Demography India
Vol. 20, No.l (1991),pp. 35-40

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Differential Growth and Characteristics of Population Across the Ecological Regions of Tamil Nadu, 1991

Introduction

DIFFERENTIAL growth and distribution of population have to a large extent been influenced by the interplay of geographical, historical, social and cultural factors. The present ecological distribution of population is a product of physical conditions such as climate, land forms, the quality of the soil and the availability of energy. Therefore, in this paper an attempt is made to look into the differential growth, distribution and characteristics of population across the major ecological regions of Tamil Nadu state on the basis of 1991 census data.

Tamil Nadu is the core area of Dravidian culture. It is located on the south-eastern peninsula of India. On its eastern boundary lies the Bay of Bengal, on the south the Indian Ocean, on the west Western Ghats bordering with Kerala and part of Kamataka states and on the north flanked by rest of Karnataka and Andhra Pradesh. In size Tamil Nadu ranks the 11th state in India and has 4 per cent of the total area of the country (1,30,058 sq km). It has a total population of 55.6 millions (1991 census) and ranks as a seventh populous state in India (Director of Census Operations, 1991).

Ecological and Geographical Perspectives

Tamil Nadu state can be ecologically divided into five regions viz., 1. Hilly, 2. Coromandal plains, 3. Cauvery delta, 4. Western plains and 5. Dry southern plains (Paramasivam 1968; Singh 1983; Manorama Year Book, 1989). The first region consists of only Niligiris district. The second zone comprises four districts such as Chengai-Anna, South Arcot, North Arcot-Ambedkar and Tiruvannamalai-Sambuvarayar. Cauvery delta, the third region consists of three districts viz., Tiruchirappalli, Thanjavur and Pudukkottai. The fourth zone comprises four districts such as Dharmapuri, Salem, Periyar and Coimbatore and the dry southern plains consists of eight districts: Dindigul-Quaid-e-Milleth, Madurai, Kamarajar, Ramanathapuram, Pasumpon Thever Thirumagan, Tirunelveli-Kattabomman, Chidam-

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baranar and Kanniyakumari. Added to these regions, Madras metropolitan city (fully urban district) is also situated in Tamil Nadu, but not included in any one of the above regions, because of its special characteristics.

The famous Queen of all hill stations of South India, Uthagamandalam (popularly known as Ooty) is located in Nilgiris district, besides the two other prominent hill stations viz., Coonoor and Kotagiri. Dodabetta peak (2640 metres above the sea level) and Mudumalai Wild life Sanctuary are also situated in this hilly district. This district receives a normal rainfall of 1920.8 mm during a year, which is the highest rainfall received by all the districts of Tamil Nadu (Director of Statistics, 1990). The forest around Ooty is rich with varied vegetation. The Coromandal plain is prominent for its lengthy coastal line of Bay of Bengal. The average normal rainfall received by this region is around 1 124 mm. The soil of this area is mostly alluvial and also black soil. River Palar with its tributaries such as Cheyyar and Vegavati flows through this region. This region is also rich in deposits of large quantities of lignite, which is the raw material for power generation in the state.

The Cauvery delta region is famous for its rich culture, architecture, fan-shaped alluvium and has least number of hills and forests. Though the normal rainfall in this region is around 976 mm, it has sufficient water resources for irrigation and drinking through the famous Cauvery river. This region has also the rich land that produces the major share of the cereals for the state.

By and large the western plains historically formed as 'Kongunadu', which is inhabited largely by dominant caste, by name Kongu Vellalas. However, the present population inhabiting this region consists of highly heterogeneous immigrants who came from Andhra Pradesh, Kefala, Karnataka and rest of India, besides local population. This region receives comparatively less normal rainfall of only 779 mm. However, it has the irrigation facilities from water sources of Cauvery tributaries viz., Bhavani, Noyyal and Amaravathi. This region is also famous for Western Ghat hills like Pachamalai hills, Kolli hills and Anamalai hills. The highest peak in south India, Anaimudi (2700 mts) is situated in Anamalai hills of this region.

The dry southern plains truly reflects the meaning of the title itself. Though this region receives a normal rainfall of 920 mm, it promotes mostly dry crops like millets, oil seeds and coconut. Added to this dry plains a substantial coastal area is also found in some of the districts of this region viz., Ramanathapuram, Chidambaranar, Tirunelveli-Kattabomman and Kanniyakumari. In this coastal belt fishing is the main occupation of the people. The continuation of the Nilgiris forest range extends to this region. However, forest based industries are mostly confined to production of match boxes. Sivakasi of Kamarajar district is famous for match box, crackers and calender industry.

Growth and Distribution of Population

Tamil Nadu has a total population of 55.6 millions (1991 census) and it constiutes seventh populous state in India. During 1991 census Tamil Nadu has recorded a decennial growth rate of 14.94 per cent (198 1-91 period) which is the second lowest growth rate (next to Kerala) among the major states of India (Director of Census Operations, 1991). Looking into the differentials of decennial growth rate of population(1981-91) across these ecological

regions.itis clear thatCoromandal region has the highest growth rateof population (18.45%) followed by western plains (15.11%) and these two regions showed the growth rate above the state average (14.94%). Conspicuously, growth rate is recorded as the lowest in the hilly district of Nilgiris (11.8%). Of course, the decennial population growth in the Cauvery delta region and the southern plains has also been noticed as less than the state average (12.8 per cent each). The highest decennial growth rate of population in Coromandal region may be due to the higher rate of migration from other districts of Tamil Nadu, because of its close proximity with Madras urban agglomeration. Besides this the birth rate of the districts of this region is also found to be comparatively higher than the other districts of Tamil Nadu. Further, it is interesting to note that the decennial growth rate is observed as the highest (27.77%) in Chengai-Anna district among all the districts belonging to the Coromandal region. However, the lowest growth rate of population has been observed in the newly formed districts of Chidambaranar (7.79%), and Pasumpon Thevar Thirumagan (10.57%).

The percentage distribution of population by ecological regions of Tamil Nadu showed that both southern plains and Coromandal regions constitute half of the population (26% in each region), closely followed by western plains (22%) and Cauvery delta region (18%). However, Madras district (urban agglomeration) not included in any of the regions constitutes a population of 6.8 per cent only. District-wise distribution of population reveals that South Arcot district has the highest (8.7%) percentage of population, closely followed by Chengai-Anna (8.3%) and Thanjavur (8.1%). On the other hand, the lowest concentration of population is noticed in the newly formed southern districts viz., Pasumpon Thevar Thirumagan (1.9%), Ramanathapuram (2.0%), Chidambaranar (2.6%), Kamarajar (2.8%) and Kanniyakumari (2.8%).

With regard to the geographical area and density of population, Tamil Nadu has an area of 130,058 square kilometres and a total density of 428 persons per square kilometre. Out of the total area of Tamil Nadu, 29.5 per cent of the area lies in the southern plains region followed by 26.1 per cent, 23.9 per cent and 18.5 per cent of areas respectively in western plains, Coromandal and Cauvery delta regions. On the other hand, the hilly region comprises an area of only 2 per cent of the total area. When we see the density of population among these regions, it is fascinating to note that the density is the highest in Coromandal plain (467) closely followed by Cauvery delta region (415). As expected the lowest density of population (277) has been noticed in the hilly region. Among the districts, barring Madras urban agglomeration (21,811), Kanniyakumari district has the highest density (945) followed by Chengai-Anna (588), Thanjavur (547), Madurai (525) having the density above 500 population. On the other hand, Dharmapuri district has the lowest density of population (249). Of course, Pasumpon Thevar Thirumagan (263) and Ramanathapuram districts also showed lower density as compared to other districts (see Table 1). All these thinly populated districts are considered backward areas and also dry in nature.

Urban Population

The percentage of population living in urban areas is generally considered as the best indicator of overall economic development, besides industrialisation and urbanisation. According to 1991 census the percentage of urban population of Tamil Nadu (34.2%) is the second highest among the major states of India. Of the regions of Tamil Nadu the percentage of urban population is the highest in the hilly region (49.8%). This proportion is also found

TABLE 1 : GROWTH, DISTRIBUTION AND CHARACTERISTICS OF POPULATION ACROSS THE ECOLOGICAL REGIONS AND DISTRICTS OF TAMIL NADU, 1991

Ecological Regions/ Districts	*Population*		*Growth Rate 1981-91*	*Area*		*Density*	*Sex Ratio*	*% Urban Population*	*General Literacy*		*Rate*
	COOOs)	%		(in sq km)	%				*T*	*M*	*F*
Tamil Nadu	55,638	100.0	14.94	130,058	100.0	428	972	34.2	54.6	64.0	44.9
Hilly Region	705	1.3	11.85	2,549	2.0	277	987	49.8	63.8	72.6	54.9
Coromandal Plains	14,489	26.0	18.45	31,020	23.8	467	970	27.8	50.8	61.1	40. 1
Cauvery Delta	9,963	17.9	12.80	24,027	18.5	415	992	23.4	55.0	65.5	44.4
Western Plains	12,164	21.9	15.11	33.949	26.1	358	933	31.3	50.1	59.0	406
Southern Plains	14,522	26.1	12.85	38,329	29.5	379	1,003	32.4	56.8	66.2	45.2
The Nilgiris	705	1.3	11.85	2,549	2.0	277	987	49.8	63.8	72.6	54.9
Chengai-Anna	4,621	8.3	27.71	7,857	6.0	588	957	44.8	57.5	66.7	47.8
N.A.-Ambedkar	3,000	5.4	14.14	6,077	4.7	494	987	31.8	52.4	62.4	42.2
T.M. -Sambuvarayar	1,997	3.4	11.85	6,191	4.8	323	982	12.1	45.2	56.7	34 0
South Arcot	4,871	8.7	15.92	10,895	8.4	447	968	15.8	45.8	56.9	343
Tiruchirappalli	4,113	7.4	13.90	11,096	8.5	371	983	26.7	53.7	64.5	42.8
Thaniayur	4,527	8.1	11.40	8,280	6.4	547	996	22.9	57.6	67.4	47.8
Pudukkottai	1,323	2.4	14.32	4,651	3.6	284	1,006	14.3	50.0	62.2	37.9
Dharmapun	2,396	4.3	19.96	9,622	7.4	249	944	9.4	39.8	48.4	30.7
Salem	3,914	7.0	13.73	8,649	6.7	453	932	28.9	48.6	56.8	37.7
Periyar	2,323	4.2	12.30	8,209	6.3	283	960	24.8	48.7	59.1	38.0
Coimbatore	3,531	6.4	15.39	7,469	5.7	473	910	53.2	60.8	68.6	52.4
D.Q. Mffieth	1,769	3.2	13.05	6,058	4.7	292	973	21.3	50.4	61.0	39.5
Madurai	3,448	6.2	16.02	6,565	5.0	525	972	45.0	53.3	63.4	42.8
P.T. Thiramagan	1,075	1.9	10.57	4,086	3.1	263	1029	26.8	55.0	67.3	43.1
Kamarajar	1,554	2.8	15.92	4,283	3.3	363	995	37.6	54.9	65.8	43.9
Ramanathapuram	1,136	2.0	11.11	4,232	3.3	268	1020	22.0	52.5	63.5	41.7
Chidambaranar	1,456	2.6	7.77	4,621	3.6	315	1047	41.4	63.2	70.7	56.0
T.V.-Kattabomman	2,493	4.5	12.15	6,810	5.2	366	1036	31.7	56.5	66.5	46.9
Kanniyakumari	1,591	2.8	11.79	1,684	1.3	945	994	17.0	72.1	75.3	68.9
Madras	3,795	6.8	15.82	174	0.1	21,811	930	100.0	72.6	77.6	67.1

SOURCE : References 1 and 5.

Note. N. A.-Ambedkar=NorthArcot-Ambedkar, T.M.-Sambuvarayar=Tiiuvannamalai-SambuvaravanD. O.-Milleth = Didigul-Quaid-e-Milleth;P.T. Thirumagan =Pusumpon Thevar Thirumagan T.V.-Kattabomman=Tirunelveli-Kattabomman

to be higher in southern (32.4%) and western (31.3%) as compared to Cauvery delta (23.4%) and Coromandal plains (27.8%). Among the districts, barring Madras, Coimbatore district (53.2%) stands first in respect of urban population. On the other hand, Dharmapuri has recorded the lowest percentage of urban population (9.4%). Further, it is interesing to note that of the four Metropolitan cities of India, one viz., Madras urban agglomeration is in Tamil Nadu, which has an urban population of 53.62 lakh (1991 census). Next to Madras, two other major urban agglomerations which have 10 lakh and above population viz., Coimbatore U.A. (11.36 lakhs) and Maduirai U.A. (10.94 lakhs) are also situated in Tamil Nadu State (R.G. India, 1991).

Sex Ratio

Sex ratio is one of the best indicators of status of women in the society. It is a well known fact that in India sex ratio is favourable towards male in all the states except Kerala State, where it is favourable towards females. The overall sex ratio in Tamil Nadu as per the 1991 census is 972 females per 1000 males, which is the second highest sex ratio noticed among the major states of India. Of course, Andhra Pradesh and Orissa also have similar sex ratio of 972. Significant variations in sex ratio across the regions and districts of Tamil Nadu are noteworthy. While it is the highest in southern plains (1003), similar figure on the lowest side is in the western plains region. Rest of the regions have recorded the sex ratio of 992 (Cauvery), 987 (hilly) and 970 (Coromandal). By and large the southern districts viz., Chidambaranar (1047), Tirunelveli-Kattabomman (1036), Pasumpon Thevar Thirumagan (1029), Ramanathapuram (1020) and Pudukkottai (1006), in Cauvery delta have manifested the sex ratio in favour of females. On the contrary, the lowest sex ratio is recorded in Coimbatore district (910) closely followed by Madras (930) and Salem (932). The excess of male population in these three districts is mainly due to the higher rates of male in-migration from other states and districts in search of employment because of their industrial development.

Literacy

According to 1991 census the general literacy rate (number of literates to total population including 0-4 population) of Tamil Nadu (54.6%) stands second place among the major states of India. However, differentials in literacy rate across the ecological regions, districts and sex wise are noteworthy. While higher general literacy rate is noticed in hilly (63%), southern plain (56%) and Cauvery delta (55.0%), it is at the lower side in Coromandal (50.8%) and western regions (50.1%). Madras urban agglomeration (72.6%) closely followed by Kanniyakumari district stands first in literacy rate. Dhramapuri has recorded the lowest overall literacy rate (39.8%). Looking into the sex-wise differentials it is clear that male literacy rate is higher (64.0%) in T.N. as compared to female literacy rate (44.9%). Across the ecological regions though same trend has been noticed, as in the case of general literacy rate, the difference between male and female literacy rate is slightly large in Coromandal, Cauvery and southern plains (around 21 percentage points) as compared to western and hilly regions (around 18 points). These differences are still wider in the districts of Pudukkotai (24 points), Pusumpon Thevar Thirumagan (24 points), Thruvannamalai-

Sambuvarayar (23 points) and South Arcot (23 points). On the other hand, this disparity is conspicuously lowest in Kanniyakumari (6 points) closely followed by Madras U.A. (10 points). This may be due to its closer proximity with Kerala State in the former case whereas of its urban nature in the latter case.

Conclusions

From the above findings it has been confirmed that ecology plays a major role in the differential growth and distribution of population in Tamil Nadu. As expected the growth and concentration of population is highest in fertile and plain regions than in hilly and dry plains. However, in respect of urban population and literacy status it is fascinating to note that the hilly region stands first. This may be due to its better infrastructural facilities and economic development. Of course, district-wise variations have also been observed in the above aspects. Hence, it is recommended that future policies and programmes of development may be framed and implemented on the basis of differential ecological and district-wise population aspects instead of state as a whole.

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