EUROPEAN ACADEMIC RESEARCH
Vol. V, Issue 5/ August 2017

Impact Factor: 3.4546 (UIF)
DRJI Value: 5.9 (B+)

ISSN 2286-4822
www.euacademic.org

On Housing Geography: A Spatial Analysis of Urban Housing Scenario in Srinagar City, J&K

TAWSEEF YOUSUF[1]
Doctoral Scholar
Department of Geography and Regional Development
University of Kashmir, Srinagar (J&K)
TAWHEED YOUSUF
Department of Higher Education
Government of Jammu Kashmir, Srinagar (J&K)
Dr. SHAMIM AHMAD SHAH
Associate Professor
Department of Geography and Regional Development
University of Kashmir, Srinagar (J&K)

Abstract:

For the fact of the matter, the modern concept of housing does not limit the idea of housing merely to the provision of shelter. Rather, the house that people live in, touch upon every facet of their lives and the society as a whole. In the last couple of decades Srinagar city has been experiencing very rapid urbanization. This is largely due to very rapid urban growth associated with natural population growth and rural-urban migration driven by rapid socio-economic changes and development. The Main focus of this study is the spatial analysis of urban housing scenario in Srinagar city and to offer some revival measures or suggestions for better urban management of the Srinagar city, J&K. The significance of present study lies in the fact that the present structure of the Srinagar city, its problems and the magnitude of the problems, to be faced by it in future especially related to urban housing/settlements due to population growth indicate that the city is heading towards a critical situation of no return.

[1] Corresponding author: tawseefyousuf@gmail.com

This study is based on both primary as well as secondary data sources and the universe of the study is exclusively the capital city of Srinagar, comprising a total of 68 wards. So, the data collection was done using Stratified Random Sampling (proportionate allocation) method. The collected data has been analysed and represented with aid of statistical, graphical and cartographic techniques. This analysis can serve as a helpful resource in policy advocacy, with the aim of influencing changes to positively affect the current housing situation in Srinagar, in a way which will ultimately lead to a better socio-economic development of society.

Key words: Housing Geography, Spatial Analysis, Urban Housing Scenario, Srinagar City, Urban Housing Information System (UHIS), House-to-House Gap

INTRODUCTION

In the last couple of decades Srinagar city has been experiencing very rapid urbanization. This is largely due to very rapid urban growth associated with natural population growth and rural-urban migration driven by rapid socio-economic changes and development. However, this growth has not been matched with simultaneous provision of adequate services/infrastructure and resource development. Thus, the significant rise in population, number and size of households have led to the acute shortage of dwelling units, resulting in overcrowding, high housing & land prices, poor urban living conditions, low infrastructure services, deteriorating environment, increasing poverty and rise in urban insecurity. The significance of present study lies in the fact that the present structure of the Srinagar city, its problems and the magnitude of the problems, to be faced by it in future especially related to urban housing/settlements due to population growth indicate that the city is heading towards a critical situation of no return.

STUDY AREA:

Srinagar city is located between 33º53´49´´-34º17´14´´N latitudes and 74º36´16´´ - 75º01´26´´E longitudes. It is the summer capital of the state of Jammu & Kashmir. It is situated at an altitude of 1585 meters above the mean sea level and spreads over the midst of an oval shaped valley of Kashmir. Srinagar city has grown over the past about eleven hundred years on either banks of river Jhelum of Kashmir valley. The city as well as its hinterland is encircled by the natural wall of mountains (the sub-mountain branches of the Pir Panjal range) whose height varies from 1800 to 4300 meters above the mean sea level. Apart from these physical diversities the serpentine river Jhelum traverses the city from the south-east to north-west, meandering for about 29 kilometers dividing the city into two parts which are so well interwoven by different bridges (13 in number) over the river Jhelum that they represent two in one. Srinagar City is famous throughout the world for the tourist attraction. The city receives high influx of tourists both from India and outside India. Srinagar city for being the capital of the state, all the developmental processes and infrastructural advancements are made available here which attract people from all parts of the state, which could be understood from the fact that Srinagar is the only Metropolitan city of the state.

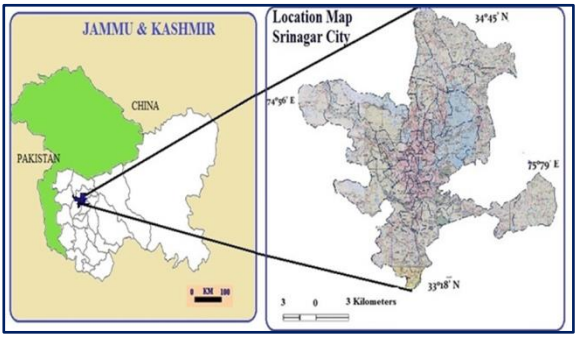


Figure 1.1: Location of Study Area

Objective

The prime focus of this study is the spatial analysis of urban housing scenario in Srinagar city and to offer some revival measures or suggestions for better urban management of the Srinagar city, J&K.

Database & Methodology

Coverage: The universe of the study is exclusively the capital city of Srinagar, comprising a total of 68 wards. So, the data collection was done using Stratified Random Sampling (proportionate allocation) method representing all the wards of Srinagar city. At Random, households were covered for Field Household Survey from different areas within Srinagar city.

Sources of Data Collection: The information related to the present study has been gathered using a variety of methods to gain a better understanding of the situation, issue, perspectives and priorities. Methods used for the data collection included documentation, archival records, interviews, direct observations etc. The present study is based on both primary as well as secondary data sources. Primary data was collected with the help of field household survey i.e. through questionnaires/schedules, interviews and personal observations.

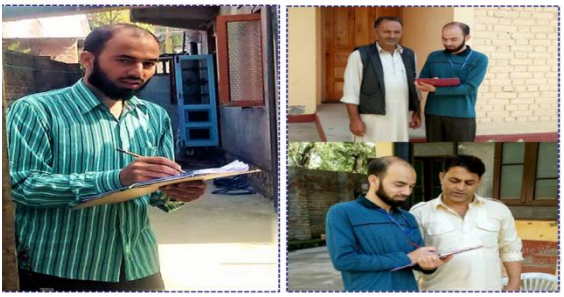
Data Collection Technique: The primary data collection was done using Stratified Random Sampling (proportionate allocation) method covering all the wards of study area. At Random, 2000 sample households were covered for Household Survey from different areas within core of Srinagar city. The selection of samples for field survey is nearly representative and conforms to the spatio-geographic distribution. For obtaining the required data and information a total of 2000 questionnaires were framed, distributed, collected and analysed for the purpose, keeping in view the predefined procedure.

Nevertheless, wherever the households were illiterate, the questionnaires were filled by the investigator himself by gathering the required information orally.

Secondary Data: Supplementary data comprising reports and publications relevant to the present study were obtained from different sources mainly including the publications of different organizations and offices of urban local bodies in Srinagar city viz. Srinagar Municipal Corporation (SMC), Office of Deputy Commissioner Srinagar, and Srinagar Development Authority (SDA), for the undertaken study. The contemporary land/housing value data regarding different locations within Srinagar city was acquired from Office of Deputy Commissioner Srinagar.

The collected data has been analysed and represented with aid of statistical, graphical and cartographic techniques.

Researcher Collecting Data During Field Survey



RESULTS & FINDINGS

This initial segment of research study makes an analysis of the housing scenario of the households in the Srinagar city. Data and figures are based on and have been collected from 2000 sample households using stratified random sampling (proportionate allocation) method from 68 wards, grouped into 8 Housing Density-Land value (HDLV) classes given in following table 1.1 and table 1.2 and depicted in the map below in Figure 1.2.

The magnitude of homeless population in the Srinagar city is minimal (less than 1 per cent) as revealed by field study. Only few wards experience problem of homeless population that too in very less magnitude. However, the household density and population density as being very high in wards falling in the two HD-LV classes viz. HD-HLV and HD-MLV. The crowding density is also extremely high in these very same wards grouped under two HD-LV classes viz. HD-HLV and HD-MLV (Computed from Field Survey).

Table 1.1: Housing Density-Land Value Classes

S. No.	Housing Density-Land Value Classes	Mean Annual PCI (₹)	Mean House Value in Lakhs (₹)
1.	High Density - High Land Value (HD-HLV)	27564	53
2.	High Density - Medium Land Value (HD-MLV)	47280	40
3.	Medium Density - High Land Value (MD-HLV)	38810	51
4.	Medium Density - Medium Land Value (MD-MLV)	62760	38
5.	Medium Density - Low Land Value (MD-LLV)	49530	21
6.	Low Density - High Land Value (LD-HLV)	151149	50
7.	Low Density - Medium Land Value (LD-MLV)	63978	36
8.	Low Density - Low Land Value (LD-LLV)	55623	16

Source: Computed from Field Survey and Land/House Value Data of Office of Deputy Commissioner Srinagar (2013-14); Average computed by Harmonic Mean

Table 1.2: Ward-wise Grouping of Housing Density-Land Value Classes

S.No.	Housing Density-Land Value Classes	Wards	Total No. of Wards
1.	**(HD-HLV)**	S.R. Gunj, Malik Angan, Jamia Masjid, Aqilmir-Khanyar, Zindshah-sahib, Ganpathyar, Khankhai Moulla, Barbarshah, Khawaja Bazar, Syed Ali Akbar Safa Kadal	11
2.	**(HD-MLV)**	Nawab Bazar, Islamyarbal, Allochi Bagh, Chattabal, Aali Kadal, Batamallo, Hassanabad	07
3.	**(MD-HLV)**	Kawdara, Soura, Shaheed Gunj, Mukhdoom Sahib, Karan Nagar	05
4.	**(MD-MLV)**	Jawahar Nagar, Chanapora, Jogilankar, Eidgah, Nowshera, Sheikh Dawood Colony, Zoonimar, Buchpora, Magarmal Bagh, Qamerwari, Bemina East, Lal Bazar	12
5.	**(MD-LLV)**	Tarabal, Mehjoor Nagar, Parimpora, Natipora, Zadibal, Ahmad Nagar	06
6.	**(LD-HLV)**	Lal Chowk, Baghat-Barzulla, Dalgate, Nishat	04
7.	**(LD-MLV)**	Bemina West, Rajbagh, Nund Reshi Colony, Umar Colony, Locut-Dal, Rawalpora, Wazirbagh, Bud-Dal, Humhama	09

Source: Computed from Field Survey

The mean annual Per Capita Income (PCI) of sample households is depicted in table 1.1 and subsequently exemplified in the following map (figure 1.3). The Correlation coefficient value comes upto +0.15 which shows positive correlation and Chi-Square value is 0.046 (x^2) which means that there is generally a significant variation in mean annual household Per Capita Income with respect to mean House value in the city.

Table 1.3: Location Quotient displaying Household Concentration in Srinagar City

S.No.	Location Quotient Class	No. of Wards in each Class	Name of Wards in each Class
1.	Highly Excessive Concentration (Above 1.10)	04	Magarmal Bagh, Rawalpora, Bud-Dal, Sheikh Dawood Colony
2.	Excessive Concentration (1.02-1.10)	30	NundReshi Colony, Hazratbal, Zindshah-sahib, Allochi Bagh, Wazir Bagh, Mukhdoom Sahib, Locut-Dal, Chanapora, Madin-Sahib, Shaheed Gunj, Lal Chowk, Tarabal, Ganpathyar, Dalgate, Baghat-Barzulla, Islamyarbal, Bemina West, Bemina East, Lal Bazar, Nishat, Jogilankar, Hassanabad, Syed Ali Akbar, Jawahar Nagar, Natipora, Mehjoor Nagar, Khanmoh, Aqilmir Khanyar, Zakura, Khawaja Bazar
3.	Self-sufficient (0.99-1.01)	09	Humhama, Zadibal, Ahmad Nagar, Buchpora, Barbarshah, Harwan, Jamia Masjid, Safa Kadal, Chattabal
4.	Deficient (090.-0.98)	20	Tailbal, Rajbagh, Nawab Bazar, Maloora, Nowshera, Zoonimar, Khankhai Moulla, Umar Colony, Kawdara, Zainakot, Aali Kadal, Eidgah, Batmaloo, Soura, Qamerwari, Khumani Chowk, Pandrathan, Dara, Parimpora, Alesteng
5.	Highly Deficient (Below 0.90)	05	Karan Nagar, S.R. Gunj, Malik Angan, Palpora, Laweypora

Source: Computed from Population and Household Data Records of Srinagar Municipal Corporation (2011)

The Location Quotient highlighting the Household Concentration in Srinagar City has been depicted in table 1.3. Similarly, findings reveal that 'House to House Gap' (HHG) amongst 8 HD-LV classes, is lowest in wards falling under HD-HLV class, followed by HD-MLV class; which drastically increases towards wards falling in MD-HLV, MD-MLV and MD-LLV. In all other wards this 'House to House Gap' (HHG) becomes extremely high especially in LD-LLV class (Computed from Field Survey).

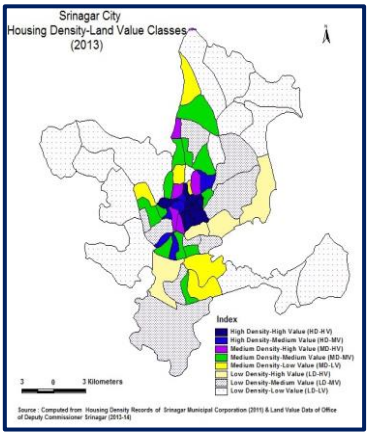
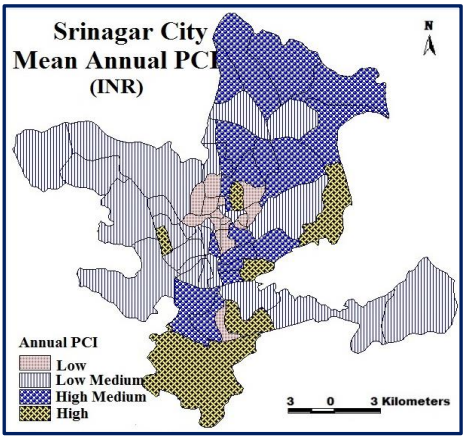
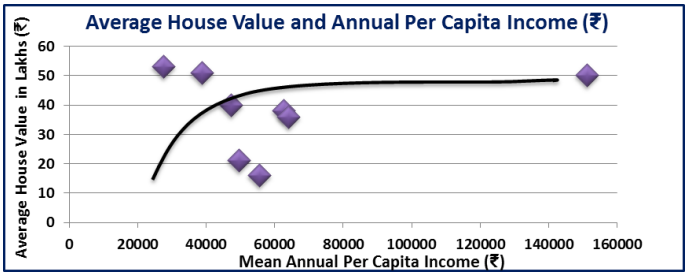


Figure 1.2: Housing Density-Land Value Classes



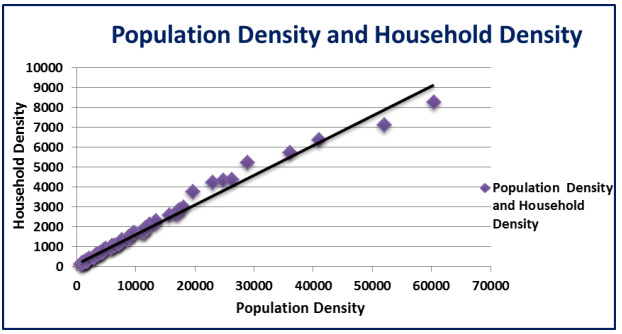
Source: Computed from Field Survey

Figure 1.3: Srinagar City: Mean Annual Per Capita Income (₹)



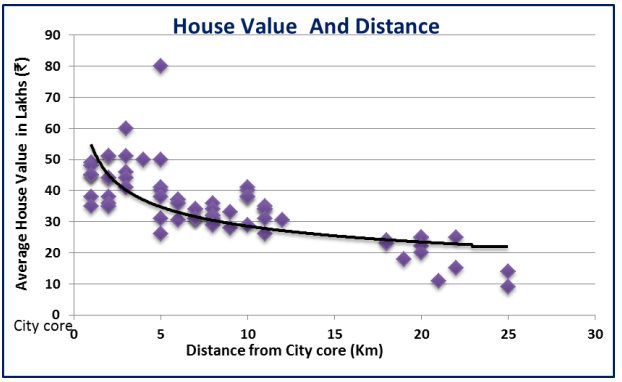
Source: Computed from Field Survey and Land/House Value Data of Office of Deputy Commissioner Srinagar (2013-14)

Figure 1.4: Average House Value and Annual Per Capita Income (₹)



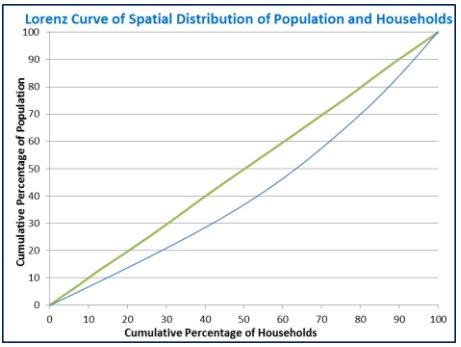
Source: Field Survey
Figure 1.5: Population Density and Household Density

The Correlation coefficient value for these two attributes is upto + 0.99 which shows very high positive correlation and Chi-Square value is 0.01. This infers that there is a significant variation in household density with respect to population density.



Source: Field Survey
Figure 1.6: House Value and Distance

The correlation coefficient value comes up to 0.76 which shows high negative correlation and Chi-Square value is 0.03. Therefore, there is a significant variation in housing value with respect to distance from city core of Srinagar (Figure 1.6).



Source: Computed from Population and Household Data Records of Srinagar Municipal Corporation (2011); Field Survey

Figure 1.7: Lorenz Curve of Spatial Distribution of Population and Households

The Lorenze Curve of spatial distribution of Population and Households (Figure 1.7) reveals that it is an upward sloping Linear Curve and computed Gini's Index value for it is 0.02.

As Clark (1951) states that there are intra-location variations in housing density in urban areas with increasing distance from city core. Hence those Density-Distance Craters or Density-Distance Gradients more specifically Land Value waves are also prominent in the Srinagar city as well. There are some locations which defy the general trend of house value and density as clearly evident from table 1.2, 1.3; Figure 1.4, 1.5, 1.6 and Figure 1.7.

CONCLUSION

Srinagar city is the largest urban entity in the entire Himalayan region in terms of population and constitutes the most urbanized district as well. The city despite its physical threshold and constraints is likely to expand and grow but ironically there is directionless growth of the city. In case the growth is not channelized and regulated it is likely to intrude towards a settlement pattern characterizing of unorganized, unplanned mess and haphazardness. The research study also

connotes inference that approximately 80 per cent of houses in the Srinagar city are unplanned or illegal or form informal housing, excluding the government or cooperative colonies, those too being partially planned.

Further it is emphasized that the scale of urban problems in Srinagar city is enormous and the situation is worsening due to unorganized - unplanned urbanization and related social trends. Continued wealth inequality, increased immigration, increased part-time employment, and independent family trends have all contributed to growing urban problems in Srinagar city. A number of unregulated colonies and housing clusters have mushroomed in and around innumerable locations of Srinagar metropolis, in haphazard and unplanned manner, without a proper layout and devoid of service lines and other essential facilities.

The data analysis leads to yet two other important conclusions. First, formal/planned housing in Srinagar is unaffordable to the majority of its population. Majority of households have incomes that are not in congruence with the market price of the potential affordable houses. In other words, the household's stock and flow principle, essential for equilibrating the housing market, is violated in Srinagar. Second, providing low cost housing in Srinagar, even at construction rates, does not achieve the target of about 80 per cent households in formal/planned housing sector. The study concludes that city core of the Srinagar city is gradually declining in all respects of urbane living.

SUGGESTIONS

Apropos to this analysis, following are some revival measures or suggestions noteworthy to ponder upon for better urban management of the Srinagar city.

1. Srinagar Master Plan (2012-2032) must be reviewed, revised and redrafted keeping in view housing needs of

the different strata and socio-economic groups residing in the Srinagar City.

2. An Urban Housing Policy, with an impetus whereby inner city areas would systematically decrease in population, the middle areas remain almost static and the surrounding outer areas increase, is needed. A rational land use policy for the State in general and Srinagar city in particular is also recommended.
3. There is also the need for inclusion of Housing Geography or Housing Studies as a specialised field of Urban Studies at higher education level.
4. Also it is highly recommended that for proper planning of Srinagar city an Urban Information System (UIS) more precisely an Urban Housing Information System (UHIS) must be developed for Srinagar City.
5. Thus, there is a tremendous need for affordable housing but no sufficient effective demand. This makes a case for supplementing policies that tackle affordable housing supply with policies that provide housing subsidies to the needy. Cities worldwide generally have a downward sloping Floor Space Index (FSI) when plotted against the distance from the Central Business District (Bertaud, 2008). However Srinagar's deterring FSI is almost mixed in nature as it tends to linear line at few spots and curved at others, when plotted against distance from city centre, thus violating this principle. In such a highly regulated housing market, housing builders find it viable to have little incentive to provide affordable housing; thus catering to the demand of a small segment of the population. This structure of Srinagar's housing market and the skewness of the income distribution imply that the property prices are affected by a small segment of the population—the chief reason for the wedge between households' stock of wealth and income inflows.

6. Given these distortions in the market, the lopsided and inadequate policies addressing slums and affordable housing implemented by the government have failed to redress these issues. Affordability Index reveals that there is need of and scope for 'Supporter Model of Housing' whereby EWS/LIG/LMIG and other marginal groups of our urban society will be supported economically to own or possess separate independent house around or in vicinity of Srinagar city. This needs to be taken care off and patterned on priority basis with specific motive for a greater good of society.

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