and the data used for analysis are collected from secondary sources. In India, main source of information on Scheduled Tribes population is the reports and tables of the decennial censuses conducted by Office of the Registrar General of India (RGI). After independence, for discharging constitutional obligations, RGI has been collecting data on Scheduled Tribes population. RGI data has two parts- before and after independence. Before independence or 1951 census: Scheduled Tribes data available were limited to specific individual communities, castes and tribes, limited to group totals for Scheduled Tribes and no uniform definition was followed to distinguish tribal. Since 1951 census, Scheduled Tribes populations have been enumerated strictly in accordance with The Constitution (ST) Order, 1950 and its subsequent amendment.

From 1961 census, the detail information of the social, economic, demographic and educational characteristics relating to each Scheduled Tribes are available separately.

Scheduled Tribes (ST) data collected from 1961 onwards in censuses are being used in the study for better comparability. As the age distribution in the data used in census are not uniform; hence, instead of defining the working age ratio as a share of population aged between 15-64 years; we define it as the share of population aged between 15-59 years, a group for which there is consistent data. Further two more adjustments are made to the population data on account for creation of new series from 1961-2011. First, in 1961, there were no separate state of Mizoram, Meghalaya and Arunachal Pradesh. These states were carved out of Assam later. Hence, considering their geographical coverage, a consistent data series have to be made [similar to 1991-2011 censuses] for these states and Assam. While preparing the data set for the state of Mizoram, the populations living in Mizo Hills district have been considered and for Meghalaya the population living in United Khasi & Jaintia Hills district and Garo Hills districts has been considered. For the state of Arunachal Pradesh, the population living in North East Frontier Agency (NEFA) was considered during 1961-1971. Also for Arunachal Pradesh, the population in 1961 includes population of that portion of NEFA, where all India census schedule was not canvassed for 297853 (persons), 147100 (male) and 150753 (female) and these population have been

considered as Scheduled Tribes for the state as the region is tribal dominated. Finally, the population of Assam is presented without Mizo Hills, United Khasi & Jaintia Hills, Garo Hills districts and NEFA during undivided period. Second, to make a consistent data set in various age groups, the available broad age group-wise data for Scheduled Tribes for 1961-1971, the detailed age group-wise analysis for all population of respective states and all-India are being used (see foot note).

2.1 Measures Used in Analysis

The measures used in the study are : population growth rate, (percentage share in various age groups, share in working age group ,dependency ratios, Crude literacy rate and Working population ratio.

3. Results and Discussions

3.1 Scheduled Tribes Population of Seven NE States

As per MOTA (2016) record, the seven North Eastern states are presently having 29 Scheduled Tribes (ST) in Assam [15 ST in the autonomous districts of Karbi Anglong and North Cachar Hills and 14 ST in the State of Assam including the Bodoland Territorial Area District and excluding those autonomous districts], 16 ST in Arunachal Pradesh, 34 in Manipur, 5 in Nagaland, 17 in Meghalaya, 15 in Mizoram and 19 in Tripura.

Scheduled Tribes population in seven NE states increases during 1961-2011 and the highest increase is registered in Nagaland (496%) followed by Manipur (468%). The increase is 334% for Assam, 314% for Arunachal Pradesh, 312% for Meghalaya, 322% for Mizoram and 276% for Tripura during 1961-2011. The 2011 census has registered the highest Scheduled Tribes population of 38, 84,371 in Assam and least population of 8, 39,310 in Mizoram among seven North Eastern states. The share of Scheduled Tribes to total population is highest for Nagaland (87%) followed by Mizoram (77%), Arunachal Pradesh (67%), Meghalaya (67%), Manipur (41%), Tripura (27%) and Assam (12%) in 2011.

Overall the Scheduled Tribes population in seven NE states are increasing continuously (except 2001-2011 in Nagaland) during 1961-2011 with more than 10% average decadal growth rate.

3.2 Age Group-wise Analysis of Scheduled Tribes Population Living in North Eastern States

Table 1: Share of ST Population living in seven NE states in Broad Age-group, 1961-2011

Age Group	1961	1971	1981	1991	2001	2011
Assam						
0-14	45.0	46.8	43.7	41.8	37.8	32.2
15-29	25.3	23.9	27.6	28.8	28.7	29.1
30-44	16.9	16.4	16.0	15.9	19.2	21.2
45-59	8.4	8.3	8.7	7.9	9.1	11.3
15-59	50.6	48.6	52.3	52.6	57.0	61.6
60+	4.3	4.6	4.1	5.4	5.4	6.2
Arunachal Pradesh						
0-14	25.7	39.6	40.5	41.6	42.3	37.5
15-29	48.2	24.8	23.1	24.5	25.6	29.2
30-44	19.5	20.4	19.4	16.7	16.8	18.3
45-59	4.7	10.6	11.0	11.0	9.8	9.6
15-59	72.4	55.8	53.5	52.2	52.2	57.1
60+	2.0	4.8	6.0	6.2	5.6	5.2
Manipur						
0-14	42.7	43.0	37.1	34.7	33.8	31.4
15-29	24.9	25.5	31.6	31.3	31.3	31.9
30-44	17.6	16.2	15.9	17.3	18.2	19.0
45-59	9.0	9.3	9.7	10.2	10.4	11.6
15-59	51.5	51.0	57.2	58.8	59.9	62.5
60+	5.5	6.0	5.8	5.7	6.0	5.9
Meghalaya						
0-14	44.0	44.5	43.6	43.6	43.5	41.0
15-29	26.0	25.2	27.0	26.4	26.9	28.9
30-44	17.3	17.0	16.4	16.2	16.7	16.6
45-59	8.4	8.7	8.6	8.3	8.3	8.8
15-59	51.7	50.9	52.0	50.9	51.9	54.3
60+	4.2	4.8	4.5	4.5	4.5	4.7
Mizoram						
0-14	44.8	47.0	41.2	39.6	36.1	32.8
15-29	25.4	23.6	29.8	28.4	30.1	29.5
30-44	16.9	16.2	15.6	16.8	18.2	19.5
45-59	8.4	8.3	8.5	8.7	9.9	11.8
15-59	50.7	48.1	53.9	53.9	58.2	60.8
60+	4.3	4.6	4.9	5.0	5.6	6.4
Nagaland						
0-14	43.3	38.9	38.0	38.2	37.2	35.0
15-29	26.0	27.0	28.8	29.1	32.3	30.9
30-44	17.1	17.8	17.1	16.1	16.0	18.8
45-59	8.9	9.4	9.3	9.5	9.4	9.8
15-59	52.0	54.2	55.2	54.7	57.7	59.5
60+	4.5	6.7	6.8	5.7	4.8	5.4
Tripura						
0-14	43.6	44.4	40.8	41.9	39.4	33.3
15-29	24.7	22.8	26.4	25.2	26.5	29.9
30-44	17.3	16.6	16.5	17.5	18.6	19.1
45-59	9.1	9.4	9.6	8.7	9.1	10.8
15-59	51.1	48.8	52.5	51.4	54.2	59.8
60+	5.3	6.6	6.8	6.5	6.3	6.8

Source: calculated from RGI data

Age group-wise analysis of Scheduled Tribes population reveals (Table 2) that, the maximum share of population for all North Eastern states

(except Mizoram) has shifted from 0-4 years in 1961 to 10-14 years in 2011 (for Meghalaya 0-4 years continued up to 1991, for Manipur maximum share in 10-14 and 15-19 years remained same in 2011, for Nagaland maximum share continuing in 10-14 years from 1991 onwards, for Tripura maximum continuing from 2001. However, for Mizoram it is showing fluctuating trend: during 1961-1981 maximum share was at 0-4 years and from 1991 it is shifted to higher age group and in 2001 the maximum share is at 10-14 years, which again shifted back to 0-4 years in 2011. This is the only population among North Eastern states which has 33% share in 0-14 years and 29.5% in 15-29 years age group in 2011. This may be because of high birth rate experienced by the population during 2001-2011.

3.3 Broad Age group-wise (i.e. 15 years age group) Analysis

From Graph 1, it is seen that the child population (0-14 years) has decreased during 1961-2011, however, the trend of decrease and its share is different for each of the North Eastern states. Based on the child population shares in respective groups and its trend of decrease, the states are grouped into two: Group A: states with less than 35% child population share and Group B: states with more than 35% child population share. Group A states are - Assam, Manipur, Mizoram and Tripura and Group B states are Arunachal Pradesh, Meghalaya and Nagaland on the basis of 2011 census. The child population share is lowest for Manipur (31%) and highest for Meghalaya (41%) in 2011. During 1961-2011, the decrease in share is 12% each for Assam, Manipur and Mizoram (for Assam 15% decrease during 1971-2011 and 5% decrease during 2001-2011) and for Tripura decrease is 10%. For Arunachal Pradesh (2% increase during 1971-2001 and 4% decrease during 2001-2011), Meghalaya (3% decrease) and Nagaland (8% decrease) the decrease is also minimum during 1961-2011.

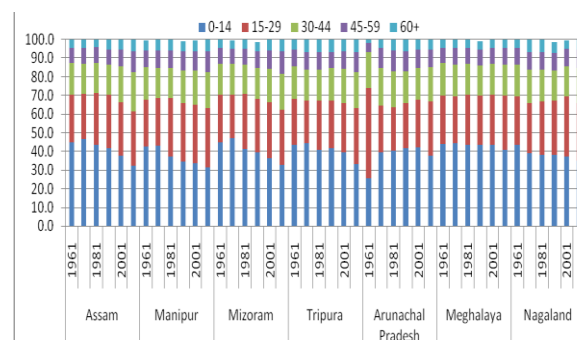
Table 2: Percentage Share of 15-59 years age Group to Total Population

States	All Population			ST Population		
	2011	2001	1991	2011	2001	1991
Assam	60.4	56.6	54.1	61.6	56.9	53.0
Arunachal Pradesh	59.6	55.0	55.1	57.2	52.1	52.6
Manipur	62.6	60.5	57.6	62.4	59.9	59.4
Meghalaya	55.4	53.0	52.3	54.2	51.8	51.5
Mizoram	61.2	59.1	55.5	60.7	58.1	54.7
Nagaland	60.4	58.6	56.1	59.4	57.8	55.5
Tripura	64.4	59.0	54.5	59.8	54.2	51.5
India	60.3	56.9	55.4	57.4	54.3	55.8*
Andhra Pradesh	63.5	60.2	57.0	59.8	54.9	53.3
Himachal Pradesh	63.7	59.7	56.0	62.2	57.9	54.6
Odisha	61.5	58.4	56.5	56.7	55.4	59.4

* average of the states

Source: Calculated from RGI data

Graph 1: Scheduled Tribes Population in seven North Eastern States in Broad Age Groups 1961-2011



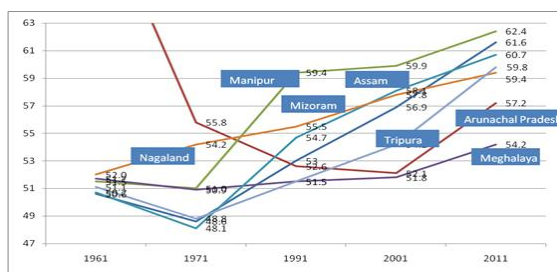
Source: calculated from RGI data

The Scheduled Tribes population of all the North Eastern states (even Group A states) are still weighted towards childhood. However, their shares have been declining and less than the benchmark of 40% child population to mark starting point for transition (characteristics set by Pool, 2006). Except Meghalaya, the share of child population has drastically declined. The shift in share of child population is absorbed mainly by the working age population (WAP), especially early and middle WAP for these states.

Working age population (WAP) share has increased for both groups of North Eastern states (see Graph 2). The share of WAP in 1961 is showing some irregular pattern and this may be because of the approximations applied in the data. Therefore, the comparisons are made from 1971

data. WAP share is maximum for Manipur (62.4%) and minimum for Meghalaya (54.2%) in 2011. For Group A states, WAP is 60% or more and for others it is less than 60% in 2011. Among the WAP also there is variation among the states in attainment of maturity in various groups, namely early mid, mid and late mid age groups. Among WAP majority are young adults: in Group A states - Assam is having lowest 47% young adults of their WAP followed by Mizoram (48.5), Tripura (50%) and Manipur (51%) and in Group B states- Arunachal Pradesh has the lowest young adults 51% of WAP followed by Nagaland (51.9) and Meghalaya (53%) in 2011. However, except Assam and Manipur, all the states are having about 32% share of middle WAP to total WAP in respective states in 2011. For Group A states- late middle age WAP is 18-19% and for Group B states WAP is 16-17% of total WAP in 2011.

Graph 2: Share of 15-59 years age Group ST Population, 1961-2011



Thus, the Scheduled Tribes population in seven North Eastern states are increasing continuously (except Nagaland) during 1961-2011. The share of child population is decreasing to add the share mainly to working age population and marginally to the elder population during 1961-2011. Among all these populations, less than 8% elderly population share establishes that the population is yet to undergo late third or fourth stage of demographic transition. More than 61-70% share of less than 30 years age population for all states establish that the Scheduled Tribes population is very young. These ascertain that Group A states are currently undergoing demographic dividend and Group B states are about to undergo this stage. Therefore, for assessment of productive engagement of the working age population, their engagement and quality are examined.

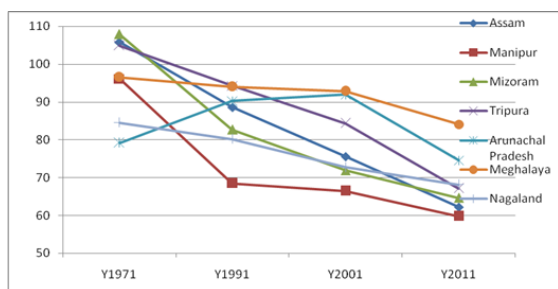
3.4 Dependency Ratios among the Scheduled Tribes living in NE States

Among Scheduled Tribes living in the North Eastern states, the age-structural transition (AST) is significant, as the decrease in child population is leading mainly to increase in working age population and marginally to the aged population. One of the measures of age-structural transition is dependency ratio, which is an important indicator that describes the expected socio-economic burden and responsibilities on the working age population. For North Eastern states, this is decreasing over the years, significantly during 1991-2011. Overall, the dependency ratio of Scheduled Tribes population in Group A states have decreased on an average of 14% from 1991 to 2011 and that of Group B states have decreased on an average of 11% from 1991 to 2011.

Table 3: Dependency Ratio among ST and All Population, 1991-2011

States	All Population			ST Population			Changes in ST
	2011	2001	1991	2011	2001	1991	
Assam	65.4	76.4	84.2	62.2	75.6	88.6	0.177
Arunachal Pradesh	67.5	81.6	80.6	74.6	91.9	90.3	0.188
Manipur	59.4	65.0	71.6	59.8	66.5	68.5	0.100
Meghalaya	80.1	88.4	89.2	84.1	92.9	94.0	0.094
Mizoram	63.2	69.1	77.9	64.6	71.9	82.7	0.101
Nagaland	65.4	70.2	75.9	68.1	72.7	80.2	0.063
Tripura	55.3	69.3	83.1	67.1	84.3	94.3	0.204
India	65.2	75.2	79.4	73.6	83.9	79.1*	

Graph 4: Dependency Ratios among ST living in NE states, 1971-2011



3.5 Working Population Ratios among the Scheduled Tribes of seven North Eastern States

The engagement of working age population is examined by working population ratio (WPR), and its quality is examined through their attainment of literacy and possessing certain skills (technical diploma or certificate not equal to degree and graduate & above). Overall, WPR among Scheduled Tribes in seven states are more than 40% in 2011. WPR among group A states are 44-47% and that of group B states 40% (excluding 49% for Nagaland) in 2011. Also, WPR among rural and male ST are more than their respective urban and female counterpart during 1991-2011. More workers in rural and among male as compared to their respective counterparts in urban and female may be because of definitional problem of workers¹ followed in census. In rural areas, most people are found to perform some work or other daily which may or may not be economically significant, and they are captured as workers in census. Also there may be male recording bias among the population and non-reporting of female as worker, who are engaged in household works.

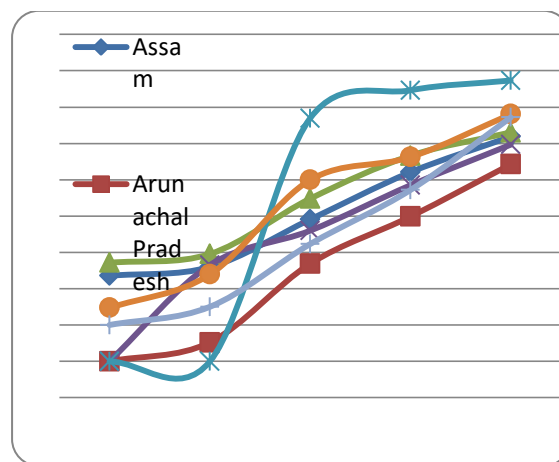
3.6 Crude Literacy Rate among the Scheduled Tribes Population of NE States

The literacy (crude literacy rate (CLR) is the literate as a percentage of the population) among

¹ Work is defined as participation in any economically productive activity with or without compensation, wages or profit. Such participation may be physical and/or mental in nature. Work involves not only actual work but also includes effective supervision and direction of work. It even includes part time help or unpaid work on farm, family enterprise or in any other economic activity. All persons engaged in 'work' as defined above are workers. Persons who are engaged in cultivation or milk production even solely for domestic consumption are also treated as workers. (A person who did not at all work during the reference period was treated as non-worker.)

the ST in the states have increased during 1961-2011. For group A states the CLR is more than 63% and for group B states it is less than 60% (except Nagaland) in 2011. This is almost same as that of state level average and slightly lower (except Mizoram) than all India average literacy rate for all population in 2011. The CLR among ST is better among the population living in urban areas and among male population compare to their respective rural and female counterparts during 1961-2011(see Graph 7). Among the ST population there is wide gap in attainment of education (separately for persons living in rural and urban areas). The NSS (2009-10) shows that, still, more than 10% households are outside the bracket of having educated adult family member.

Graph 7: Crude Literacy Rate among the ST living in NE States, 1961-2011



3.7 Better Educated Persons among the Scheduled Tribes of North Eastern States in 2011

The persons having better skill and education are capable of adding more economic dividend (UN, 2014). Analysis of better educated persons shows that only 1% to 5% better educated among the Scheduled Tribes is living in North Eastern states during 2011. This is lower than state level averages among all population in 2011. Among the North Eastern states, Manipur has the highest and Tripura has the lowest better educated persons in 2011. Among better educated persons also, male and urban preference as compared to their respective counterparts is significant in 2011.

Table 4: Percentage of Better Educated Persons among the ST and all Population in NE States in 2011

State	ST Population			All Populations		
	Pers ons	Ma les	Fem ales	Pers ons	Ma les	Fem ales
Assam	2.0	2.7	1.3	3.4	4.2	2.5
Manipur	5.3	6.6	3.9	8.2	9.6	6.7
Mizoram	4.6	5.4	3.8	4.7	5.5	3.8
Tripura	1.1	1.5	0.7	3.9	5	2.8
Arunachal Pradesh	3.7	5.1	2.4	4.2	5.6	2.7
Meghalaya	2.6	2.5	2.7	3.2	3.3	3.1
Nagaland	4.7	5.4	3.9	4.8	5.5	4
India	1.9	2.6	1.2	6.2	7.6	4.8

Source: Calculated from RGI data

4. Conclusions

Except Census, there is no concrete source of information for Scheduled Tribes in India. Especially on the economic parameters there is no such data source which can be relied upon. Scheduled Tribes population in seven North Eastern states have been increasing from 1961 to 2011 and the highest increase is registered in Nagaland (496%) followed by Manipur (468%). Scheduled Tribes population in seven North Eastern states are increasing continuously with more than 10% average decadal growth rate.

Age group-wise analysis of Scheduled Tribes population reveals that, the maximum share of population has shifted from 0-4 years in 1961 to 10-14 years in 2011 except Mizoram. State wise variation shows that in Meghalaya age group of 0-4 years continued up to 1991, for Manipur maximum share was seen in 10-14 and 15-19 years, which remained same for 2011, for Nagaland maximum share in 10-14 years continued from 1991 onwards. The continuous decrease in share of child population has resulted mainly in increasing the share of working age population and marginally to the elderly population- this establishes that Scheduled Tribes populations are in transition stage. However, the trend is not same for all states.

The continuous increase in working age group population coupled with insignificant population ageing (elderly share is increasing but less than

10%) during 1961-2011- confirms that Scheduled Tribes population is in mid stage of transition.

More than 50% working age Scheduled Tribes population from 1981-2011 by Arunachal Pradesh, Manipur, Meghalaya and Nagaland show that these states have already been enjoying benefits of demographic dividend.

Dependency ratios among Scheduled Tribes decreased considerably for the states during 1991-2011 and these states (except Arunachal Pradesh and Meghalaya) have lower dependency ratio than all-India average of 73.6% in 2011. Working Population Ratio among Scheduled Tribes during 1991-2011 in North Eastern states are not following any trend or pattern unlike continuous increase for all-India average. Among ST in 1991 all-India WPR (ST) was 49% and all NE states had lower WPR (ST) than all-India average.

Crude literacy rate during 2011 has improved as compared to 2001 or earlier censuses for North Eastern states and especially for Scheduled Tribes. The quality of literate or better qualified persons among the literate and all ST are very low at 1-5% (among ST) and 2-8% (among literate ST) in 2011. Overall, better qualified persons are very low as compared to general population of North Eastern States and all India average in 2011.

The Scheduled Tribes population in seven North Eastern states are in transition stages (different for Group A and Group B states) and all are experiencing demographic dividend- working age population is more than 55%. Among the population, dependency rate is decreasing (about 65% for all NE states in 2011) and the crude literacy rate is increasing continuously during 1961-2011. But, Working Population Ratio is less than 50% among the population for all NE states, which is a cause of worry as more than 50% population are unemployed. The increasing working age population among the Scheduled Tribes should be provided with better education and skills so that demographic dividend is actually created, and for that proper policies may be formulated.

References:

- [1] Aiyar S. and Mody A.(2011). The Demographic Dividend: Evidence from the Indian States, WP/11/38, IMF.
- [2] Attanasio, O., Kitao, S. and Violante, G. L. (2006). Quantifying the Effects of the Demographic Transition in Developing Economies. *Advances in Macroeconomics*, 6 (1) pp. 1-44.
- [3] Bisai S., Saha K. B., Sharma R. K., Muniyandi M. and Singh N (2014). "An Overview of Tribal Population in India", *Tribal Health Bulletin: vol. 20 (Special Issue)*, January 2014.

- [4] Bloom, David E. (2011). Population Dynamics in India and Implications for Economic Growth. Working Paper No. 65, PGDA.
- [5] Cervellati, M. and Sunde, U. (2007). Human Capital, Mortality and Fertility: A Unified Theory of the Economic and Demographic Transition. Discussion Paper No. 2905. IZA Germany.
- [6] Das, A. (1999). Socio-economic Development in India: A regional Analysis. Development and Society, Volume 28, Number 2, December 1999, pp 313-45.
- [7] Deshmukh, S. (2012). "Population Growth in India and Its Impact on Indian Economy", International Referred Research Journal, January 2012, vol. III, Issue 28.
- [8] Dhillon P., Ladusingh L. (2013). Working life gains from gain in old age life expectancy in India. Demographic Research, Vol 28, Article 26, April 2013.
- [9] Dyson T. (2008). India's Demographic Transition and its Consequences for Development. Golden Jubilee Lecture Series of the Institute of Economic Growth, Delivered at IEG on 24 March 2008.
- [10] Dyson, T. (2003). India's Population: Past, Present and Future. The Pravin Visaria Public Lecture was delivered at Gujarat Institute of Development Research and held at the Conference Hall of the Ahmedabad Management Association on March 4, 2003.
- [11] Edt. Pool, I., Wong, L. R. and Vilquin, E. (2006). Age- Structural Transitions: Challenges for Development. Committee for International Cooperation in National Research in Demography, Paris.
- [12] Eggleston K. and Fuchs V. R. (2012). The New Demographic Transition: Most gains in Life Expectancy now realised late in Life. Asia Health Policy Program WP #29, Stanford University, Walter H. Shorenstein Asia-Pacific Research Centre, Asia Health Policy Program.
- [13] Galor, Oded. (2012). The Demographic Transition: Causes and Consequences. Discussion Paper series, No. 6334, Forschungsinstitut zur Zukunft der Arbeit.
- [14] Golley J. and Tyers R. (2012). Demographic Dividends, Dependencies and Economic Growth in China and India, Discussion Paper no. 12.03, The University of Western Australia.
- [15] Golley, J. and Tyers, R. (2003). Demographic Dividends, Dependencies and Economic Growth in China and India. Discussion paper no.12.03, The University of Western Australia.
- [16] Jemna D. V. (2012). A Comparative analysis of demographic transition in the Central and Eastern European Countries. Journal of Eastern Europe Research in Business & Economics. Vol. 2012.
- [17] Joe William, Dash A. K., Agrawal P. (2015). Demographic Transition, Savings, and Economic Growth in China and India. Working Paper no.351, IEG, Delhi.
- [18] Ladusingh L. and Narayana M. R. (2011). Demographic Dividends for India: Evidence and Implications Based on National Transfer Accounts. No.292, ADB Economics WP series.
- [19] Lee, R. (2003). The Demographic Transition: Three Centuries of Fundamental Change. Journal of Economic Perspectives, Vol.17, No.4- Fall 2003, pp 167-190.
- [20] Mahesha D. and Shivalingappa B. N. (2012). An Appraisal of Population Characteristics in Union Territories of India. International Journal of Research in Management, Issue 2, Vol.3, (May2012).
- [21] Malmberg and Lindh (2006)
- [22] Marbaniang, D. F. and Warjri, A. L. (2010). Impact of Globalization and Modernity on the Indigenous Tribal Youth of North East India. DBCIC Publications, Nawlai, Shillong, India.
- [23] Mason, A. (2005). "Demographic Transition and Demographic Dividends in Developed and Developing Countries", ESA, UN, 2005.
- [24] Mason, A. (2005). Demographic Transition and Demographic Dividends in Developed and Developing Countries. United Nations Expert Group Meeting on Social and Economic Implications of Changing Population Age Structures, Mexico City.
- [25] Matteo Cervellati, Uwe Sunde (2013). "The Economic and Demographic Transition, Mortality, and Comparative Development", *American Economic Journal: Macroeconomics*, 7(3), 189-225, 2015.
- [26] McNay, K. (2003). Women's changing roles in the context of the demographic transition. Background paper prepared for the Education for All (Gender and Education for All: the Leap to Equality) Global Monitoring Report 2003/4, UNESCO.
- [27] Ministry of Health & Family Welfare, Govt. of India, website: www.mohfw.nic.in.
- [28] Ministry of Law, Govt. of India, website. www.lawmin.nic.in.
- [29] Ministry of Statistics & Programme Implementation, Govt. of India. (2011). Socio Economic Statistics India, 2011. New Delhi, India.
- [30] Ministry of Statistics & Programme Implementation, Govt. of India, website. www.mospi.nic.in.
- [31] Ministry of Tribal Affairs, Govt. of India (2013). Statistical Profile 2013. Website: www.tribal.nic.in.
- [32] Ministry of Tribal Affairs, Govt. of India (2014). Annual Report 2013-14. Website: www.tribal.nic.in.
- [33] Nangia, S. and Kumar A. (2005). "Change in the Age Structure of India's Population (1881-2001)", Dialogue. vol. 6, no. 3 January-March, 2005.
- [34] National Sample Survey Office, MOSPI, Govt of India (2012). Employment and Unemployment Situation among Social Groups in India. New Delhi.
- [35] National Sample Survey Office, MOSPI, Govt of India (2012). Employment and Unemployment Situation in India. New Delhi.
- [36] North Eastern Council, Ministry of DONER, Govt. of India. www.necouncil.nic.in.
- [37] Ranjan A. (2006). "The Age and the Sex Structure of Tribal Population in Central India", Tribal Health Bulletin: vol. 12 (1&2) January & July 2006.
- [38] Registrar General of India, Govt. of India (1965). Census of India 1961, Volume III, Assam, Part V-A, ST and Scheduled Castes [Reprints from Old Census Reports and Special Tables].

- [39] Registrar General of India, Govt. of India (1975). Census of India 1971, Series 1, Paper 1 of 1975 SC and ST.
- [40] Registrar General of India, Govt. of India, website. www.censusindia.gov.in.
- [41] Ronald Lee and Andrew Mason (2006) "What is the Demographic Dividend?" Finance & Development 43(3) September. <http://www.imf.org/external/pubs/ft/fandd/2006/09/basics.htm>.
- [42] Srinivasan, K. (2004). Population and Development in India since Independence: An Overview. Journal of Family Welfare, Vol.50, Special Issue-2004.
- [43] Thakur, V. (2012). The Demographic Dividend in India: Gift or curse? A State level analysis on differing age structure and its implications for India's economic growth prospects. WP series no.12-128, London School of Economics.
- [44] Thomas Lindh and Bo Malmberg. (2007). "Effect of Age structure on investment, saving and trade". Chapters in : Population Ageing, International Transfers and Macroeconomy, chapter 7 Edward Elgar Publishing.
- [45] UNFPA (2014). The State of World Population 2014. New York.
- [46] United Nations Population Fund (UNFPA). (2016). The State of World Population 2016. New York.

End Note

ST Population of Assam

1961 Census: In 1961 census ST population for Assam includes population of Mizo Hills district, Garo Hills district and United Khasi & Jaintia Hills district. However, these districts were separated from Assam afterwards to form Meghalaya and Mizoram state. Therefore, the ST population for Assam was worked out excluding the ST population of these districts. Also, age groupwise ST population is available for Assam in three broad age groups 0-14, 15-44 and 45+ years. Single year age distribution for total population of Assam is available. From single age data, 5 year age groupwise (0-4, 5-9, 10-14, 75+) percentage distributions are calculated. Broad age-group wise percentage shares for total population and ST population are compared. Percentage differences as a correction factor are applied to the percentage distribution (total population) in 5 years groups to calculate the percentage share in 5 years age groups for ST.

1971 Census: In 1971 census the ST population for Assam were worked out excluding the population of Mizo Hills district (now Mizoram). Broad age groupwise 0-14, 15-44 and 45+ year population for total and ST population are available. Single year age distribution of the total population is also available. To work out 5 years age groupwise ST

population the method adopted for 1961 Census is used.

1981 Census: For Assam the 1981 census could not be held owing to disturbed conditions prevailing there at that time (RGI, 1983). To estimate population for the state especially ST population the estimated data available in the report of the Expert Committee on Population Projections set up by Planning Commission, GoI after 1981 census is used. In the report the projected total population of Assam is available in 5 years age groups. Also, the decadal growth rate 25% for the projected total population is available. However, for ST projected growth rate data is not available. Decadal growth rate (25%) is applied in ST population of 1971 to estimate ST population of 1981. Percentage distribution of total population (available) is applied to the estimated ST population for estimating the 5 year age group wise ST population.

1991- 2011 Census: Required data for individual tribes are available.

ST Population of Arunachal Pradesh

1961 Census: Data is available on broad age groups 0-14, 15-44, 45+ years separately for male and female for 5195 population of NEFA. On the other hand, single year age distribution is available for 38705 total populations (including 5195 ST population) of NEFA. Total populations are converted in broad age groups. Compare these distributions for ST and total population and calculate the difference (percentage). Apply the broad age group population of ST to total 5 years age groupwise population with correction factor of adjustment of percentage difference ST and total population. These distributions are applied to 150630-male and 152418-female populations separately to work out the ST population in 5 years age groups.

1971 Census: Data in 3 broad age groups 0-14, 15-44 and 45+ years for total and ST population are available. Single year age distribution of the total population is also available. Detail procedure is same as 1961 census.

1981 Census: Data in 5 year age groups 0-4 to 30-34 and 35-59 and 60+ years are available. 5 years age groupwise distribution for total population is available. Detail procedure is same as 1961 census.

1991- 2011 Census: Required data for individual tribes are available.

ST Population of Manipur

1961 and 1971 Census: Data is available in 3 broad age groups 0-14, 15-44 and 45+ years. Single year

wise population (total) is available. Detail procedure is same as Assam 1961.

1981 Census: Data in 5 year age groups in 0-4 to 30-34 and 35-59 and 60+ are available. 5 years age distribution for all population is available. Detail procedure is same as 1961.

1991- 2011 Census: Required data for individual tribes are available.

ST Population of Meghalaya

1961 Census: Data is available on broad age groups 0-14, 15-44, 45+ years for Garo Hills, United Khasi & Jaintia Hills districts of Assam. Population of these districts are considered as population for Meghalaya. Single year wise population for total population of undivided Assam is available. Detail procedure is as for Assam 1961.

1971 and 1981 Census: Data in 1971 is available in 3 broad age groups 0-14, 15-44 and 45+. For 1981 it is available in 5 groups 0-4 to 30-34 and 35-59 and 60+. Total population in 5 years age groups are available. Details are worked out as in Assam.

1991- 2011 Census: Required data for individual tribes are available.

ST Population of Mizoram

1961 Census: Population (including ST) of Assam included the population of Mizo Hills district now with Mizoram. ST population of Mizo Hills district of undivided Assam in 1961 is considered as the population for Mizoram. This is available in three broad age groups. 5 or single age groupwise population is available for total population of Assam. Details are worked out as for Assam 1961.

1971 Census: Mizoram was with Assam during this period also, therefore, the Population of Mizoram is considered as the population of Mizo Hills District of Assam. Broad age groupwise ST population is available for Mizo Hills district of Assam. Also broad age groupwise and 5 year age groupwise population are available for total population of undivided Assam. Applying the percentage of total population (undivided Assam) with correction factor of difference among ST (Mizo Hills district) and total population (undivided Assam) to calculate 5 year age groupwise ST population of Mizoram.

1981 Census: Data in age groups 0-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-59, 60+ are available. Single or 5 years age group wise population (for total) is available. Distribution is made on the age groups as per 1971 census.

1991- 2011 Census: Required data for individual tribes are available.

ST Population of Nagaland

1961 Census: Population (including ST) of Assam in 1961 included the population of Nagaland. Population of the districts under undivided Assam is considered as population for Nagaland. This is available in three broad age groups. Five or single age groupwise population is available for total population of undivided Assam. Broad age groupwise ST population of Nagaland is available. Broad age groups of ST (Nagaland) and total population (undivided Assam) are compared. Percentage difference is used as correction factor to calculate the 5 years age groupwise ST population by applying it on the percentage shares of population of undivided Assam.

1971 Census: Total data is available. Broad age group and five years age group wise population (total) is available for undivided Assam. Details worked out as for Assam.

1981 Census: Data available is in age groups 0-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-59, 60+ years available. Single or 5 years age group wise total population is available. Distribution is made on the age groups as per 1961 census.

1991- 2011 Census: Required data for individual tribes are available.

ST Population of Tripura

1961 and 1971 Census: Data available is in three broad age groups 0-14, 15-44 and 45+ years. Single year wise population (total) is available. Details are worked out as for Assam.

1981 Census: Data available is in 5 year age groups in 0-4 to 30-34 and 35-59 and 60+. 5 years age distribution for all population is available. Details are worked out as for Manipur.

1991- 2011 Census: Required data for individual tribes are available.

Table 5a: WPR- All Populations, 1991-2011

States	All Population				
	1961	1971	1991	2001	2011
Assam	43.3	30.7	36.1	35.8	38.4
Arunachal Pradesh	67.6	57.7	46.2	44.0	42.5
Manipur	45.9	34.6	42.2	43.6	45.7
Meghalaya	-	44.2	42.7	41.8	40.0
Mizoram	-	-	48.9	52.6	44.4
Nagaland	59.4	50.8	42.7	42.6	49.2
Tripura	38.3	27.9	31.1	36.2	40.0
India	43	32.9	37.5	39.1	39.8
Andhra Pradesh	-	-	45.1	45.8	46.6
Himachal Pradesh	-	-	42.8	49.2	51.9
Odisha	-	-	37.5	38.8	41.8

Source: Calculated from RGI data

Table 5b: WPR- ST Populations, 1991-2011

States	ST Population				
	1961	1971	1991	2001	2011
Assam	51.4	28.4	41.2	43.2	44.0
Arunachal Pradesh	-	57.0	45.9	43.0	40.3
Manipur	50.2	43.3	46.7	44.1	47.4
Meghalaya	-	45.3	43.2	42.8	40.3
Mizoram	-	-	47.6	51.7	43.8
Nagaland	58.9	49.3	42.0	42.3	49.3
Tripura	51.6	31.5	35.8	42.7	43.8
India	-	-	49.3	49.1	48.7
Andhra Pradesh	-	-	54.0	53.9	54.2
Himachal Pradesh	-	-	49.6	54.6	53.5
Odisha	-	-	49.4	49.0	49.7

Table 6a: Crude Literacy Rate among All Population in seven NE States, 1961- 2011

States	All Population				
	1961	1971	1991	2001	2011
Assam	27.4	28.7	42.5	52.6	61.5
Manipur	30.4	32.9	49.9	60.5	66.8
Mizoram	-	-	67	74.4	77.3
Tripura	20.2	31	49.5	63.2	76.3
Arunachal Pradesh	7.1	11.3	32.8	44.2	55.4
Meghalaya	-	29.5	38.2	50	60.2
Nagaland	17.9	27.4	51.1	56.9	67.8
India	24.0	29.5	42.5	54.5	63.0

Source: calculated from RGI data

Table 6b: Crude Literacy Rate among ST Population in seven NE States, 1961- 2011

States	ST Population				
	1961	1971	1991	2001	2011
Assam	23.6	26	39.1	52.1	61.9
Manipur	27.2	29.6	44.8	56.6	63.0
Mizoram	-	-	66.9	74.6	77.3
Tripura	10.0	15.0	32.3	47.2	67.2
Arunachal Pradesh	-	5.2	26.9	39.9	54.3
Meghalaya	-	26.5	36.0	48.5	59.7
Nagaland	14.8	24	50	56.3	68.1
India					