

ABSTRACT

RURAL-URBAN INTERACTION: A CASE STUDY OF SILIGURI MUNICIPAL CORPORATION WITH SILIGURI SUB-DIVISION OF DARJEELING DISTRICT

Introduction

The function of rural area is related with agricultural land and villages mainly operate through primary activities whereas urban area accommodate within it with various industry, shops, offices, warehouses, public building etc. The natural link between this two is provided with development of transport and communication. So, the relationship between rural and urban areas are multidimensional incorporating trade and financial relations, agricultural relations, industrial relations, social and cultural relations, education and health relations, transport and communication relations and finally administrative and political relations. Here the urban area depends on its rural counterpart for its need of agricultural and allied materials and rural area depends on specialized function of exchange, manufacture and services on urban areas. Thus the rural-urban interaction is a two-way or mutual process involving social, economic as well as political consideration.

The distinction between urban and rural is not at all very sharp across the developing countries, there is still several rural features noticed in urban areas. The main reason behind this is a different process of development witnessed across the developing countries taking place in a totally different historical context compared to already developed world.

Objectives

1. To study the growth of rural and urban settlements within study area.
2. To study the various factors governing rural-urban interaction and delineate the zone of interaction in the study area.
3. To study the transport network and analyze the land use and land cover change within study area.
4. To study the pattern of rural-urban interaction within study area.

Hypothesis

1. With an increase in distance from Siliguri Municipal Corporation the population growth in rural settlements decrease.

2. Road density decrease with an increase in distance from Siliguri Municipal Corporation.
3. There is a negative relationship between distance from the Siliguri Municipal Corporation and land use and land cover change in the study area.
4. Rural-urban interaction decrease with an increase in distance from Siliguri Municipal Corporation.

Database and methodology

Both primary and secondary sources of data have been used for the present study. Keeping in mind the objectives, the relevant necessary primary data was collected through prepared questionnaire related to economic, agricultural, educational, health, entertainment and administrative / organizational linkages.

The secondary data like demographic characteristics, growth of rural and urban settlements and economic activities was collected from District Census Handbook, Town and Village Directory, West Bengal Administrative Atlas, Government Reports, Occasional Papers and other reports of Census of India. Satellite imagery data will be collected for 1991, 2005 and 2020 to analyze the change in land use and land cover. The analysis will take into consideration the three consecutive census years of 1991, 2001 and 2011. Data related to origin and evolution of the city and surrounding area will be collected from historical records, published monographs, gazetteers and old maps.

Major findings

In the present study an attempt has therefore been made to study the growth of rural and urban settlements. The population growth was analyzed from 1991 to 2001 based on the census data. The analysis was done for all the four blocks, i.e. Matigara, Naxalbari, Phansidewa, Kharibari as well as Siliguri Municipal Corporation. It was observed from the analysis that population growth in the study area was very rapid from 1991 to 2011. However, the decadal growth of population was not uniform for all the blocks. Matigara block located closest to Siliguri Municipal Corporation witnessed very high population growth both during 1991- 2001 and 2001 -2011 as a direct impact of rapid population spill out from SMC to its surrounding areas that took place from 1991 onwards. On the other hand, Phansidewa and Kharibari block located farthest from Siliguri Municipal Corporation have recorded relatively less population growth. Siliguri Municipal Corporation during 1991- 2001 more than doubled

it's population due to addition of adjoining area within its boundary but during the next decade it witnessed a very moderate population growth.

The size class classification of rural settlements within the study area was also done for each block. It was observed that the conversion of villages in to census towns in Matigara and Naxalbari block saw a decrease in their total number of villages from 1991 to 2011. However, the same cannot be said for Phansidewa and Kharibari as the total number of villages from 1991 to 2011 remained almost the same. Another interesting fact which requires attention is that the numbers of villages in the lowest four size classes have declined considerably in the study area in 2011 compared to 1991, while an opposite trend was visible for the largest three size classes.

The study area portrays diverse socio-economic characteristics. In general, the literacy rate of villages decreases with increasing distance from Siliguri Municipal Corporation. The literacy rate for most of the villages has seen improvement in 2011 compared to 1991. Moreover, the villages with very low literacy rate in 1991 witnessed the highest improvement in 2011, with a few exceptions. Similarly, the sex ratio also varies among the villages and there are many villages in the study area where high sex ratio were recorded. Most of the villages with low sex ratio in 1991 witnessed a significant improvement in sex ratio in 2001 and 2011. In terms of distribution of population according to worker's category, an increase in the share of marginal workers in the villages has been observed. Most of the villages reported a very low share of marginal worker in 1991 (Zero in nearly 50 % of villages) but in subsequent years this share increased to about 5 to 15% of the total population in the villages. This increase in the share of marginal workers for most of the villages in the study area has taken place at the cost of main workers. Continued increase of marginal workers at the cost of main workers will definitely have severe repercussions which will eventually have catastrophic effect on the rural economy of the study area.

In this study an attempt has been made to study the transport network and analyze the land use and land cover change within the study area. It was observed that although, Siliguri sub-division is connected by roadway as well as railway, it is the roadways that are the most popular mode of communication for the rural population in the study area. Although, railway network is present but lack of suburban rail connectivity with Siliguri does not make it a popular mode of transportation for the rural population of Siliguri sub-division to connect with Siliguri. The transport network is most developed in Siliguri Municipal Corporation and its surrounding rural areas and as one moves away from the main urban centre the transport network also became less developed. The transport network analysis done for the study area

shows that Siliguri Municipal Corporation and its surrounding areas around Bagdogra, Shivmandir and Matigara covering the east-central part of the study area have the highest network connectivity and as one moves towards the north, west and south-western part of the sub division the transport network connectivity deteriorates considerably. It has also been observed that the road density within the study area isn't consistent and varies. The highest road density was observed around Siliguri Municipal Corporation and its surrounding area and the lowest road density observed along the border areas of the sub-division, Matigara has the highest road density while Kharibari and Phansidewa has the lowest road density among the four blocks. While among the zones, Zone I has the highest road density and Zone III has the lowest road density.

The land use and land cover change in the study area has been analyzed for seven classes which are agricultural land, barren land, built-up area, forest cover, sand bars, tea garden and water bodies. The area under built-up area and tea garden has increased while the area under agricultural land has declined for all the zones as well as the blocks from 1991 to 2020. As far as the rest of the classes were concerned, not much change has been recorded from 1991 to 2020. It is also seen that the built-up area increased as result of rapid urbanization and increase in associated construction activities. The area under tea garden has also gone up considerably due to the conversion of agricultural land into tea garden. This shift from agricultural practices to tea plantation by small farmers was because of the relatively more profitable nature of tea plantation than conventional agricultural practices. It is worth mentioning that land use and land cover change along the main transportation lines in the study area has also undergone a lot of change which is a direct result of agricultural land being converted to built-up area.

The present study would remain incomplete without analyzing the pattern of rural-urban interaction within the study area. To fulfill this objective of studying the pattern of rural-urban interaction within the study area, 55 villages were selected based on their size-class category from Zone I, II and III respectively. Since rural-urban interaction takes place for a variety of reasons so in this study, rural-urban interaction was analyzed for the following purposes viz. economic, agricultural and educational, health, entertainment, administrative and organizational. From each of the 55 selected villages, the households were classified on the basis of frequency of visit to Siliguri Municipal Corporation for each of the above mentioned purposes. The unequal weightage method was used, with the highest weightage given to those households who visit Siliguri Municipal Corporation daily and the lowest weightage to those households who never visit Siliguri Municipal Corporation. This gave a composite index of

interaction for each of the 55 villages with respect to different purpose of the rural-urban interaction individually. While analyzing the rural-urban interaction, it was seen that interaction for economic, agricultural and educational purposes were in general higher compared to interaction for health, entertainment and administration and organizational purpose between the villages of the study area with Siliguri Municipal Corporation. However, a dominant trend with respect to all the purposes of rural-urban interaction in the study area is that the frequency and volume of interaction decrease with an increase in distance from Siliguri Municipal Corporation. Infact, while analyzing the relationship with average income of households and the literacy rate of 55 selected villages with their composite index of interaction, no significant relationship was established. Therefore, it can be said that for rural-urban interaction between the villages of the study area with Siliguri Municipal Corporation, distance of a village from Siliguri Municipal Corporation plays the dominant role in determining the level of interaction.

Conclusion

Rural-urban interaction is beneficial for both the urban areas and the surrounding rural areas. It helps in integration of the rural economy with the nearly urban centre. However rural-urban interaction in the study area is not uniform with the presence of a number of villages whose interaction with Siliguri is minimum. Therefore, efforts need to be done to increase the rural-urban interaction in the study area. This will finally lead a harmonious development of both Siliguri Municipal Corporation and the rural areas of Siliguri sub-division in the future.