Structural Transformation of the Villages in Delhi Metropolitan Region

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Introduction

The structure and function of villages surrounding a city has traditionally been an important area of geographical research as it helps us to know the impact of the city on economy, land-use and social structure of the villages. On the other hand, such analyses could help frame policy that addresses the issues of resource optimization and the pace of growth of the services sector from the city center to the adjoining villages.

This study of the rural urban interaction is the case study of selected villages of Delhi Metropolitan Region (DMR). The choice of Delhi was made because Delhi fulfils all the conditions of a metropolitan city and is a seat of central services of their respective area of influence. The unprecedented expansion of the metropolitan city of Delhi since independence has had great impact on its regional structure and its surroundings. The settlements in the Delhi Metropolitan region are experiencing physical, social and economic transformation at a much faster rate than the settlement in the remote areas, which do not have direct access to such a dynamic city as Delhi. The physical expansion of the metropolis has not kept pace with its population and its economic growth, due to which, the spill over effect are being borne by the settlement in the neighborhood which continue to function for the city and bear some of its population and economic loads at a cheaper economic cost than the city. The neighboring settlements in turn depend upon the city for several specialized function and vice-versa. Hence the city has been assuming greater importance day by day. Therefore, the present study will focus on the relationship between the city of Delhi and its hinterland.

The dynamism exhibited during 1961-1981 by the DMR towns is expected to continue in the succeeding decades. In the 1990's the growth rate of population in DMR is around 33.22%. Delhi Union Territory in the nineties has the highest rate of growth (51.44%). The total area of rural Delhi in 1981 is 891.1 Km^2, whereas, in 1991, it is only 797.66 Km^2. So, over a period of ten years it had lost 93.44 Km^2 of land, owing largely to urbanization.

With the improvement in communication and transportation, the social and economic opportunities of the city become more accessible to rural residents in the hinterland consequently their level of living rises and the urban impact radiates rapidly. Settlements having better transport facilities are more urbanized than those are located far away from the transport line.

The rural areas being primarily agricultural areas, the land use pattern are also basically agricultural in nature. However the proximity to metropolitan city affects the land use pattern in two ways. Firstly, the conversion of land for industrial and commercial purposes and secondly, change in the pattern of land use within agricultural sector under the impact of the demand from the urban core. Though the expansion of urban area is a threat to the rural periphery in terms of losing their agricultural character at times they are found to get strengthened in agricultural activities due to urban demand for agricultural

goods. In the case of Delhi's hinterland the changes in the land use pattern has to be explored to assess its impact on land use.

The proximity of the rural areas to the urban metropolis of Delhi (DMR Region) would tend to induce a higher level of literacy in the population, if only because of the fact that an urban conglomerate offers a higher percentage of what are called *white collar* jobs. It would be necessary to explore the strength of the association between the levels of educational attainment and the occupational structure of the population in the rural areas around the DMR.

The distributional pattern and the types of services, the number and functional inter-relationship of the service areas, the occupational structure of the jobs and the functional segregation of land use in various rural settlements alter drastically due to their proximity to large cities. Their regional variations are mostly dependent on the sequential growth of their morphology and the socio-economic structure of the society they represent and serve.

To study the Structural Transformation, some of the above few components are taken into account and the following specific objectives are drawn for further research. While examining the structural and functional pattern of the village, however one can not afford to neglect the analysis of the influence of various factors that are not specifically rural but which do exist and in some cases dominate the life of the village. Thus services, transportation, construction and the level and pace of industrial activity must be examined as well.

The main objectives of the study are; To study the spatial pattern of agricultural land use changes within the villages under study, to analyze the spatial pattern of educational and occupational structure of the population, to identify the spatial variations in the standard of living within the villages under study, to examine the nature of functional relationship between the villages and the urban centers, viz; to understand the rural –urban linkages.

Data for the study are both primary and secondary in nature. Secondary data have been collected from Census of India and the Annual Reports of National Capital Region Planning Board, while, Primary data has been collected through field survey of the selected villages in Delhi Metropolitan Region (DMR).

Methodology

The study uses two formal methods for analysis, which neatly divides it into two stages. In the first stage, the study has used secondary data of the DMR for the period 1971-1991 to broadly draw the structure of the hinterland. Further in the second stage, the study used questionnaires, focus group discussions and other interactive techniques for generation of primary data from nine villages in the DMR that are surveyed for the purpose of the above research. The primary data has been analyzed through the use of various statistical tools which are formally structured to derive the different linkages as have been sought in the objectives, in a form that can be interpreted to derive tangible and quantified results for the researcher.

Statistical methods such as correlation, multiple regression, standard deviation and other statistical methods are used where it is required. Index of Standard of Living has been worked out for the analysis. Suitable cartographic techniques also utilized to represent statistical data.

Sample Design

The study aims to cover rural population in order to bring out the difference in socio-economic structure of the population by residence. The sample population was designed to provide estimate for the village as a whole. The study considered a sample size of 5% of the total household. The rural sample comprised of nine villages, on the basis of the total sample available, covering 450 households. Out of which few villages are within 6 kilometres from the urban centers and rest are selected from 15 kilometres away from the urban centers. The differing distances of various villages from the urban centers was sought, so that would enable the researcher to examine the nature of urban influence on the villages.

Different social groups were taken into consideration to estimate the number of households for the survey. The sample households were distributed proportionally according to the proportion of the households within each social group. During the survey the researcher initiated prolonged and detailed interviews with nearly 5% of the households in each of the nine villages. It is perhaps important to note here that the endowments of the respondent (the size of land held by him, for example) were not taken into account as a basis for selection, or otherwise, of the household. Primary household survey was conducted from December 2001 to March 2002.

The following hypotheses have been constructed from the above discussion. They are: The agricultural land use pattern of the villages near the city is urban oriented; Shorter the distance from urban area, higher the levels of education; Proximity of the urban centers has a strong influence on the occupation of the workers in the villages surrounding them; Shorter the distance from urban area, higher the standard of living and vice-versa.

Result

Different statistical methods are used to understand these relationships. It has been observed that there is a clear- cut gender bias in the educational attainment in the region. This indicates the existence of male dominance in Indian (patriarchal) society. Major proportion of girls attains only upto high school level. Distance of the school from the village and mode of conveyance are major determining factor for higher education. The villages in the vicinity of the metropolis seem to be changing their character (in occupation) more conspicuously than those situated away from it. Standard of living is also affected by distance. Similarly villagers near the urban centers are growing more vegetables whereas; villagers in the far off areas are growing more food crops. Distance of village from the urban area and mode of conveyance are the major determining factor for any change.