13 Population Dynamics and the Demographic Dividend in Meghalaya

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Introduction

It is a long standing debate whether the continuous growth of population is pro - or anti-development of economics. There is no doubt that the size and composition of population always play an important role behind the development of an economy. On the one hand, it is the source of labour force for the production and other socio-economic activities in the economy. Hence rising population increases the supply of labourer and thus (if properly utilised) raise the scope of production in an economy. But that is possible if there is shortage of labour in the economy and production activities are on a sub-optimal level. On the other hand, if the population size crosses the carrying capacity of the system then it instead of adding to the growth, create several impediments due to rising needs for food, shelter etc. and management of waste materials that it generates beyond the assimilating capacity of the environment. Also if the increased labourers do not find any gainful employment, it generates the problem of unemployment and other related issues.

Malthus (1798) was very much concerned about the growth of population to outrun the availability of food supply. The increasing pressure of the human population on the nature and diminishing marginal productivity of resources leading to Malthusian catastrophe was underlined in his book, *An Essay on the Principles of Population.* The pessimistic views have also been found in Ehrlich (1968), Meadows *et al.* (1972), Ehrlich and Ehrlich (1990) etc. who were of the opinion that if the population continues to grow the world would

be falling short of resources especially the critical natural resources after some years. However, labourers in the production units to a certain extent can be substituted by machineries through the improvement of technology that would certainly compound the problem of unemployment. However, the rising waste materials and other environmental problems can also be better managed through the innovation of improved technology, which is possible when an economy grows and that is associated with the rise in human qualities and not the size of population only. Hence Johnson (2000), Simon (1981, 1996) pointed out that rising population is not a problem but it enhances the utility of resources through improved and judicious management. In their opinion, if there is freedom and markets are free and fair that would solve many of the problems.

However, one can safely argue that if technological improvement does not match with the rising requirements of the growing population, rapid growth of population may act as a retarding factor for the growth and development of the economy. That is, if income does not grow at vleast at the identical rate of population growth, per capita income will necessarily fall and also reduce access to the per capita availability of other resources needed to maintain a particular standard of living. Then there will be a rise in pressure on natural, especially common resources as they will be increasingly dependent on such resources for their livelihood. Therefore, rapid growth of population in many cases leads to environmental and natural resource degradation. Mikesell (1995) also pointed out that crowding is one of the consequences of population growth that reduces the quality of life.

Moreover, rising population means rising requirement of land for agricultural purposes to produce more (unless technology helps rise in productivity in the same way) and hence it expedites cutting and felling of trees by the people for extension of cultivation, settlement purposes, etc. leading to depletion of forest resources and thus severe environmental change. That is why many environmentalists think population growth is the greatest threat to sustainable development, and perhaps to the survival of the human species itself. Even though the application of modern seed, fertiliser, irrigation, technology yields

better result in the short-run, the long-run productivity of soil is adversely affected as already observed in several parts of India.

Trend of Population in Meghalaya and Other North Eastern States of India

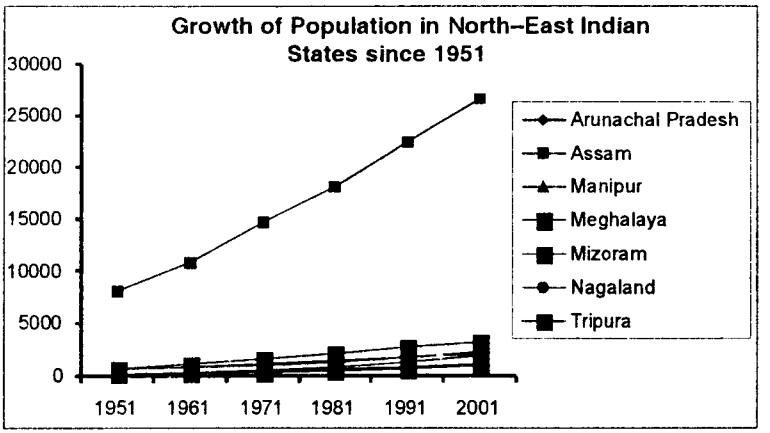
Trend of population during 1951 to 2001 in Meghalaya and other North Eastern States is shown in Table13.1. Since 1951 a tremendous growth of population has been observed in the North Eastern Region of the country. The population in the region has registered an increase from under 1.03 crores in 1951 to over 3.83 crores in 2001. That is population has increased to more than three times during these five decades as against 2.8 times in the country as a whole.

Table 13.1: Trend of Population in North Eastern Region of India, 1951 to 2001

	Population (In Thousand)						*Annual Exponential Growth Rate (in percentage)*		
States	*1951*	*1961*	*1971*	*1981*	*1991*	*2001*	*1951–71*	*1971–2001*	*1951–2001*
Arunachal Pradesh	N. A	337	468	632	865	1097	3.28*	2.84	2.95*
Assam	8029	10837	14625	18041	22414	26655	3.00	2.00	2.40
Manipur	578	780	1073	1421	1837	2166	3.09	2.34	2.64
Meghalaya	606	769	1012	1336	1775	2318	2.56	2.76	2.68
Mizoram	196	266	332	494	690	888	2.64	3.28	3.02
Nagaland	213	369	516	775	1210	1990	4.42	4.50	4.47
Tripura	639	1142	1556	2053	2757	3199	4.45	2.40	3.22
NER	10261	14500	19582	24750	31548	38316	3.23	2.24	2.64
All-India	361088	439235	548160	683329	846303	1028737	2.09	2.10	2.09

Note: *indicates that the base year for Arunachal Pradesh is 1961 instead of 1951.
Source: Census of India, 2001.

During 1951–1971, the highest annual exponential growth rate of population among the North-Eastern States was recorded by Tripura (4.45 per cent), which was followed by Nagaland with 4.42 per cent (Table 13.1). The annual exponential growth rate of population in Meghalaya during that period was 2.56 per cent only, which was the lowest among all the North Eastern States. However, the overall annual exponential rate of growth during 1951 to 2001 in Meghalaya was 2.68 per cent. During the same period, Nagaland recorded the highest annual exponential rate of growth of population, which was 4.47 per



cent. Annual exponential growth rate during 1951 to 2001 was the lowest in Assam and highest in Nagaland. Also, during 1971 to 2001, annual exponential growth rate was highest in Nagaland and lowest in Assam. Annual exponential growth rate has increased during the later sub-period in the State of Meghalaya, Nagaland and Mizoram, while in the other North Eastern States it has declined. Though growth rate of population in Meghalaya was the lowest during 1951 to 1971 sub-periods, it became higher than the States of Assam, Manipur and Tripura in the later sub-periods. The growth rate significantly declined in Tripura, Arunachal Pradesh, Assam and Manipur, which together more than offset the rising annual exponential growth rate of other North Eastern States and led to decline in overall growth rate in post 1971 period. Here, population growth has been not only due to the natural growth but also due to the net in migration from the neighbouring countries especially Bangladesh. These States, mainly Tripura and Assam were highly affected due to partition (at the time of Independence) and even at the time of Bangladesh War, we had observed huge influx of people. But during 1980s and 1990s the net in migration has come down significantly and the population growth that was observed during that time was mainly due to the natural growth. Moreover, the population controlling measures have been successfully implemented in those States and not in Meghalaya, Nagaland and Mizoram. Though the overall annual exponential

growth rate has declined in 1980s and 1990s, it was still higher than the all-India average. Composition of Population in Meghalaya, Nagaland and Mizoram. Though the overall annual exponential growth rate has declined in 1980s and 1990s, it was still higher than the all-India average.

Composition of Population in Meghalaya

The majority of the population in Meghalaya are tribals. The main tribes of the State are the Khasis, Jaintias and Garos. These groups are also divided into different sub-groups such as Khynriam, Pnar, Bhoi, War, etc. in case of Khasis and Jainitias. These people belong to a number of clans and are essentially differentiated from each other by their locations and functions they perform (Gopalakrishnan, 2001). The Khasis and Jaintias are mainly settled in four districts of the State, viz. East Khasi Hills, West Khasi Hills, Jaintia Hills and Ri Bhoi districts, whereas the Garos are primarily living in the three districts of the western part of the State, known as East Garo Hills, West Garo Hills and South Garo Hills districts. Besides these, there are other groups of minor tribes Mikir, Lalung, Biate, Dimasa, Hajong, Hmar, Kuki, Lakhar, Koch, Rabha, etc. who are settled in the State.

District-wise Trend of Population in Meghalaya

Population in Meghalaya has been increasing at a steady rate since 1951, which has been higher than the national average. Yet now the density of population (103 per sq. km) is much lower than the national average (313 per sq. km, according to 2001 Census Report), that is less than one-third of the national average. Though the State is endowed with huge forest, mineral resources, it is unable to absorb the rising population because of the lack of enterprises and technological development. Therefore, even with very low population density the State failed to create sufficient employment opportunities and hence the growing population became more and more dependent on their surrounding natural resources for the sustenance and the dependence is intense among the poorer section. The district-wise variation in population over time has been displayed in Table 13.2.

Table 13.2 : District-wise Variation of Population in Meghalaya 1971–2001

State/Districts	Persons				Males				Females			
	1971	1981	1991	2001	1971	1981	1991	2001	1971	1981	1991	2001
Jaintia Hills	113562	156402	220473	299108	56810	79052	111753	149891	56752	77350	108720	149217
	(11.22)	(11.71)	(12.42)	(12.89)	(50.03)	(50.54)	(50.69)	(50.11)	(49.97)	49.46)	(49.31)	(49.89)
East Khasi Hills	327922	411489	537914	660923	198972	262952	341670	333553	181678	248462	323548	327370
	(32.41)	(30.80)	(30.31)	(28.50)	(52.27)	(51.42)	(51.26)	(50.47)	(47.73)	(48.58)	(48.64)	(49.53)
West Khasi Hills	110872	161576	220157	296049	56687	82906	112860	150419	54185	78670	107297	145630
	(10.96)	(12.09)	(12.40)	(12.77)	(51.13)	(51.31)	(51.26)	(50.81)	(48.87)	(48.69)	(48.74)	(49.19)
East Garo Hills	102698	136550	188830	250582	53218	70365	96444	127474	49480	66185	92386	123108
	(10.15)	(10.22)	(10.64)	(10.81)	(51.82)	(51.53)	(51.07)	(50.87)	(48.18)	(48.47)	(48.93)	(49.13)
West Garo Hills	248913	306347	401571	518390	155280	188435	244960	263424	148637	181442	235140	254966
	(24.61)	(22.94)	(22.63)	(22.35)	(51.09)	(50.95)	(51.02)	(50.82)	(48.91)	(49.05)	(48.98)	(49.18)
Ri Bhoi	52728*	99925*	127304*	192790	N.A.	N.A.	N.A.	99319	N.A.	N.A.	N.A.	93471
	(5.21)	(7.48)	(7.17)	(8.31)	51.52	N.A.	N.A.	N.A.				(48.48)
South Garo Hills	55004*	63530*	78529*	100980	N.A.	N.A.	N.A.	52007	N.A.	N.A.	N.A.	48973
	(5.43)	(4.75)	(4.42)	(4.35)	(51.50)							(48.50)
Meghalaya	1011699	1335819	1774778	2318822	520967	683710	907687	1176087	490732	652109	867091	1142735
	(100.00)	(100.00)	(100.00)	(100.00)	(51.49)	(51.18)	(51.14)	(50.72)	(48.51)	(48.82)	(48.86)	(49.28)

Notes: (1) Population for Ri Bhoi and South Garo Hills are not available for the years 1971, 1981 and 1991 since these two districts are newly created on June 4, and June 18, 1992 respectively. Here, value is approximated by assuming growth rate figures available in Basic Statistics of North Eastern Region.

(2) Figures in the brackets of males and females indicate the percentage to Total Population of each district.

(3) Figures in the brackets of persons indicate the percentage of Total Population of the State.

(4) * Population of East Khasi Hills and West Garo Hills in 1971,1981 and 1991 have been estimated by the scholar by assuming estimated population of Ri Bhoi and South Garo Hills districts. So for those years the male and female figures may not be added up to total population of those districts.

(5). N. A. indicates not available and earlier Ri Bhoi was part of East Khasi Hills and South Garo Hills was part of West Garo Hills.

Sources: (1) Census of India, 1981, Series-14, Part A & B: General Population Totals and Primary Census Abstract.

(2) Census of India, 1991, Series-1; Paper–2 of 1992.

(3) Census of India, 2001, Primary Census Abstract, Meghalaya, Series-18.

(4) Basic Statistics of North-Eastern Region, 2002.

During the past three decades, the growth of population in the State was nearly 130 per cent over the total population of 1971. In absolute terms, the population of the State increased by 1307123 persons during 1971 to 2001. In all the districts population growth followed more or less the similar trend.

Table 13.3 represents the inter-district variation in decadal growth rate and annual exponential growth rate of population in Meghalaya and in India as a whole since 1971.

Table 13.3 reveals that the decadal growth rate of population in the State was increasing from 1971–1981 to 1981–1991 and we observe a deceleration in the growth rate during 1991–2001. Whereas the decadal growth rate of population in India as a whole from 1971 onwards indicated a declining trend. In other words, we have seen that the decadal growth rate of population in the State since 1971 has always been much higher in comparison to that of India as a whole.

Table 13.3 : Changes in Decadal Growth Rate, Decadal Variation and Average Exponential Growth Rate of Population in Meghalaya (in Percentage)

State	*Decadal Variation in Population*				*Average Annual Exponential Growth Rate*			
Period	*1971–1981*	*1981–1991*	*1991–2001*	*1971–2001*	*1971–1981*	*1981–1991*	*1991–2001*	*1971–2001*
Jaintia Hills	37.72	40.97	35.67	163.39	3.20	3.43	3.05	3.23
East Khasi Hills	25.48	30.72	22.86	101.55	2.27	2.68	2.06	2.34
West Khasi Hills	45.73	36.26	34.47	167.02	3.77	3.09	2.96	3.27
East Garo Hills	32.96	38.29	32.70	144.00	2.85	3.24	2.83	2.97
West Garo Hills	23.07	31.08	29.09	108.26	2.08	2.71	2.55	2.45
Ri Bhoi	89.51	27.40	51.44	265.63	6.39	2.42	4.15	4.32
South Garo Hills	15.50	23.61	28.59	83.59	1.44	2.12	2.51	2.03
Meghalaya	32.04	32.86	30.65	129.20	2.78	2.84	2.67	2.76
India	24.66	23.86	21.56	87.67	2.20	2.15		1.95

Sources: Census of India, 2001; Basic Statistics of North-Eastern Region, 1995, 2000 and 2002.

Among the districts during 1971–1981, West Garo Hills and South Garo Hills districts recorded much lower rates of growth of population than the State while all other districts experienced higher rates of growth than the State average. In 1981–1991, Jaintia Hills recorded the highest rate of growth of population with 40.97 per

cent and South Garo Hills experienced the lowest growth rate of 23.61 per cent. During 1991–2001, the decadal growth rate in Ri Bhoi district was the highest (51.44%) and in the East Khasi Hills district the growth rate was the lowest (22.86%). During the period from 1971 to 2001, the growth rate was the highest in West Khasi Hills (167.02%) and lowest in South Garo Hills (83.59%). Here one point to be noted is that during all the sub-periods all the districts have higher growth rates than the national average except during 1971–1981 and 1981–1991, when the growth rates in South Garo Hills were lower than national average and during 1971–1981 the figure of West Garo Hills was also lower than the national average. Moreover, during 1991–2001 growth rate was increasing in Ri Bhoi and South Garo Hills, while in other districts it was declining.

Average annual exponential growth rate of population for the State it has been found that it always remained above 2 per cent since 1971 onwards, and declined marginally during 1991 to 2001. All-India average annual exponential growth rate declined at a faster rate and reached 1.95 per cent per annum during 1991 to 2001 as compared to 2.67 per cent of the State of Meghalaya. Thus, both in absolute terms as well as in terms of the growth rate, the State had continued to witness (though the density is still low, considering the poor technology and economic growth) what we may think whether it can be designated as Population Explosion or not.

Density and Sex Ratio of Population in Meghalaya

Over time variation in density of population in the State of Meghalaya is very unevenly distributed. An inter-district comparison shows that East Khasi Hills and West Garo Hills have been more densely populated districts; while Jaintia Hills, West Khasi Hills and South Garo Hills districts on the other hand, have low density of population (Table 13.4). From merely 27 persons per square kilometre in 1951, the density of population rose to 45 persons per square kilometre in 1971 and then to 103 per square kilometre in 2001. However, still now the density of population in the State is much lower than the national average of 313 per square kilometre, according to 2001 Census Report.

Table 13.4 : District-wise Variation in Density of Population in Meghalaya (1951–2001)

State/Districts	*1951*	*1961*	*1971*	*1981*	*1991*	*2001*
Jaintia Hills	17	21	30	41	58	78
East Khasi Hills	81	103	119	149	191	241
West Khasi Hills	13	17	21	31	42	56
East Garo Hills	24	30	39	52	73	96
West Garo Hills	48	62	67	82	108	140
Ri Bhoi	N.A	N.A	22*	48*	54	79
South Garo Hills	N.A	N.A	27*	34*	42	55
Meghalaya	27	45	45	60	79	103
All-India	117	134	177	216	267	313

Note: * Values are estimated by the Scholar.
Source: Census of India, 2001; Basic Statistics of North-Eastern Region, 1981 and 2002.

Since 1951, there is a sharp increase in the density of population in all the districts of Meghalaya. In Jaintia Hills, the density of population was only 17 persons per square kilometre in 1951 but has increased to 78 persons per square kilometre in 2001. In East Khasi Hills, we observed rapid increase in population especially due to urbanisation. Here the density of population in 1951 was 81 persons per square kilometre and increased to 241 persons per square kilometre in 2001. In West Khasi Hills, the density increased from 13 persons per square kilometre in 1951 and rose to 56 persons per square kilometre in 2001. In East Garo Hills and West Garo Hills districts, in 1951, the density of population was only 24 and 48 persons per square kilometre and rose to 96 and 140 persons per square kilometre respectively in 2001. Even in the newly districts like Ri Bhoi and South Garo Hills also, the density of population has increased sharply from 54 and 42 persons per square kilometre in 1991 to 79 and 55 persons per square kilometre in 2001. Only East Khasi Hills and West Garo Hills districts stand above the state average in terms of density of population. The density of population thus varies significantly across different districts of the State. However, the coefficient of variation in density of population decreased from 69.13 per cent in 1951 to 57.37 per cent in 2001. But the range of variation increased from 68 to 186 during 1951 to 2001. The density in East

Khasi Hills has always been the highest because of the availability of socio-economic activity, educational scope and better infrastructure.

Table 13.5 shows the district-wise variation in sex ratio of population in Meghalaya since 1951. The sex ratio in Meghalaya has always been higher than that of all-India average since 1951, except in 1961 when it was marginally lower. It has been observed from the Table 13.5 that sex ratio has increased in the State since 1961, whereas it has continuously declined at all-India level till 1991, after which, we observe a marginal increase. This is in consonance with the existing notion of the matrilineal society of Meghalaya at all-India level, the much-hyped campaign against gender discrimination, sex determination, etc. failed to increase the sex ratio to the desired level.

The percentage decadal variation of sex ratio in the State since 1951 has been varying significantly. During 1951–1961, the variation in sex ratio in the State was negative (-1.26 per cent) and during 1971–1981 it rose by 1.27 per cent. In the period, 1981–1991, it increased marginally by 0.10 per cent and during 1991 to 2001 it increased by 1.78 per cent. By taking into account the two sub-periods (1951–1971 and 1971–2001), the percentage decadal growth rate of sex ratio in the country was 1.70 per cent in 1951-1971 and 0.32 per cent in 1971–2001, whereas the figures in the State were -0.74 and 3.18 per cent respectively during 1951–1971 and 1971–2001.

More or less similar variation in sex ratio is observed in the different districts of Meghalaya. In 1971, sex ratio in Jaintia Hills (999), West Khasi Hills (956), and West Garo Hills (968) were above the State average sex ratio (942). In the other districts, the sex ratios were below the State average. Almost in all the districts we observe rising sex ratio, except in Ri Bhoi district where it has remained constant at 941 during 1991–2001.

According to 2001 Census, the Jaintia Hills district had the highest sex ratio of 996 and Ri Bhoi district recorded the lowest sex ratio of 941 among all the districts of Meghalaya. However, all the districts recorded comparatively higher sex ratio than the national average of 933 in 2001. The rise in sex ratio is due to: (i) the improvement in medical facilities that resulted in improvement in females life expectancy, (ii) fall in high death rate of women during the pre-

Table 13.5 : District-wise Sex Ratio and its Dicadal Growth in Meghalaya (1951–2001)

Districts/State	*1951*	*1961*	*1971*	*1981*	*1991*	*2001*	*Percentage a Decadal Variation*						
							1951–1961	*1961–1971*	*1971–1981*	*1981–1991*	*1991–2001*	*1951–1971*	*1971–2001*
Jaintia Hills	954	1015	999	978	973	996	6.39	-1.58	-2.10	-0.51	2.36	4.72	-0.30
East Khasi Hills	950	898	916	951	948	981	-5.47	2.00	3.82	-0.32	3.48	-3.58	7.10
West Khasi Hills	948	927	956	949	951	968	-2.22	3.13	-0.73	0.21	1.79	0.84	1.26
East Garo Hills	958	976	930	941	958	966	1.88	-4.71	1.18	1.81	0.84	-2.92	3.87
West Garo Hills	945	951	968	1096	959	968	0.63	1.79	13.22	-12.50	0.94	2.43	0.00
Ri Bhoi	921	870	893	921	941	941	-5.54	2.64	3.14	2.17	0.00	-3.04	5.38
South Garo Hills	965	971	909	967	963	942	0.62	-6.39	6.38	-0.41	-2.18	-5.80	3.63
Meghalaya	949	937	942	954	955	972	-1.26	0.53	1.27	0.10	1.78	-0.74	3.18
All-India	946	941	930	934	927	933	-0.53	-1.17	0.43	-0.75	0.65	-1.69	0.32

Sources : (i) Census of India, 2001, Primary Census Abstract, Meghalaya, Series -18.
(ii) Basic Statistics of North-Eastern Region, 2002.

pregnancy and post-pregnancy periods, (iii) out-migration of male workers and (iv) non-discrimination among sex in case of birth because of matrilineal society.

Literacy of Population in Meghalaya

Literacy is considered to be an index of socio-cultural and economic advancement and is recognized as a basic need for the development of human resource in an area. Education is an instrument of social change and economic development as it imbibes knowledge and enhances skill of the people. The quality of population can be judged from the level of literacy and the level of technical training attained by the people in the country. It is experienced that the more a country is developed, the more are the people of it educated and the less they are victimised and exploited. Not only this, it is education that has the supremacy to promote gender quality and empowering of women.

The literacy rate of Meghalaya is increasing progressively from only 29.49 per cent in 1971 to 62.56 per cent in 2001 (Table 13.6). In spite of a rapid increase, the literacy rate in the State is still lower than the national average. Looking at the sex-wise growth of literacy since 1971, it is noticed that for the males it has gone up to 65.43 per cent from 34.12 per cent in 1971 and in case of females it has gone up to 54.61 per cent from 24.56 per cent. It may, however, be mentioned that literacy rate relates to the persons for the age group of five and above up to 1971 Census. From 1981 onwards, the literacy rate shown in the table relates to the person of the age group seven years and above.

Table 13.6 : Percentage of Literacy in Meghalaya and India (1971–2001)

Years	*Meghalaya*			*All-India*		
	Persons	*Males*	*Females*	*Persons*	*Males*	*Females*
1971	29.49	34.12	24.56	29.48	39.52	18.70
1981	34.08	37.89	30.08	36.23	46.89	24.82
1991	49.10	53.12	44.85	52.21	64.13	39.29
2001	62.56	65.43	54.61	64.84	75.26	53.67

Source: Census of India, 1971, 1981, 1991 and 2001.

From Table 13.7, it is observed that in all the districts of Meghalaya, the rural literacy rate have been increasing rapidly since 1971 except in West Khasi Hills, where it declined during 1981 to 1991. Moreover the difference between male and female literacy rates has been declining over time in both the rural and urban areas. But the gap between the rural and urban literacy rates has been widened though both have been increasing over time. This is particularly because of the better educational facilities available in the urban areas, less poverty and better utilisation of educational awareness campaign in the urban areas, that is, total literacy campaign, etc.

Table 13.7 : District-wise Percentage of Literacy in Rural and Urban Areas to Total Population in Meghalaya (1971-2001)

Districts/State		*Rural*				*Urban*			
		1971	*1981*	*1991*	*2001*	*1971*	*1981*	*1991*	*2001*
Jaintia Hills	P	17.20	19.98	24.15	37.06	51.58	65.84	64.83	74.28
	M	18.72	19.51	48.71	35.54	55.91	70.15	51.89	75.23
	F	15.69	20.46	51.28	38.59	47.05	62.00	48.10	73.37
East Khasi Hills	P	26.59	31.87	36.91	53.02	66.11	63.63	70.49	76.33
	M	29.97	33.07	51.98	52.94	70.80	67.73	55.90	78.80
	F	23.20	30.10	48.01	53.10	60.52	59.10	44.09	73.85
West Khasi Hills	P	27.21	30.43	25.45	47.99	51.78	53.25	50.52	63.93
	M	30.43	32.42	52.92	49.25	55.97	53.66	*	64.13
	F	23.84	28.32	47.07	46.69	46.50	46.33	*	63.72
East Garo Hills	P	30.13	31.92	35.98	45.19	43.43	52.68	*	66.46
	M	35.21	37.26	57.96	49.92	42.13	59.29	*	69.02
	F	24.66	26.26	42.03	40.30	32.16	40.70	*	63.73
West Garo Hills	P	28.20	*	*	36.60	63.78	*	*	73.52
	M	60.42	*	*	41.88	48.47	*	*	76.66
	F	39.58	*	*	31.15	51.52	*	*	70.23
Ri Bhoi	P	*	*	*	50.66	*	*	*	58.87
	M	*	*	*	53.37	*	*	*	60.58
	F	*	*	*	47.78	*	*	*	57.07
South Garo Hills	P	*	*	*	40.98	*	*	*	69.17
	M	*	*	*	46.50	*	*	*	71.61
	F	*	*	*	35.16	*	*	*	66.37
Meghalaya	P	23.40	26.98	32.60	44.20	65.22	62.30	67.68	73.48
	M	27.68	30.20	54.79	46.54	69.93	66.72	54.58	75.74
	F	18.94	23.64	45.20	41.78	*	58.82	45.41	71.19

Note: P=Persons, M=Males and F=Females and * indicates that data are not available.

Source: Census of India, 1981, 1991 and 2001.

Spatio-Temporal Variation in Growth of Urban Population in Meghalaya

The process of urbanisation has some positive as well as negative implications. Of the adverse implications of urbanisation, especially when it results in the growth of cities and towns, the most serious is its impact on the environment. The expansion of urban areas depletes productive agricultural land. Moreover, raising income levels of the people results in increased consumption and utilisation of resources that contributes to the deterioration of the environment. Water, which is becoming a scarce resource, is increasingly polluted with urban and industrial waste, unless those are properly managed. Moreover at the time of urban expansion, destruction of forest areas takes place. Alŏng with that, the management of urban sewage has become an important issue in many countries. Again, when rural-urban migration takes place, initially the low income families stay at the outskrits and slum areas without basic civic facilities and they put more pressure on local environment including the forest for their survival and development. As far as the State of Meghalaya is concerned, it is still underdeveloped and large number of the people is still live in the rural areas (80.42 per cent, according to 2001 Census). That means the process of urbanisation has been very slow in the State.

Table 13.8 : District-wise Distribution of Rural-Urban Population in Megha[illegible] (1971 to 2001)

Districts/State	*Rural in (Per cent)*				*Urban (in Percentage)*			
	1971	1981	1991	2001	1971	1981	1991	2001
Jaintia Hills	92.14	91.74	90.66	91.62	7.86	8.26	9.34	8.38
East Khasi Hills	67.75	64.65	65.25	57.98	32.25	35.35	34.75	42.02
West Khasi Hills	*	97.60	93.49	88.31	*	2.40	6.51	11.69
East Garo Hills	*	96.86	93.64	85.67	*	3.14	6.36	14.33
West Garo Hills	94.90	89.34	89.88	88.62	5.10	10.66	10.18	11.38
Ri Bhoi	*	*	*	93.16	*	*	*	6.84
South Garo Hills	*	*	*	91.44	*	*	*	8.56
Meghalaya	85.46	81.93	81.40	80.42	14.54	18.07	18.60	19.58

Note : * indicates that data are not available.

Source : Census of India, 1971, 1981, 1991 Series-1 Paper–2; Census of India, 2001.

District-wise distribution of rural-urban population in Meghalaya since 1971 is shown in Table 13.8. Though population has been increasing significantly in some urban centres, the pace of urbanisation in Meghalaya is rather slow. At present, there are in total 16 urban centres in Meghalaya, of which seven are the district headquarters and the rest are the sub-divisional headquarters/towns. Of these urban centres/towns, Shillong Urban Agglomeration is the biggest and is classified as the Class–I Town with a population of 267662 (2001 Census). Other towns in the State fell within Class-III and Class-IV category.

Before 1971, Shillong Urban Agglomeration was the capital of the then undivided Assam. During 1971, urban population in the State was concentrated mainly in Shillong Municipal, Shillong Cantonment, Mawlai, Nongthymmai, Jowai and Tura. But, between, 1971 and 2001, with changes in the number of districts (from two in 1971 to seven in 1992) new urban centres have emerged. In 1981, there were 12 towns in the State (5 Statutory and 7 Census Towns) and increased to 16 (10 Statutory Towns and 6 Census Towns) in 2001.

In 1971, total number of urban population in the State was 1.47 lakhs. In 1981, it was almost doubled to 2.41 lakhs (a rise of 63.98 per cent), which further increased to 3.30 lakhs in 1991 (an increase of 36.76 per cent). In 2001, the urban population figure reached to 4.54 lakhs that is an increase of 37.59 per cent over 1991. The growth rate of urban population has been declining over time. Shillong Urban Agglomeration, itself has recorded significant decrease in growth rate from 42.32 per cent in 1971–1981 to 15.80 per cent in 1991–2001. However, in the towns like Jowai, Mawlai and Shillong Cantonment, the growth rate increased during the period 1971–1981 to 1981–1991 and declined thereafter. Nongthymmai, Pynthorumkhrah and Madanriting observed a substantial growth since 1981–1991 onwards. Sohra has shown only a marginal increase, from 28.47 per cent in 1981–1991 to 28.76 per cent in 1991-2001 and all other towns show a decline in growth rate during this period as is observed from Table 13.9. The deceleration in growth of urban population, especially of the large town in Meghalaya may be due to the saturation of

opportunities available in the urban area and non-expansion of activities. Also because of growing opportunities and activities coupled with the rising infrastructure in rural areas, migration of population from rural areas has been declining.

Table 13.9 : Population and Growth Rate of Urban Areas in Meghalaya, 1981– 2001

Districts	*Urban Areas/Towns/Cities*	*Urban Population*			*Growth Rate*	
		1981	*1991*	*2001*	*1981 –1991*	*1991 –2001*
Jaintia Hills	Jowai (M)	12923	20601	25057	59.41	21.63
East Khasi Hills	Shillong (UA) (1–7)	174703	231143	267662	32.31	15.80
	1. Shillong (M)	109244	131728	132867	20.58	0.86
	2. Shillong Cantt. (CB)	6620	11075	12396	67.30	1193
	3. Nongthytnmai (CT)	21558	26816	34292	24.39	27,88
	4. Mawlai (CT)	20405	30442	38303	49.19	25.82
	5. Pynthorumkhrah (CT)	10711	14322	22115	33.71	54.41
	6. Madanriting (CT)	6165	8927	16318	44.80	82.79
	7. Nongmynsong (CT)	NA	NA	11371	NA	NA
	Sohra (CT)	6097	7833	10086	28.47	28,76
West Khasi Hills	Nongstoin (TC)	3880	14339	23106	269.56	61.14
	Mairang (TC)	NA	NA	11492	NA	NA
East Garo Hills	Williamnagar (MB)	4290	12004	18247	179.81	52.01
	Resubelpara (MB)	NA	NA	17660	NA	NA
West Garo Hills	Tuna (M)	35257	45740	58978	29.73	28.94
Ri Bhoi	Nongpoh (TC)	NA	NA	13180	NA	NA
South Garo Hills	Baghmara (MB)	4183	6220	8643	48.70	38.95
Total	All-Towns	241333	330047	454111	36.76	37.59

Note: NA. means not available, M means Municipality, UA means Urban Agglomeration, CB means Cantonment Board, CT means Census Town, TC means Town Committee and MB means Municipal Board.

Source : Census of India, 1981, 1991 and 2001.

Age-Sex Structure of Population in Meghalaya

Population differs greatly in the way members are distributed in the various age groups and sex categories, as the age and sex composition of population are important factors both biologically and socially (Banerjee, 1994, p. 47). The age structure of the people is legally the outcome of the regime of fertility and mortality that prevailed in the past. One of the implications of population growth is ageing. In

developed countries, the proportion of the population in the older age groups is very high and increasing (because of slower fertility rate); while in the developing countries it is still lower and increasing at a moderate rate. The rise in dependency ratio in the age structure of the population has been observed in those countries where declines in fertility and mortality occurred much earlier and at a faster rate. The spatial distribution of population of Meghalaya according to age and sex structure is given in Table 13.10. It is observed that the percentage of females is higher in Meghalaya in the age group of 0–14 years than that of their male counterparts from 1971 to 2001. The higher percentage of females in the 0–14 age group indicates the rising percentage of newborn females than that of males. Though the percentage of both male and female in 0–14 year's age group to total population has been declining up to 1991, it again increased in 2001. The percentage of total population in the age group 0–14 years has decreased from 43.55 per cent in 1971 to 42.43 per cent in 1981 and further to 26.40 per cent in 1991. However, it again increased to 42.30 per cent in 2001. The decline of population in the age group 0–14 years is an indication of fall in the fertility during 1971 to 1991. The proportion of female in the reproductive age group 15–49 years has increased marginally from 46.39 per cent in 1971 to 48.65 per cent in 2001 period. The percentage of 60+ of the age group in both male and female section remained more or less same throughout the whole period of discussion. Thus, the age structure from 1971 to 2001 period suggests a trend of progressive type of growth of population. There is no discrimination among sexes at the time of birth and the proportion of people in working age group has also increased.

Dependency Ratio of Population in Meghalaya

The growth of population growth is largely associated with the variation in dependency ratio. Normally population is divided into three broad age groups, that is, dependent children (0–14 years), the economically active adult (15-59 years) and dependent old (above 60 years). A high dependency ratio leads to an increase in the demand

Table 13.10 : Age Distribution of Population in Meghalaya by Sex, 1971 to 2001 (in percentage)

Age	1971			1981			1991			2001		
Group	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
00–14	43.55	42.45	44.74	42.43	41.81	43.08	26.40	25.99	26.84	42.30	42.23	42.37
15–19	9.06	8.87	9.27	10.53	10.40	10.66	9.71	9.68	9.75	10.77	10.79	10.76
20–24	8.13	7.64	8.65	8.48	7.80	9.17	8.52	7.99	9.08	8.42	8.03	8.82
25–29	8.44	7.88	9.02	8.36	7.75	8.99	8.66	8.07	9.28	7.94	7.42	8.48
30–34	6.39	6.48	6.28	6.30	6.51	6.07	6.39	6.50	6.28	6.37	6.35	6.39
35–39	6.08	6.73	5.38	6.09	6.51	5.65	6.06	6.42	5.68	6.52	6.71	6.32
40–49	8.61	9.37	7.79	8.40	9.07	7.73	8.27	8.98	7.53	8.38	8.86	7.88
50–59	5.08	5.60	4.54	4.10	5.35	4.45	4.68	5.01	4.34	4.61	4.87	4.34
60+	4.63	4.95	4.30	4.46	4.78	4.13	4.44	4.78	4.08	4.56	4.59	4.53

Sources: (1) Census of India, 1981 Series-14 Meghalaya, Part-III General Economic Tables and Social and Cultural Tables.
(2) Census of India, 1991 Series-16 Meghalaya, Part-III-B Series, Economic Tables.
(3) Census of India, 2001, Primary Census Abstract.

for food for consumption, housing and shelter and many other necessities, while it reduces potential savings and investments. Whereas the increase of population in the age group of 15–59 years, may aggravate unemployment problem if sufficient opportunities are not created to match the increase. Here, we observe no significant change in dependency ratio in Meghalaya. Though percentage of dependant children declined during 1971 to 1991, it again increased during 1991 to 2001.

Changes in Birth and Death Rates of Population in Meghalaya

It is also necessary to have a look at the birth rate and death rate while analysing the growth of population. In Meghalaya, the birth and death rates have been fluctuating throughout the years, while they have shown a downward trend at the all-India level. Based on the data of the Sample Registration System issued by the Registrar General Office, the birth rate in Meghalaya stood at 18.0 per cent in 1976 and continuously increased to 39.1 per cent in 1985 and thereafter continuously followed a declining trend and reached a level of 29.0 per cent in 1995. However, in 1996, it was 30.4 per cent and thereafter it declined again to 24.7 per cent in 2003. Though the birth rate ultimately showed a declining trend over the years, it was higher than that of the national average. The death rate, on the other hand, was 15.5 per cent in 1976 and declined rapidly to 8.3 per cent in 1983 and again increased to 12.7 per cent in 1985. From 1985 the death rate fell through the years and after some fluctuations it finally reached to a level of 6.8 per cent in 1993. Thereafter, it recorded a continuous fluctuation and finally reached to 7.4 per cent in 2003. In 2003, both birth rate and death rate in the State was lower than that of all-India average. Comparing the natural growth rate of the State with that of the country, it is observed that in almost all the years the natural growth rate of the State was higher than that of the country. The natural growth rate of the State indicates a similar trend to that of the decadal growth rate of population in the State. The rate was always above 20 per cent except a few years and natural rate of growth has

been higher than the all-India natural rate of growth. Comparing with the total growth of population in the State we can safely argue that the growth of population in Meghalaya has been largely due to natural rate of growth and not migration.

Table 13.11 : Birth and Death Rates in Meghalaya during 1976 to 2003 (in percentage)

Years	*Mehalaya*			*All-India*		
	Birth Rate	*Death Rate*	*Natural Growth Rate*	*Birth Rate*	*Death Rate*	*Natural Growth Rate*
1976	33.5	15.5	18.0	34.4	15.0	19.4
1977	32.5	14.1	18.4	33.0	14.7	18.3
1978	32.0	10.2	21.8	33.3	14.2	19.1
1979	33.2	12.1	21.1	33.1	13.0	20.1
1980	31.2	11.1	20.1	33.3	12.5	20.8
1981	32.6	8.2	24.4	33.9	12.5	21.4
1982	31.1	8.9	22.2	33.8	11.9	21.9
1983	30.0	8.3	21.7	33.7	11.9	21.8
1984	38.3	11.8	26.5	33.9	12.6	21.3
1985	39.1	12.7	26.4	32.9	11.8	21.1
1986	33.4	10.1	23.3	32.6	11.1	21.5
1987	39.9	9.1	30.8	32.2	10.9	21.3
1988	36.4	9.1	27.3	31.5	10.9	20.6
1989	31.9	11.9	20.0	30.6	10.3	20.3
1990	31.8	7.8	24.0	30.2	9.7	20.5
1991	32.4	8.8	23.6	29.5	9.8	19.7
1992	29.8	8.5	21.3	29.2	10.1	19.1
1993	28.5	6.8	21.7	28.7	9.3	19.4
1994	29.5	7.1	22.4	28.7	9.3	19.4
1995	29.0	8.9	20.1	28.3	9.0	19.3
1996	30.4	8.9	21.5	27.5	9.0	18.5
1997	30.2	8.8	21.4	27.2	8.9	18.3
1998	29.2	9.0	20.2	26.5	9.0	17.5
1999	28.7	9.1	19.6	26.1	8.7	17.4
2000	28.5	9.2	19.3	25.8	8.5	17.3
2001	28.3	9.0	19.3	25.4	8.4	17.0
2002	25.8	7.7	18.1	25.0	8.1	16.9
2003	24. 7	7.4	17.3	24.8	8.0	16.8

Source : Basic Statistics of North-Eastern Region, 2002; Statistical Hand Book of Meghalaya, 2005.

Spatio-Temporal Variation in Labour Force and their Composition in Meghalaya

The spatial pattern of the distribution of working population in the State of Meghalaya is presented in Table 13.12. Table 13.12 shows that the majority of the total workers (Main and marginal) in Meghalaya were cultivators (48.14 per cent), followed by those engaged in the tertiary sector (31.98 per cent). Agricultural labourers are accounted for 17.70 per cent of the total workers while the secondary sector accounted for only 2.19 per cent. The trend is observed to be similar for both male and female workers. Interestingly female cultivators accounted for the bulk of female total workers in Meghalaya (52.78 per cent). While at the all-India level, the majority of female workers were the agricultural labourers, followed by the cultivators. The tertiary sector in Meghalaya is also accounted for a greater proportion of female workers than at the all-India level. During last few decades, we observe a significant growth of the tertiary sector and thus a shift of workers from primary to the tertiary sector, whereas the growth of secondary sector remained at a very low level.

Broadly speaking, the proportion of total workers in the population is higher in the rural areas than in the urban areas. In general, total work participation rate in the State showed a decreasing trend from 1981 onwards. This decrease is more perceptible in the rural areas than in the urban areas where the work participation rate has almost remained at around 30 per cent. In case of male workers, there has been a slight decline in the rate over the years. The work participation rate in the State was 45.92 per cent in 1981 and declined to 41.84 per cent in 2001. The male work participation rate, on the other hand, was 48.34 per cent and that of female was 35.15 per cent in 2001 as compared to 53.96 per cent and 37.49 per cent respectively in 1981 (Table 13.13). The percentage of total workers in the rural areas of the State was 48.85 per cent in 1981, which also declined to 44.11 per cent in 2001. Correspondingly, the male work participation declined by around 5.99 per cent (from 55.42 per cent to 49.43 per cent) and the female work participation rate also declined by 3.43 per cent (from 42.05 per cent to 38.62 per cent) during 1981 to 2001 period.

Table 13.12 : Percentage Distribution of Total Main Workers (Main and Marginal) by Activity, Meghalaya and All-India, 2001

State/Country	T/R/U	Cultivators			Agriculture Labourers			Household Industry			Others		
		P	M	F	P	M	F	P	M	F	P	M	F
Meghalaya	T	48.14	44.86	52.78	17.70	15.99	20.12	2.19	1.65	2.95	31.98	37.51	24.15
	R	55.99	53.75	58.94	20.01	18.62	21.85	2.28	1.67	3.08	21.72	25.96	16.13
	U	4.39	3.39	6.51	4.79	3.70	7.12	1.69	1.55	2.01	89.12	91.36	84.36
All-India	T	31.71	31.34	32.51	26.69	20.82	39.43	4.07	3.02	6.36	37.52	44.82	21.70
	R	40.14	42.19	36.46	33.20	27.48	43.40	3.77	2.83	5.44	22.90	27.49	14.70
	U	3.21	2.99	4.26	4.71	3.42	11.03	5.10	3.50	12.93	86.98	90.09	71.78

Note: P=Persons, M=Males, F=Females, T=Total, R=Rural and U=Urban.
Source: Census of India, 2001.

Table 13.13 : Percentage Distribution of Workers in Meghalaya during 1981 to 2001

T/R/U	Sex	Total Workers			Main Workers			Marginal Workers			Non-Workers		
		1981	1991	2001	1981	1991	2001	1981	1991	2001	1981	1991	2001
Total	Persons	45.92	42.67	41.84	43.43	40.32	32.65	2.49	2.35	9.19	54.08	57.33	58.16
	Males	53.96	50.07	48.34	53.11	49.54	41.30	0.85	0.53	7.04	46.04	49.93	51.66
	Females	37.49	34.93	35.15	33.29	30.67	23.74	4.20	4.26	11.41	62.51	65.07	64.85
Rural	Persons	48.85	45.04	44.11	45.90	42.30	33.60	2.95	2.74	10.51	51.15	54.96	55.89
	Males		55.42	51.02	49.43	54.43	50.42	41.54	0.99	0.60	7.89	44.58	48.98
50.57													
	Females	42.05	38.85	38.62	37.06	33.90	25.41	4.99	4.95	13.21	57.97	61.15	61.38
Urban	Persons	32.63	32.30	32.51	32.27	31.64	28.73	0.36	0.66	3.77	67.37	67.70	67.49
	Males	47.55	46.01	42.82	47.33	45.78	40.30	0.22	0.23	3.52	52.45	53.99	56.18
	Females	16.12	17.23	20.98	15.61	16.10	16.95	0.51	1.13	4.03	83.88	82.77	79.02

Source : Census of India 1981, 1991 and 2001.

On the other hand, in the urban areas of the State, the work participation rate declined marginally from 32.63 per cent in 1981 to 32.51 per cent in 2001. In case of male workers, there was a decline in participation rate from 47.55 per cent to 42.82 per cent and for female workers there was an increase from 16.12 per cent to 20.98 per cent during the same period. Main and marginal workers have been declining during the same period. In this case also the same trend is observed for both male and female workers in rural and urban areas. In the case of non-workers, there has been an increase since 1981, except in 2001 for urban non-workers. On the other hand, female non-workers have declined marginally from 83.88 per cent in 1981 to 79.02 per cent in 2001.

Socio-Economic Dimensions

If we look at the performance of the State economy, it is observed that per capita NSDP at 1980-81 prices has increased from Rs. 1361 in 1980-81 to Rs. 2020 in 1990-91 and the ranking among all the major 25 States in India improved slightly from 17 to 14. Annual average compound growth rate during that period was 4.03 per cent and the rank in terms of growth however was 8. However, the annual compound growth rate (at 1993-94 prices) declined to 2.62 per cent during 1993-94 to 1999-2000. There is virtually no change in contribution of secondary sector to NSDP, which was 11.92 per cent in 1993-94 and still pegged at 11.45 per cent in 1999-2000. Agricultural productivity also has not improved much while per capita availability of land has declined from 2.22 hectares in 1971 to 0.97 hectare in 2001. Though incidence of poverty declined by 12.73 per cent during 1983 to 1999-2000, the rate of decline has been slower than the other North-Eastern States except Assam and still now about one–third of its population is living below poverty line (*North-Eastern Council 1981, 1985, 1992, 1995, 2000 and 2002*). In terms of human development index the ranking of the State among major 25 States on India declined from 15 in 1981 to 1991 and the index increased marginally from 0.317 to 0.365 during that period. Whereas, despite having higher population growth, lower economic growth States like

Nagaland, Mizoram have improved their human development significantly and ranked within top five States (GOI, 2002).

Conclusion

It is observed that during 1971 to 2001, there has been a tremendous growth of population in Meghalaya. The decadal growth rate of population in the State was always higher than the average national growth rate. The annual exponential growth rate was also above 2 per cent since 1971. The density has also increased but still much below the national average. The sex ratio has been higher than that of the country as a whole since 1971. The proportion of female in the children age group has increased over time leading to an increase in overall sex ratio. This is in conformity with the matrilineal society (as noted earlier) in Meghalaya. Also percentage of people in the working age group has increased over time. But there has been no significant development in industrial sector. Hence there has been a rise in pressure on primary and tertiary sector. Also work participation rate for that group has declined due to lack of rise in opportunities. However, the literacy rate of the State was much lower than that of the national average. This is perhaps due to non-availability of educational facilities to most the people in the State especially those who are settled in the rural areas (more than 80 per cent). Still now most of the people are cultivators and agricultural labourers. Among the cultivators especially in rural areas, percentage of female has increased over time and also in urban other informal activities percentage of female is very high. So there has been increase in pressure on natural resources, especially mineral and forest. As minerals are mostly under private ownership (and hence not accessible to many common people) and there is open access to forest in many cases, stress on forest has also increased. Whatever little development is observed is primarily due to the extraction of natural resources. Looking at the overall socio-economic performance of the State it is clear that though population growth has not created much negative externality in the way of economic development, due to lack of proper population planning (settlement,

human resource development etc.) the State has failed to capitalise dividend from the observed demographic changes over the years. Increasingly available manpower should be properly managed to increase their efficiency which could be utilised competitively to accelerate the growth process for the welfare of the people.

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