

ABSTRACT

Urbanization is the process by which cities grow and population is concentrated in urban areas. The growth of census towns makes a notable contribution to the process of socio-economic and socio-cultural transition of dwellers. The separate recognition of census towns and statutory towns contributed to a better understanding of the urbanization pattern. In the new era of urban development, increasing urbanization has a direct impact on the demographic and socio-economic situation of statutory and census cities. Census Towns are the towns which are not legally registered areas and administer the area like a city, they are in rural revenue village, i.e., they are administratively in the rural area but their population has attained urban characteristics. The role of Census Towns (CTs) in the urbanization process in sub-Himalaya West Bengal as well as in the Dooars region is very crucial. It influences not only the rate of urbanization in this region, but also changes in land use and land cover as well as the socio-cultural conditions of the study area. The CTs are helping to change the land use pattern of the sub-Himalayan regions of West Bengal. The extent and pace of urbanization have had a profound impact on the livelihoods and demographics of cities and CTs. The growth and expansion of CTs are directly influenced by the rate of urbanization and indirectly by the sociocultural changes in the study area. The present study is an attempt to assess the trend and growth of CTs more accurately and scientifically, the livelihoods and infrastructural development of the Census Towns accordingly, to identify the key issues disrupting the growth of CTs and the allocation of facilities and services to ensure a better socio-economic life of residents of census cities in the study area. In addition, it aims to examine various urban problems and provide some remedies.

Jalpaiguri district is in the northeast of West Bengal. Geographically, the district is bordered by Alipurduar district to the east, Cooch Behar district to the southeast, Kalimpong district to the north, Darjeeling district to the north, and the Bangladesh International Border to the south and southwest. Geographically, Jalpaiguri district is located at 26° 16' to 27° North latitude and 88° 23' to 89° 8' East longitude.

The study is based on five main objectives: i) To find out the pattern and growth of CTs of the Jalpaiguri district, ii) To find the livelihood conditions of Census Town dwellers, iii) To scrutinize the levels of infrastructural development of the CTs of the study area, iv) To analyze the problems associated with the urban development of the CTs of the study area, v) To

recommend the developmental strategy of the Census Town dwellers. Based on the selected objectives, there are four main hypotheses, namely i) The levels of urbanisation of the CTs are increasing over periods, ii) The socio-economic and socio-cultural status of the CTs are facing several challenges, iii) The infrastructural development of the CTs is inadequate, and iv) The problems associated with the urban development of the CTs are more in the case of large CTs and low in the case of small CTs.

The first objective and hypothesis has been proved by the fact that the census towns share a significant percentage (almost half of the total urbanization) of the urbanization rate in Jalpaiguri district. While the concept of Census Towns (CTs) was introduced by the 1961 Census of India, the trend and growth of CTs varies from time to time. In 1961 the number of CTs in Jalpaiguri district was only 3, 3 in 1971, 4 in 1981, 6 in 1991, 4 in 2001 and 15 in 2011. The district's first Census Towns (CTs) were Maynaguri, Dhupguri, and Mal. The growth history of the Census Towns (CTs) of Jalpaiguri district shows the fact that there are no constant growth characteristics from the first decade of the CTs to the last few decades. Very slow, negative, and high growth rate of some CTs proves poor growth rate of district urbanization. But the past two decades, the growth rate is increasing due to the increase in the number of CTs of such a district. The 1961-1971 and 1971-1981 period was identified as a very slow growth period. The period from 1991 to 2001 has been identified as a negative growth period due to the declining of few census towns (CTs). The number of CTs was decreased from 6 in 1981 to 4 in 1991. The period from 2001 to 2011 has been considered a high growth period due to the emergence of several new Census Towns (CTs) over the past decade. The number of CTs was increased from 4 in 2001 to 15 in 2011. There are some important statistical tools such as growth indices, census town population balance sheets, annual exponential growth rate, etc. to measure the trend and growth of census towns. Urban geographers use these tools to measure urban growth. The same tools were also used in this study. Using the different measurement tools, it was found that the Census Towns (CTs) experienced low growth and experienced significant to high growth percentage over time from inception to the last census. The population balance for the census towns in the study area is calculated. The calculation shows that the growth rate and size classes of the CTs increase over time. The correlation coefficient was calculated and graphed to show the relationship between the total population size of CTs and the annual exponential growth, and it was shown that there is a very strong relationship between these two variables.

The second objective and hypothesis has been proved by the fact that the social elements such as caste composition, sex ratio, marital status, age-gender structure, literacy status, health information, language, religion, etc. and economic elements such as economic activities, workforce composition, monthly family income, house type, housing conditions, basic housing amenities, household wealth, etc. were discussed in order to get an idea of the socioeconomic conditions of CT residents. The analysis revealed that the socio-economic characteristics of CT differ from town to town. The analysis has shown that the CTs in the tea and forest region have a higher concentration of the ST population in the northern part of the district than in the southern part. In terms of the sex ratio of Jalpaiguri district CT residents, Jalpaiguri district has an urban sex ratio of 943, slightly lower than the state average of 944 but higher than the national average of 926. The study shows that all CTs homogeneity and marriage similarities in the under 20s and over 30s age group, and the number of married women in the first age group at marriage is higher than that of men. On the other hand, the participation of men and women in marriage in the middle age group varies between CTs in the district. Looking at the total population as well as the population in different age groups in the CTs, the proportion of men in the entire district is comparatively higher than the proportion of women. The study also shows that residents use several common languages (Bengali, Hindi and Tribal) and a significant number of residents use other languages for their daily communication in the district's census towns. Several religious people also live in the CTs, even without any creed. Analysis was also conducted for common diseases of residents of the CTs across the district, and it was found that most of the residents face common diseases such as diarrhoea, fever, cough, hyperacidity, Covid-19, and some other diseases. There are also regional imbalances in the economic profile of census town residents. The census towns concentrated in the tea and forest region were found to have relatively lower economic status. Much of their workforce worked on tea plantations, resulting in a lower per capita income. The economically dependent population is also higher in these census towns, since the possibility of finding a job or other employment is comparatively low. Aside from these census towns, others have other difficult economic conditions. However, as the study shows, the overall economic profile of residents of census town is significantly low. Overall economic development is essential for a better economic livelihood. Residents had lower livelihoods throughout the study period. The differences between the Jalpaiguri district CTs were calculated to show the relationship between the various indicators of the CTs and their developmental scores, and it was shown that the maximal CTs range from the least developed to the moderately developed CTs.

The third goal and hypothesis were supported by the fact that the spatial and temporal growth of CT and the improvement of urban infrastructure over time. The analysis revealed that the infrastructural characteristics of CT differ from town to town. The composite index was calculated to measure the infrastructural development of CTs. The spatial distribution of the CTs based on their infrastructural characteristics also showed some essential characteristics. The majority of the CTs had low to very low levels of infrastructure development in 1991 and 2001. The scenario of the CTs was upgraded in 2011, with the level being reduced from low to very low level of infrastructure development and upgraded to the level of high to medium level of infrastructure development. However, almost 50% of CTs belong to high-medium level and a little more than 50% of CTs belong to low to very low-level level infrastructure development.

The fourth goal and hypothesis were supported by the fact the census towns and their dwellers suffer from many problems related to their daily livelihood. There is a lack of some basic facilities within the CTs such as access to clean drinking water, latrine and bathrooms, drainage, and separate kitchens, etc. All issues were discussed separately in every CT to understand the problem scenario. One of the main problems faced by CT dwellers is the lack of drinking water supply in the CTs. Due to the lack of proper water treatment facilities, a large percentage of households do not have access to clean water. Another problem is that to date, a large percentage of the homes of many CTs in the study area do not have latrines on their premises. This is because some of the CTs are in rural areas and a significant number of residents are uneducated. As for the proportion of households without separate kitchen facilities, in some CTs there are many households that do not have separate kitchens, particularly those whose occupants are economically vulnerable and dependent workers in the tea garden. In terms of the percentage of households without a drainage system, many households, almost all CTs, do not have a proper drainage facility in their home. Regarding the pH of the drinking water and the TDS of the water in the CTs, some of the CTs have a pH below 6.5, indicating the presence of acidic elements in the water, which non-potable according to the Bureau of Indian Standard. There is a CT where the TDS level in the water is below 50ppm, indicating it is not suitable for drinking. Regarding the noise level in the CTs, 73% of the CTs in the study area found an above-average noise level. There is a lot of noise pollution in the Jalpaiguri district CTs. Regarding the air quality (PM_{2.5} and PM₁₀) in the CTs, the survey result shows that some of the CTs have a PM_{2.5} concentration higher than the safe limit, and regarding PM₁₀, there are no CTs of the study area with more than 100g/m³. This means that the concentration of PM₁₀ in the CTs is safe compared to PM_{2.5} in the atmosphere of the CTs

across the district. There is a strong positive correlation between the total population and the concentration of PM_{2.5} and PM₁₀ of the CTs. Regarding the air quality (TVOC and HCHO) in the CTs, the survey result shows that there is one CT that has TVOC above 0.2 mg/m³. The survey also shows that there are 3 CTs that have HCHO above 0.0123 mg/m³. Regarding the traffic volume in the CTs, the traffic load at the junction of all the CTs is heavy, and the CTs that are close to the highways have heavier traffic. On the other hand, the CT away from the highways have a low traffic load. Based on the average waiting time in minutes at the junction of all CTs, it shows that 33% of CTs have no waiting time for traffic at the junction. It is important to mention that the CTs located along the highways must wait a long time for traffic. Regarding the health infrastructure in the CTs, on average, most CTs have a lack of adequate health facilities in their CT area. As such, residents of CTs face several health challenges, particularly among the larger CT dwellers. Regarding the modern employment opportunities within the CT, the primary survey shows that almost all CT residents of any individual CT are dissatisfied with the availability of modern employment opportunities within the CT. They claim that the CTs lack modern facilities. Regarding solid waste, there is no system for collecting waste from residents. The dwellers of the CTs throw their daily rubbish everywhere. Therefore, the situation was getting worse day by day and it was observed that most respondents were dissatisfied with the solid waste in their CTs.

The fifth goal has been proved by the various recommendations along with their problems within the CTs. Suggestions are made from the viewer's own perspective. Since these are the Census Towns (CTs), the Gram Panchayats cannot provide adequate urban amenities for CT residents. The CTs should be declared as a Notified Area or Municipality. When the CTs become a municipal body, almost all the problems of the CTs will automatically disappear. As the municipality or notified area has its own laws and functions. Aside from that, the continued growth of CTs also creates some demographic issues. Therefore, the competent authority should take some necessary measures to minimize this problem. Education is another background that causes some breaks in the development of CTs. However, the literacy rate and level of literacy among CTs show spatial variation in the district. Some of the CTs have a standard literacy rate with a standard literacy level, but some of the CTs have a low literacy rate compared to the Indian urban literacy rate. Therefore, the government should need to set up more educational institutions within the CTs. Also, the existing health facilities in the CTs are not sufficient to cope with the health problems of the CT residents. So, to minimize these problems, the government should have to set up a health facility. Also, most of the CTs in the

study area have an inadequate drainage system, so a proper drainage system is required in the CTs. Modern livelihood facilities are also insufficient in some CTs where very few modern living options are available, so there is a need to improve of modern facilities within the CTs. The district offers opportunities for new employment such as tourism industry, large and small industries, tea industries. Using these possibilities, the CTs can be developed. There is much prosperity in Jalpaiguri district in terms of developing industries. Some small and large industries are already settled in the Siliguri-Jalpaiguri corridor region. Some of the CTs in the study area are equipped with insufficient transport and communication facilities. Therefore, in the interest of the residents of CT, the government should build a proper transport network for communication. It has been noted that some CTs do not have drinking water supplies within the CTs, this should be minimised. There are also some environmental issues in the CTs that required proper treatment. The CTs have a variety of solid waste, but unfortunately there is no disposal for it. Therefore, a proper waste disposal system is required in the CTs. There is a lack of community facilities such as a cultural club, playground, auditorium, parks, etc. in the study area at such locations, and they are needed to develop the CTs. There are several tourist attractions in the district that can attract tourists and make CTs economically and socially strong. Proper land use can make the CTs healthy and affect the CTs functions better and better. However, the conditions of the CTs as well as the CT residents can be changed by a smooth cooperation of the CTs residents. Each CT resident can make their CTs stronger and more solid politically, socially, and economically.