SPATIAL DIMENSION OF SOCIAL WELL-BEING IN ALIGARH CITY

ABSTRACT

THESIS

SUBMITTED FOR THE AWARD OF THE DEGREE OF

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BY

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The research problem selected for this study is an important theme in social geography in India. The germination and growth of the concept of social well-being has been a slow process. There are competitive goals of economic and social systems in a country. In the initial stage of development economic growth takes precedence over other aspects of development. But as the side-effects of paradigm of economic growth accumulate then social well-being takes the central position as a goal of all developmental strategies. It has happened for developed countries. Now it is also happening in developing countries.

Further, the issues of equality, equity and fairness in distribution of social goods and bads are resurging. Reports of different agencies and institutions are projecting the reality of yawning gaps in the levels of development experienced by different social groups, countries, regions etc. And worst of it, this gap is increasing day by day creating an apparently paradigmatically unsurmountable obstacle.

The issue of social justice is well studied when its spatial manifestations are mapped. Then only this mental construct changes into social issue and academic exploration. The task of geography is to highlight spatial expressions of determinants of social well-being and presenting inequalities and inequities as the ground reality. The present study is an analytical-diagnostic research work to map out major aspects of inequality and inequity existing within Aligarh city. The ultimate objective of the study
is to discover the spatial variation of distributive justice and the levels of well-being.

Chapter I deals with the outline of the research problem and its design. There is a conscious acceptance of concept of social well-being by academics. Existing inequalities, inequities and environmental degradation caused due to consumeristic market economy in tandem with unprecedented technological development have made social well being a relevant concept. It is now accepted that good and decent life means more than mere economic attainment including quality of social, psychological, political life as well as quality of environment.

This research problem deals with the construction of the concept of 'what constitutes a good life in a micro level urban system'. Further, the task is to identify the spatial patterns of social well-being and measure the extent of inequalities existing in Aligarh city in terms of social space. An assessment of the state of social justice among major socio-spatial groups in Aligarh city has also been done.

The concept of social well-being in the present study implies a socio-spatial construct to measure levels of satisfaction resulting from the nature of spatial arrangement of social goods and services including immediate living environment. There is no theory or model available to operationalize this concept. Selecting indicators on consensus is more acceptable practice although thwarted with subjectivity.

Cities are relevant geographic units for studying social well-being in India. A large portion of a city is observed to be overcrowded, congested, creating poor neighbourhoods with narrow alleys. There is unprecedented...
inequality in the life situation of people living in cities making poor a
vulnerable social group as they already lack purchasing power.

Urban social structure is deeply fragmented according to different religious affiliations of the people. It is emerging through many studies that vulnerability of a social group generally has specific religio-ethnic characteristic. In India historical, political and now ideological antagonism is being perceived against minorities. It has become imperative to have an objective understanding of this association.

Almost every social reality is spatially manifested. Spaceless conceptualization of society is an intellectual myth. Locality moulds the psychological, behavioural and aspirational attributes of the inhabitants. A geographical enquiry of patterns of well-being in an urban area with religious attribute is a realistic and meaningful academic exercise. Keeping in view all these considerations, following objectives of this research are enumerated:

1. To highlight quality of built-up environment including quality of housing environment and quality of municipal environment.

2. To project the availability of municipal infrastructure amenities and performance.

3. To search for a causal relationship between family size, nature of employment, level of income and state of well-being of the municipal wards.

4. To find out spatial pattern of social well-being.

5. To highlight the difference in the level of social well-being of majority community and minority community dominated wards.
6. To throw light on the inadequacy of Aligarh Municipal Corporation in tackling the urban sanitary and other basic problems.

7. To assess the state of social justice existing in Aligarh city in its spatial perspective with special emphasis on Hindu and Muslim communities.

8. To help planners and policy makers of concerned departments to understand demographic, economic and occupational characteristics of the social groups of Aligarh to formulate realistic plans and policy to ameliorate the situation.

The following hypotheses have been formulated keeping the objectives in mind.

1. Levels of social well-being of wards are positively related with availability of municipal amenities among housing quality.

2. Level of social well-being is inversely related with average family size and positively associated with nature of employment, income levels, and educational attainment and political empowerment.

3. Distributive justice is positively related with the equitable share of social goods enjoyed and bads endured by different social groups.

4. Level of social well-being is higher in the developing zones creating sectoral development within city.

5. Level of social well-being is generally higher among Hindu wards than that of Muslim wards in Aligarh city.

6. Intra-community gap in well-being is more pronounced among minority wards than among majority community wards in Aligarh city.
The questionnaire for this study included enquiries on demographic attributes, education, employment income and wealth, housing and health, leisure and recreation, political and women empowerment. Along with this household enquiry, the questionnaire also included a list of observations of municipal conditions for roads, sewerage, garbage disposal, water supply, street lights, cleanliness and maintenance, noise pollution, open space availability, security perception etc. Questions are close ended. Certain data have been acquired from secondary sources as well.

The simple additive method of rank score has been employed for statistical analysis. Rank scores are calculated for nine dimensions of well-being for all the sixty municipal wards. Finally, an overall composite index measuring level of well-being was obtained by aggregating rank score values of all these nine dimensions of well-being. To measure social justice the mean value of composite indices of well-being and its nine dimensions were calculated respectively. This was done for all the sixty wards representing twenty seven Hindu dominated wards, nineteen Muslim dominated wards and fourteen mixed population wards separately. Then positive and negative departure of mean value of well being of each ward was calculated from respective points of justice to find out groups of privileged and deprived wards for both Hindu and Muslim communities. Results of the analysis have been represented through, maps, charts and graphs etc.

All the sixty wards were included for survey. Household has been the micro unit of data collection and ward is the unit space of analysis. Stratified random sampling technique has been adopted. Religion gives basis of stratification within each ward. Thirty households per ward were surveyed.
constituting 1800 households (1.8 percent sampling). Survey was done during April 2002 to March 2003. Personal observation inside the houses was also being done.

Aligarh city was selected for the present study due to two reasons. Firstly, due to its cultural/historical uniqueness and secondly due to the accessibility to the researcher. The city lies in the centre of district of Aligarh at 27°53'N latitude and 78°4'E longitude. It lies in the western part of the state of Uttar Pradesh in north India. Climate of the area is tropical monsoon and continental. Average height above MSL is around 180 metres.

Aligarh city has sixty municipal wards. It has concentric pattern of growth. Recent corridor development is also taking place along major transportation routes. Achal Tal and Upper Kot are of ancient and medieval origin respectively. The Civil Lines and the University area are of modern period and are more prosperous. The sectors of Hindu majority wards are mainly in the eastern, north-western and southern part of the city. The ward-wise population density of city has been estimated from 25,000 persons/sq.km. to 125,000 persons/sq.km. The population of the city by mid 2006 has been projected to a total of 780,000 persons.

Chapter II takes up an exhaustive literature review along two lines, according to the theme and the chronological order. Most of the works on social well-being, 1960s onwards, are concentrated on the social indicators and development of concept of well-being. Several approaches have been used to study well-being like psychological, gender specific, environmental and human development. Most of these works were found to be based upon secondary data. This review helped the researcher to find out the status
and trend of the research work on this line. The researcher applied the approach of social justice to study well-being in a spatial frame based on the primary data.

In Chapter III development of the concept of social well-being has been discussed based on a review of literature. It has been found that the concept dwells upon social well-being, level of living, relative needs, deprivation, standard of living, human development and the quality of life etc. These concepts are usually not grounded in any socio-spatial theory of urban structure. Emphasis was put on operational definition of these concepts which can be at least based upon consensus. Unanimity over the concept of well-being, however, has not been attained.

The social well-being of a group of people is a state of living condition based upon their share of social goods and bads. Due to an equitous or balanced social structure and its fair functioning the inhabitants experience peace, prosperity and progress in a spatial and temporal context. Social well-being is a function of the health of economic, political and social structure of the society. In a judicious society the economic, political, religious institutions play their roles in such a way that no social group is exploited.

In this study following sets of indicators were selected to study well-being.

1. Demographic structure and the family type
2. Education and employment levels
3. Income and wealth conditions
4. Housing and health conditions
5. Recreation and leisure availability

6. Political leverage and women empowerment

7. Indicators of the built-up environment

These indicators have been grouped under three headings; indicators of social sustainability and resource potential, indicators of social performance and indicators of built-up environment.

Chapter IV deals with built-up environment which includes (i) the micro municipal outdoor environment and (ii) sub micro indoor household environment. Household environment includes the qualitative aspect of indoor infrastructure. The municipal environment includes all those major aspects of neighbourhood conditions outside the private housing structure which belong to community under municipal authorities. Locational and distributional attributes of amenities of built-up environment of Aligarh city have been evaluated.

There are two zones of worst quality of road in Aligarh, in the northern part and in the southwestern part. City's overall sewerage condition is in a deplorable state. The old congested city has a better drainage than the Civil Lines area. Northwestern part is worst off. Western and eastern sprawl part of the city have worst facility of garbage disposal. Overall upkeep and maintenance of city is poor. Western peripheral parts are worst maintained. There is core-periphery relationship of the density of street light with core better served. New expanding peripheral and high income/educational wards report more open space. One fourth of all wards mainly in the old city have highest noise pollution. Level of security/perception is lowest in the Civil
Lines. The Civil Lines area has the best residential quarters. Hindu wards are found to be better served in comparison to Muslim wards for municipal infrastructural amenities.

Chapter V deals with sustainability potential. The term implies the inherent strength and capability of a social system to sustain its progress towards a commonly perceived goal of attaining socio-economic parity. Discussion is made on family structure, the literacy rate, educational level, employment rate and economic viability in terms of average income. Muslim wards have larger family size characterized with a fragile economy. Average size of family is inversely related with female higher education and incidence of joint family. The old city and north-western part of the city have the largest family size. A family size of 4-6 members is most representative. There is a high probability of 6 persons with less than Rs. 5,500 per month household income in Aligarh. Wards with high average monthly income lie outside the old city. The old city wards are mostly Muslim dominated and with low literacy rate. Only one sixth of total wards of the city are found to have very high and high per capita income. There has been found an inverse relationship between family size and per capita income.

Joint family is found more among Hindu wards and associated with business occupation. Joint family is strongly negatively correlated with women in higher education. An overall high literacy level is found in Aligarh city. Adult female literacy is sectoral in favour of Hindu wards. General school enrolment is high but good quality schooling is confined to high income and better employment wards.
Chapter VI discusses indicators of well-being which measure the performance of the social structure of the city. They are most important determinants of social status and well-being in an urban structure. Majority of the wards have less than 24 per cent employment. The old city has a fragile economy, mostly Muslim dominated wards with predominantly less than Rs. 3000 per month income. Distribution of five levels of income is discussed in this chapter with many of its correlates. It has been observed a general positive association between high income and high real saving and a high percentage share of the saving.

One third of the housing of the city is small sized, found in old city and the surrounding wards, with a fragile economy of daily/weekly wages. Nature of employment positively affects both income and the housing size. Over one third of the city report infant sickness mostly in Muslim dominated wards. General health condition of people in Muslim wards is worse. General leisure availability is found more among women than men. Muslim wards have more complaints against municipal neglect than the Hindu wards. Overall Hindu wards have more political leverage.

The aggregate of all the ‘goods enjoyed’ and the ‘bads endured’ in Aligarh city in terms of wards has been calculated. In Chapter VII overall level of well-being along with different dimensions were discussed and inequalities were assessed. State of social justice existing between Hindu dominated wards, Muslim populous wards and mixed population wards has been highlighted. There is overall inequality and inequity existing in Aligarh city. Muslim wards as a group are below the general level of social justice. Finally, conclusions and suggestions have systematically been discussed.
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ALIGARH (INDIA)

2006
CERTIFICATE

This is to certify that the thesis entitled "Spatial Dimension of Social Well-being in Aligarh City" has been completed by Ms. Fatma Mehar Sultana under my supervision for the award of the degree of Doctor of Philosophy in Geography.

I further certify that the work is original in nature.

Prof. Salahuddin Qureshi
(Supervisor)
... He Knoweth
What (Appeareth to His Creatures As)
Before or After
Or Behind Them.
Nor Shall They Compass
Aught of His Knowledge
Except as He Willeth....”

(Sura Al-Baqra : 255)
Dedicated

To

The Striving And Truth Searching Human Soul

Which Willingly Submits Itself Before Allah
I devoutly submit my work and endeavours to Almighty Allah whose Grace and Mercy keeps the Universe thriving. I consider my research work as a form of Worship, as it intends to reveal truth, through scientific methodology.

I express my sincere and deep sense of gratitude to my supervisor and Chairman, Department of Geography, Prof. Salahuddin Qureshi for his generous inspiration, invaluable suggestions, scholarly guidance and personal concern and for providing all the necessary facilities in the Department to carry out this work.

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I am also grateful to my model parents and motivating brothers and sister. The value and the attitude and the unfailing conviction for right and good is injected within me by my precious family.

Dated: 20-05-06

(Ms. Fatma Mehar Sultana)
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INTRODUCTION

This introduction undertakes a concise account of the research problem, research objectives, hypotheses, database, methodology and the main findings. The main theme of the problem is to study the state of social well-being in Aligarh city in its spatial perspective. The researcher has attempted a comparative assessment of the level of well-being of the two important religious communities i.e. the Hindus, who are a religious majority and the Muslims, who are a religious minority of Aligarh. Aligarh is a class one city of north India in the state of Uttar Pradesh. The spatial organization and location of these two communities within Aligarh city reflects the socio-political imprint of a long history. What makes this research problem all the more relevant is that there is a traceable process of social crystallization and spatial re-arrangement of the religious communities within Aligarh city. This has produced an iniquitous and socially undesirable distributive arrangement of the social goods and bads. The pockets of deprivation and affluence within a city carry a problem mark and have their own spatial dimensions. The conceptual linkages need to be developed to connect the apparently disaggregated reality. Construction of relevant spatial reality requires a creative task on the part of a geographer for a convincing explanation.

On the face value the significance of the problem is worth attending to. The traditional studies on poverty displayed an over emphasis on economic aspects of living conditions. The wide spectrum of living conditions which involve many qualitative elements are generally not included. Thus living condition is being equated with income and wealth status.

The present day concept of development does not hinge as much on the economic attainments as it does on social justice. More than anything else, social well being is measured in terms of social equality. The concept of social well-being emphasizes decency of living condition. It is not only money which a social group requires for its good living condition. But there are a host of factors and dimensions of living which determine its overall quality. Thus, there is a gradual shift from quantitative assessment of economic status of the social group to qualitative aspects of its life. It includes educational attainment, nature of employment, housing and
health condition, the indoor housing quality and the built-up municipal environment, cultural and intellectual attainment, political participation and women's empowerment, social security and social participation and distributive justice in terms of allocation of resources and location of amenities and facilities among communities. These are found to impinge more realistically on the life of a social group. In fact, desirable and proportionate attainment of different social groups on all these fronts in reality needs a just and functionally effective institutional framework. The vibrancy and strength of an urban spatial system which carries a social meaning can be judged on the basis of assessment of the state of well-being of different relevant social groups.

Furthermore, the assessment of well-being of social groups requires developing indicators which can aptly measure their social conditions or any aspect of it. These indicators are well-meaning and serving if they are inherently predictive and carry the ability of monitoring social condition. It is a task of social engineering which involves the academic as well as policy issues. Thus the problem taken up in this research has both academic as well as applied value.

One dimension of this problem which carries its worth is in the social planning. Assessment of living conditions of different social groups helps in understanding the nature and result of on-going social processes. The perception of planners needs to be improved in conceptualizing an urban social space. Thus, planning does not only mean provision of infrastructural facilities but it also means planning people's life in the spatial structure to enhance social justice.

Finally, the significance of the problem lies in assessment of social justice. In a normative sense, it is very important to know 'who gets what, where and how' as mentioned by D.M. Smith in his theoretical framework of welfare geography. To include 'why' in this dictum is also very relevant. Exploring how and why of the state of well-being of an urban social space ultimately lends weight to raise question about social justice. The question of social justice is a natural corollary of a few moral considerations which arise out of observation and experience of inequality and inequity in the distribution of goods and bads of society in certain traceable and predictive manner. All these aspects of the social enquiries make this research problem highly relevant.
Identifying a research problem and defining it well fulfils the task of conceptual and theoretical understanding. Identifying objectives and formulating hypotheses help in connecting the theoretical understanding of the problem with another aspect of operationalization and measurement of the problem. The broad objective of this research work is to identify the spatial pattern of well-being in an urban area in context of its community characteristics, to help assess the state of social justice and providing grass root information to policy makers. The thesis revolves round the general hypothesis that levels and gaps in the overall well-being existing between different social groups in an urban social system is associated with the state of social justice existing among these social groups.

An account of the research procedure followed is given here. Nine dimensions of well-being are identified and relevant indicators are selected, keeping in view the uniqueness of Aligarh city. On the basis of these dimensions the questionnaire has been developed. For the purpose of household survey all the sixty municipal wards were taken. In total 1800 households have been approached. Along with it for the assessment of the quality of built-up municipal environment a separate list of enquiry was developed. Data obtained has been classified and tabulated. Simple percentage and rank score methods have been used for the analysis of data. Results have been displayed through charts, tables and choropleth maps.

The interpretation involves descriptive account of the results obtained through statistical analysis. Attempt was also made to give an account of the comparative analysis of the well-being status of Hindu and Muslim wards.

There are seven chapters in this thesis excluding introduction and conclusion. Chapter I titled as ‘Statement of the Problem, Research Methodology and Nature of the Study Area’ deals with the nature of the problem and its significance. In this chapter the objective, hypothesis, research design, questionnaire construction and details of survey have been accounted. It also discusses the nature of the study area i.e. the geographical personality of the Aligarh city. The history, geography and urban morphology of the city is being discussed and demographic characteristics are highlighted.
Chapter II is basically related with the review of relevant literature. This chapter gives a chronological account of the work done on the theme of well-being and related concepts. Various sub-headings were identified for the assessment of the literature. Finally a critical evaluation of the work is being attempted.

Chapter III entitled 'Conceptual Framework of Social Well-being' is concerned with the evolution of the concept of well-being. This Chapter traces the history of social indicator movement and continuous refinement and growing understanding of the concept. The focus of this Chapter is on providing a broad-base understanding of the concept of well-being.

There are four chapters which deal with the empirical finding of the research work. Chapter IV entitled 'Built-up Environment and Well-being in Aligarh City' deals with the built-up environment and its municipal amenities and facilities being provided in Aligarh city. The theme of the Chapter revolves round the idea that urban municipal environment is one of the very important determinants of well-being. Distributional pattern of municipal amenities is reflective of social justice among social groups located in the city.

Chapter V titled as 'Social Structure and the Sustainability Potential in Aligarh City' deals with sustainability potential of Aligarh. For this purpose, demographic, employment, income and educational characteristics of Aligarh are discussed for judging the viability of the spatial structure of Aligarh in providing and harnessing maximum goods and promoting social justice.

Chapter VI entitled, 'Indicators of Social Well-being for Aligarh City' provides an account of descriptive analysis of various dimensions of well-being. It throws light on the empirical findings regarding income, employment, housing, health, recreation, political and women empowerment condition existing in Aligarh. Few correlates are also discussed.

Chapter VII titled as 'Social Justice and Well-being' deals with the present situation of social justice on the basis of aggregate measures of well-being. The purpose of this Chapter is to highlight inequalities existing in the living conditions of the urban dwellers of Aligarh city. This Chapter also aims at raising few moral and political questions about the overall distributive justice in Aligarh city.
Chapter-1

STATEMENT OF THE PROBLEM  RESEARCH METHODOLOGY AND NATURE OF THE STUDY AREA

- Statement of the Problem
- Definition of the Research Problem and its Significance
- Objectives of the Study
- Hypothesis Building
- Formulation of the Questionnaire
- Sampling Procedure
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- Response of the Households and Field Survey Experience
- Aligarh City : A Case for Study
- Aligarh City in Spatio-temporal Frame
- Aligarh City in Historical Perspective
- Morphological and Functional Characteristics of Aligarh
- Ward-wise Density of Population
- Religious Composition of the Population
Chapter – 1

STATEMENT OF THE PROBLEM  RESEARCH METHODOLOGY AND NATURE OF THE STUDY AREA

The introductory chapter of a research thesis tends to apprise the reader with the systematic line of work pursued by the researcher. In the present work basically the nature of the research problem, the database, objectives of the study, research hypotheses, the sampling and statistical techniques and methodology have been dealt with. In fact, this chapter serves the purpose of a prism through which subsequent work can be viewed and assessed. In this way, the chapter is framed with a purpose to enable the reader to focus on the specific nature of the problem.

1.1 Statement of the Problem

The selection of the research problem in the present study is a familiar theme in social geography in India. The germination and growth of the concept of social well-being has been a slow process. However, there is a conscious acceptance of this concept by academics as a social construct which expresses the state of social attainment. The unparallel economic growth and technology induced acculturation have led to shift the academic and policy emphasis beyond material to other socially relevant aspects of life. The reasons behind are very obvious inequalities, deprivation and power imbalances at any conceivable levels of structural hierarchy caused due to these drastic changes.

The comprehensive understanding of the concept of social well-being is essentially associated with the understanding of structure and stage of a society. There are competitive goals of economic and social systems of a country. In the first stage of development it is the economic growth which takes precedence, whereas in its later phase it is the social well-being.\(^1\) Noticing the changes and massive restructuration in India, the researcher finds it imperative to explore qualitative aspect of living condition.\(^6\)

The research problem focuses upon constructing a concept of what constitutes a good life in micro-level urban system. Further, the task of the researcher is to identify what kind of spatial patterns of social well-being and inequalities are existing in Aligarh city in terms of social space. The problem pushes forward to assess the state of social justice among the major socio-spatial groups in Aligarh city.

The geographical studies in India have, until recently, been biased in favour of economic attributes of distribution in the society. Social geography has a very recent advent here and comparatively lukewarm response from the subscribers of the discipline. Following the western trend, a new set of studies dealing with social structure and its characteristics has started acquiring academic space in Indian social geography. The daunting task before the social geographer is to identify the processes and patterns of social inequality in space.

1.2 Definition of the Research Problem and its Significance

A scientific research needs to initiate with a conceptual definition of the problem. The concept of social well-being in the present study implies a socio-spatial construct to measure levels of satisfaction resulting from the nature of spatial arrangement of social goods and services including immediate living environment. These are accessible to relevant social groups and shared by them on the basis of some widely recognized and accepted principles of social justice and human rights.

The empirical research in social science in hypothetico-inductive tradition, essentially comprises of few components. They are clear conceptual definition of problem and the operationalization of this definition through selection of appropriate variables. The transition from abstract notion to the observable reality is a reification of a construct, which exists in the mind of the researcher. And to establish the relationship between observable entities she has to follow certain prescribed but flexible rules. These are scientifically guided rational steps to the enquiry of a problem. Social well-being is a highly abstract concept which cannot be observed in tangible form but its empirical existence can be ascertained. Put in some analytical mode the data can generate statement of empirical truth about the state of well being.

Ahmad, A. (1999), Social Geography, Rawat Publication.
Empirical validity of a study is assessed to a certain degree, as many predictable and observable correlations are traced from earlier studies.

So far as the operationalization of concept of social well being is concerned, there is no theory or acceptable model available for help. But selecting the indicators then having a model to judge the situation is far easier and more consensual. According to Bauer’s (1968) argument ‘it is possible to look to a consensus on the indicators independent of consensus on a model of society, and that certain parameters can be agreed upon as “important” even if this judgement cannot be made with reference to a general model. The model can emerge as concepts about the nature of society are gradually refined. This seems the only reasonable approach at the moment’.3

The City is a relevant geographical unit for studying social well-being in India. According to the Census of 2001, 29 percent4 of Indian population lives in the urban areas. It can therefore be projected that in coming few decades almost 50 percent population dwell in the urban areas.

Cities, in the post-industrial economy, are distinctive socio-economic spaces where market forces interplay. In the scarcity economy, cities display market disparities due to inequalities, especially in income, consumption and the quality of life. This system works in such an iniquitous way that market forces allow the big winners to ‘feed their pets than the losers can feed their children’.5 The study of the spatial pattern of social and environmental well-being at city level would reveal the signature of this unstoppable force of globalization of economy and culture, accentuating gaps between rich and poor. A large section of most of the Indian cities are affected with over-crowding, congestion, creating poor neighbourhoods and narrow alleys. This situation dampens the quality of life of the poor people as they are already devoid of purchasing power. The process of urban sprawl associated with skewed economic growth has opened up new ways of uncertainties in human

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4 The Census of India (2001).

life. Most of the Indian cities are still a reflection of both capitalistic and post-industrial consumeristic economic system. An explanation of these malaises needs to be explored in this context.

The survival of market economy is accomplished through acquiring wealth, political power, social status and intellectual dominance. In fact, this trend has ushered in a modern version of cities leading to unprecedented inequality in the life situation of people, making poor a vulnerable social group. More apprehensive is the fact that vulnerability of a social group generally has particular religio-ethnic characteristics.

The general observation of the Indian cities substantiates the impression that if an area is economically backward then its people would be politically weak and various social problems and disorganization would be manifested. Municipal condition, health and housing, education, gender justice to enumerate only most obvious conditions of city life, are usually found in a deplorable state. Localities with these characteristics are more numerous in the Indian cities. Contrary to there are found very few localities in a city where overall standard of living including the quality of municipal environment is appreciably high. In this context, Seelay (1971, p. 466) has rightly highlighted “that the very concentration of evils or ills is itself an additional ill or evil quite separate from the mere sum of the evils concentrated”. This nature of deprivation within a city is spatially discernible and empirically observable which is the basic assumption of the present study.

The religious and caste differences are stark realities of the Indian society. Though these differences are considered to be accentuated in the rural societies but a close observation reveals that urban social structure is deeply fragmented according to religious following and caste affiliation. It is very important to study the connection between religious belongingness and the level of social well-being in our country, which is constitutionally committed as a secular state. As historical, political and now ideological antipathies against the minorities are persistent, in fact,

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increasing day by day, it has become pertinent to have objective understanding of this connection.

The culturally pluralistic societies have their own complexities. The most important of them are economic and political representation, as well as preservation of socio-cultural identity of the minorities. Almost in every civilized society minority communities have faced open or clandestine opposition from majority groups. To corroborate this fact, it is reported that Muslims in India, a religious minority, are least literate and educated, unable to avail the benefit of liberalization. There is under representation of minorities in legislature. They have only 1-3 percent posts in higher administrative services.\(^8\) Whereas, Muslims constitute 12 percent of the total population.

Geography has recently been trying to become socially relevant, incorporating element of space in the existing concepts of social system, thus putting society on the terrestrial plane. According to Harvey\(^9\) (1990) ‘geographers have sought to correct that defective vision’ i.e. to make amendment of the spaceless doctrine of progress and evolution taking place in the world which was propagated by Adam Smith, Marx or Weber etc. Obviously this effort on the part of geographers needs a lot of intellectual training in the domain of social theory. Hence, it can be said that the study of socially relevant problem like social well-being in geography is a conscious effort to legitimize space as a social reality and to make it a factor in planning and development.

Considering the greater degree of socio-economic choices exercised by some social groups in relation to others who have to suffer constraint and deprivation, compels some researchers to ask, whether these problems are inherent in the nature of society itself.\(^10\) The poor social, environmental and health condition of spatially identifiable social group is inseparably linked with better quality of life conditions in the other parts of the defined territory.\(^11\)

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8 The Times of India (June 19th, 2001), Editorial ‘Major Myths’.
10 Jones, E. & Eyles, J. (1966), An Introduction to Social Geography, Oxford University Press.
At this juncture, the resurge of space as a factor in conditioning human life should be facilitated. Uniqueness of the space, meaningfully identified as localities with varying degrees of social well-being, in an urban setting, might be an attempt in this direction. The economic and political processes result in emergence of unique socio-spatial entities. In this perspective, the economic and political factors take an explanatory supportive role and uniqueness of the space becomes the end-product.

In fact, spaceless conceptualization of society is an intellectual myth to be rectified by the geographers. Almost every social reality is spatially bound. The most important characteristic of immediate space is that locality moulds the psychological, behavioural and aspirational attributes of the inhabitants, as needs priorities and structure of a locality is unique. Thus, the characteristics of locality in many ways is determinant of the levels of individual and the community attainment.

In addition to, seen from ecological perspective, the relationship between society (rather than man) and environment is irrevocable as beautifully and cogently expressed by Barth (1992, p. 20).

Society cannot be abstracted from the material context. All social acts are ecologically embedded. It is therefore not meaningful to separate 'society' from 'environmental' and then show how the former affects or is adapted to the latter.

It is a rather fitting tribute to the geographical enquiry of social relevance.

1.3 Objectives of the Study

The practical utility of a research activity is enhanced manifold if the objectives of the study are clearly mentioned. They help the readers to assess the implied themes of work in form of concrete statements. Objectives are clearly and explicitly written statements which carry within themselves the ability to regulate the research activity to a specified aim. The defined objectives guard the researcher to keep the feet firmly on the ground and to be in touch with the reality around. Objectives of a research project must be in accordance of the hypotheses. In empirical research, nature of the problem itself leads to the formulation of objectives.

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The present study inquires into the levels of well-being of Hindu, Muslim and mixed population wards of Aligarh city. The major objectives are enumerated below.

1. To highlight the quality of household environment and built-up environment of Aligarh city in a spatial frame.

2. To project the availability of municipal infrastructural amenities and performance in a spatial frame.

3. To search for a causal relationship between average family size, employment, income, health, and well-being.

4. To find out the spatial pattern of social well-being in Aligarh city.

5. To highlight the difference in the level of social well-being of majority community and minority community dominated wards.

6. To throw light on the inadequacy of the Aligarh Municipal Corporation in tackling the urban sanitary and other basic problems.

7. To assess the state of social justice existing in Aligarh city in its spatial perspective with special emphasis on Hindu and Muslim communities.

8. To help planners and policy makers of concerned departments to understand demographic, economic and occupational characteristics of the social groups of Aligarh, and to formulate realistic plans and policy to ameliorate the situation.

1.4 Hypothesis Building

Hypothesis building is an integral part of the scientific methodology and one of the many important phases of the research activity. Hypotheses are the scientific assumptions to answer certain queries which are dealt with as research problems. As the term implies, a hypothesis is the basic premise around which the whole research activity builds. When these assumptions are related to social and economic conditions of different social groups, many factors like cultural perception, myths, historical accounts, observation etc. affect them. Formulation of research hypothesis depends upon the nature of the research problem and is generally expressed in terms
of variables. Variables are those empirical properties which take more than one value. Following hypotheses have been formulated:

1. Levels of social well-being of different social groups are positively related with environmental conditions of their wards including household and municipal environment.

2. Levels of social well-being inversely associated with average family size and positively associated with nature of employment, income levels, educational attainment and political empowerment.

3. Distributive justice is positively related with the equitous share of social goods enjoyed and bads endured by different social groups.

4. Levels of social well-being are higher in the new developing zones creating sectoral development within the city.

5. Level of social well-being is generally higher among Hindu wards than that of Muslim wards in Aligarh city.

6. Intra-community gap in well-being is more pronounced within minority community wards than majority community wards in Aligarh city.

These hypotheses have a close concurrence with the objectives of the research.

1.5 Formulation of the Questionnaire

Questionnaire construction is another important phase in scientific social research. It is the instrument to measure the concept which is operationalized into variables. Measurement in social science research is quite different from natural sciences. Social realities are multi-dimensional multi-variate and intangible in form of attitude, opinion, preferences etc.

Developing a questionnaire needs two major considerations. Firstly, it should be thoroughly exhaustive to measure all the relevant aspects of the problem, as well pragmatic enough to generate best answers. Secondly, questions should be designed in such a manner that ambiguities are reduced to minimum as a cross-section of society with different perceptions is approached.

The Questionnaire for the present study of social well-being includes questions on demographic condition, education, employment, income and wealth, housing and health, leisure and recreation and political as well as women's empowerment. Questions are close ended, encouraging prompt answers from the respondents (Appendix-III). It was found that people were more confident answering about demographic and social enquiries and least interested in giving information about income and wealth status. The problem which was faced in the latter case was mostly confined to upper middle class and rich people irrespective of community affiliation. The problem was more complicated for people with flexible income. In most of the cases, the available respondents at the time of survey were females who might have found it difficult to answer queries on economic conditions. The low income group was found to be more prompt in providing informations on its economic status.

In most of the cases, the researcher herself asked and explained the questions. It was found quite advantageous because it enabled the researcher to put questions according to the comprehension level of the respondent, and their socio-cultural precepts. Thus, the information was generated through a different modus-operandi from a low income, less educated group. Further, this procedure saved time and facilitated a kind of warm rapport between the researcher and the respondent. The researcher, herself being female, had advantage in coaxing female respondents to answer who formed a majority.

The procedure which was followed to develop this questionnaire was that an exhaustive list of questions was prepared considering the relevant dimensions. Then the most representative and informative questions were sorted out. After the proper formatting of these questions was done. The researcher doesn't claim that the questionnaire is all inclusive of the concept of well-being. But to a certain extent this objective is thought to be attained. After the survey, it was found that a big storehouse of data had been created. It was decided that only very pertinent and most relevant data would be used for the present problem. Finally, only those variables are selected which are thought to be useful in highlighting the actual purpose of the present study.
Along with household enquiry the questionnaire also includes a list of observations of municipal conditions. The aim is to generate data of general impression about the municipal conditions of different wards. The objects of enquiry in this category are condition of roads, drainage/sewage, garbage disposal, water supply, street light, cleanliness, maintenance and open space availability etc. For this purpose secondary data have also collected.

1.6 Sampling Procedure

For the sampling purpose all sixty wards of the city have been selected. Household has been the micro unit of data collection and ward the unit space of analysis. From each ward data has been collected through household survey using stratified random sampling. Religion is taken as basis of stratification within each ward. Few wards have been selected out of these sixty wards to represent high, medium and low income Hindu and Muslim wards. A little more data collection exercise has been done in these representative wards. In all 1800 households (nearly 2 per cent sampling) have been surveyed and respondents interviewed during one-year period from April 2002 to March 2003. On an average 30 households have been interviewed in each ward involving approximately 10800 persons. Field observations are made to assess the condition of built-up municipal environment and the neighbourhood condition. Further, personal observations inside of the houses have also being done to generate additional observational data.

For interview purpose an adult member above 18 years is contacted. Other family members are also encouraged to come together to help out the respondent. Mostly women were interviewed, as majority of the men have been absent due to their work schedule. The response rate of each ward is given in Appendix I. It reveals the spatial variation in the attitude and awareness level in different wards of the city. And of course it has its own tangible reasons.

For the collection of relevant secondary data as well as city’s official map, few offices were visited. The Municipal Corporation of Aligarh is the most important office from where map as well as secondary data related with population and infrastructural facilities collected. Along with it offices of National Informatics Centre, Aligarh Development Authority, Collectorate, Public Welfare Department were also visited.
1.7 Database and Methodology

The two research traditions in geography ‘multivariate regionalization’ and ‘factorial ecology’ provide appropriate operational technique of analysis for the present study. The earlier studies have employed simple additive techniques which involves classification and ranking of indicators guided by theoretical criterion. Later on, advent of social indicator approach has encouraged the procedure of standardization.

The present study employs a simple additive method of rank score. The procedure involves the following steps. First of all, the highest and lowest values of a particular variable for all sixty wards are found and range is calculated. This range value is divided into five categories. These categories are termed as very high, high, medium, low and very low. In this way these five categories are formed for all the relevant variables (with few exceptions where only three categories are formed). These five categories are assigned rank values of 5, 4, 3, 2 and 1 in descending order from very high to very low categories respectively. In case of negative variable the rank values are assigned as −5, −4, −3, −2 and −1 for these five categories. Even a single rank value is divided into ten sub-categories assigning 0.1 value to each sub-category. For example, for very high category the values of sub-categories are 4.1, 4.2, 4.3 and so on till 5. The modification is done to capture the nuances of broad rank values. This method is not as rigorous as standardization but some loss of information may be averted in this way.

To differentiate between positive and negative variables of well-being negative (−ve) signs are assigned to the rank values of negative variables. Thus rank values of very high and very low categories of a negative variable would be −5 and −1 expressing worst and most tolerable situations respectively. Thus −1 rank score is most desirable.

The point of reference for these rank values is 0. A positive variable has a value above 0 and a negative variable has value below it. It ranges from 5 to −5. In effect, every negative value cancels off the positive rank value of equal magnitude making it nil. Thus, overall rank score value for a particular ward is equal to the difference of the total rank value of positive and negative variables respectively.
The composite rank score for each dimension of social well-being for every ward is calculated by adding rank values of all relevant variables. Finally, an overall composite rank score index of social well-being for each ward is developed by adding composite rank score values of every dimension of social well-being for all sixty wards.

The additive method is simple in calculation and less ambiguous because all the subjective elements are made explicit. Their relationships may be evaluated and analysed. If the theoretical construct of the indicators is acceptable then this method of classification is quite valid and addition of variables carries legitimacy. But the biggest handicap of this method is that assignment of equal rank to the varying magnitude of the variable paves the way to the loss of information. This could be considerably retrieved through standardization process. Again, simple addition without giving weightage to the significance of the constituent indicators of a particular dimension ignores major part of the reality. This problem is solved by factor analysis because loadings of variables on a factor (dimension) are the weights which are derived from their factual interrelationship. But this procedure begins with a solution which is mathematically not unique. It cannot be determined that factors obtained would conform to certain theoretically relevant or most important aspects of the reality. Hence factors are allowed to conform to certain theoretical criteria to make the structure more interpretable.

Here it is pertinent to clarify as to why additive method of rank score has been selected for statistical analysis in the present study. The researcher has the following points in her mind.

(i) To avoid complicated calculation and make computation easier.

(ii) To avoid technical overtone for a socially relevant research problem.

(iii) Basic aim of the study is not to highlight the factors determining the variance of social well-being because many factors like recreation which are apparently negligible in their impact also make an important contribution towards well-being.


though culturally $ might not be realized at present. Further, the consideration of different dimensions of well-being independently allows some, hitherto, less considered factors to be included which have far reaching effect in future. For example, degree of women emancipation is spatially highly disaggregated and has a potential to change the urban scenario in the coming decades.

(iv) In the present study, the emphasis of the researcher is to have descriptive analysis of the existing situation of well-being and seek out an explanation of the reality. For this purpose, rank score method is found most efficient.

The logically connected and generally accepted indicators of well-being have been taken into consideration for measuring well-being. But the analytical methods have been kept as simple as possible.

During the course of interpretation of the findings, a reference of correlation and association has been made but without rigorous statistical determination to this effect. The percentage value of all the relevant variables representing major dimensions of well-being has been calculated and presented through choropleth method. The aim is to develop a clear understanding of the spatial patterns of well-being.

In the present study, no weightage is being assigned to any variable. The premise extended here is to substantiate this stand that though some aspects of well-being are basic and biological in urgency for survival, but well-being is much more than mere survival. It is concerned with a level of human existence which is culturally decent at any given period of time. Thus, at this level the various aspects of well-being become equally important, whether income, recreation or living environment. The only difference is that lack of income might lead to starvation but lack of recreation does not seem to show its effects so dangerously or instantly. But surely, our premise is that we consider social well-being as an outcome of decent existence, where a just balance of various aspects of human life is paramount. High level of social well-being is not only the matter of high score of index but also a due proportion of contribution of different aspects of well-being towards this index. Of course, there should be least proportional difference within a theoretically or empirically determined limit.
The researcher has an explicit objective to enquire the state of social justice existing among different religio-cultural spatial groups viz. majority dominant, minority dominant and mixed population wards. For this purpose, the point of social justice is calculated for all the major dimensions of well-being. The point of social justice which is considered as a reference point as well, is taken as the mean value of the rank scores of all sixty wards for a particular dimension of well-being. The point of social justice for Aligarh city as a whole is calculated as a mean value of the composite score of well-being of all sixty wards of the city.

In the second step, the mean value of rank scores of the wards belonging to these three religio-cultural spatial groups are calculated in the same fashion separately. The positive or negative departure of the values of the point of social justice of these three social groups, from the general reference point of justice of Aligarh as a whole is calculated in terms of percentage. This departure is represented statistically as well as graphically to highlight the deviation from the empirically identified social equilibrium which is considered as a just distribution.

1.8 Response of the Households and Field Survey Experience

The researcher has gained rich experiences while surveying through the cross-section of the city. Certain observations based on these experiences are enumerated below.

1. The response rate in the low literacy and low-income social group irrespective of the religious denomination was very high. The members of these households have, comparatively, been far more cordial and open in their attitude when they were approached for the survey.

2. The response of educated Muslims around the University area has been found discouraging. In general they have appeared to be more suspicious and apathetic towards the researcher and demonstrated an elite behaviour of inaccessibility and disliking. But those households, where girls are engaged in higher studies, have shown more maturity and tried to assess the importance of the survey exercise.

3. Many educated Hindus did not entertain the researcher inside their gate, presumably in view of the researcher’s minority status.
4. Women majority religious community wards in general have been found less inclined to answer than their men who proved to be more interactive and secular in their outlook.

5. Overall impression of such surveys public opinion is that they are superfluous or at least irrelevant for them. Among very poor people this survey has led them to expect that some welfare scheme, like free health service or free education for children, is being unveiled. Many of them would say that very frequently surveys are done but nothing concrete takes place.

Thus, it is realized by the researcher that socially relevant research should involve the participatory approach where academicians, government and community should work together to achieve a goal. This approach would sensitize all concerned communities to improve the social condition including the municipal environment of their city. It would help in creating a progressive culture where the objective assessment of social reality would help in inducing an urgency of social planning, which utterly in India.

1.9 Aligarh City: A Case for Study

The research problem is being specified here with respect to Aligarh city. A few interrogative components of this problem are enumerated below:

1. What is the spatial pattern of social well-being in Aligarh city?

2. Does a communal bias exist in the spatial distribution of municipal amenities in Aligarh city?

3. If the bias exists then what are the factors responsible for it?

4. What is the state of social justice in Aligarh city?

The well-being of the people is closely associated with the quality of their living environment. The nature of living space reflects their aspirations, collective consciousness and the ground reality. For having realistic findings in the present study, data has been generated at the ward level. For the purpose of data availability and the cartographic convenience, ward has been selected as the unit of enquiry.

The search for the causal factors explaining the difference in the levels of social well-being between Hindu and Muslim wards in Aligarh city has been made
through empirical observations. It is assumed that the minority community which antagonizes the majority community or being antagonized by it, is more vulnerable to have the lower level of social well-being than the majority community as a whole. The plight of Jews in Europe during medieval and recent periods and of Blacks living in America is more or less comparable with minorities, especially Muslims, in the present day India.

The selection of Aligarh city for the study is partly guided by the historical and cultural uniqueness of the city and partly by the convenience of the researcher. The uniqueness of the city is embedded in its origin and evolution it underwent, during Muslim and British regimes. Firstly, the intellectual and cultural impetus in form of Aligarh movement by Sir Syed Ahmad has helped Muslims acquire proportionally better education and occupational structure in comparison to Muslims living in other cities in North India. Secondly, the recent Hindutva politics dominating the city environments has accentuated the cultural divide within the city. Lastly, the Aligarh Municipal Corporation is taken as a typical example of inadequacies of local government functioning. The colossal problems of sanitation, sewerage, municipal roads, public parks and health are its reflection. These observations, therefore, have facilitated a planned and methodological approach to survey all the sixty municipal wards to estimate the extent of the problem.

1.10 Aligarh City in Spatio-temporal Frame

Cities, like all social reality, are historical products, not only in their physical materiality but in their cultural meaning in the role they play in the social organization, and in people’s lives. A city (and each type of city) is what a historical society decides the city (and each city) will be. Urbanism is the social meaning assigned to a particular spatial form by a historically defined society.... The definition of urban meaning will be a process of conflict, domination and resistance to domination, directly linked to the dynamics of social struggle and not to the reproductive spatial expression of a unified culture. Furthermore, cities and space being fundamental to the organization of social life, the conflict over the certain goals to certain spatial forms will be one of the fundamental mechanisms of domination and counter domination in the social structure... Thus the definition of the meaning of 'urban' is not the spatialized xerox copy of a culture, nor the consequence of a social battle fought between undermined historical in some intergalactic vacuum. It is one of
LOCATIONAL MAP OF ALIGARH CITY

Fig 1.1
the fundamental processes through which historical actors (social classes, for instance) have structured society according to their interests and values (Castells, 1983, p. 202).\textsuperscript{16}

The city of Aligarh lies in the centre of the district of Aligarh, which lies at 27°53'N latitude and 78°4'E longitude. The Aligarh district lies in the south-western part of the state of Uttar Pradesh which is a highly populous and dense state of North India (Fig. 1.1).

Aligarh district shares a fate of those north Indian districts, which are forced by the geological processes of gigantic proportion, to become a monotonous (if not colourless) landscape of little beauteous morphological excitement. Though the subtlety of the observations and measurement certainly leads to trace out certain morphological exquisiteness to honour the efforts of a geographer.

It lies in the southern-most part of Upper Ganga Yamuna Doab which is itself a part of Indo-Gangetic plain, traversed by majestic perennial rivers. Topographically, Aligarh district as a whole represents a shallow trough i.e. general natural depressions. Meandering rivers, in complicity of poor drainage, cause salt encrustation in the form of saline alkaline patches, more intensified in the south-east. The obvious explanation of this is that the plain slopes from north to south-east. The highest ground elevation is 195 m at Chandaus and the lowest is 173.8 m in the south-eastern part of the district.

Other than perennial Himalayan rivers, Ganga and Yamuna, fringing eastern and western border of Aligarh District, Kali Nadi, a non-Himalayan perennial river originating from the depressions in Muzaffarnagar also satiates the district’s evergrowing need of water. Nim, Chhoya, Rind, Senegar, Karwan and Patwaha are some non-perennial rivulets which assist their perennial counterparts in watering the district. The Aligarh Drain flows through the central portion of district passing through the city. This networking of water channels helps in maintaining a high level of water table, a natural bounty for marginal farmers to carry on intensive agriculture.

Aligarh’s soil has two distinctive forms of alluvium. Khadar is the low lying poorly drained alluvial soil and Bhangar, found in upper reaches, is a better

\textsuperscript{16} Castells, M. (1983), \textit{The City and the Grassroots}, Edward Arnold.
drained and less calcereated soil. The south-eastern part of the district has to pay for being in lower sloppy portion, resulting in saline-alkaline efflorescence of medium to high pH value.

Two well-marked features of climatic condition of Aligarh are the tropical monsoon climate and the continentality. Thus, the seasonal rhythm is accentuated with the extremes of the temperature variation. The summer season confined to the months of April to June, records an average temperature between 30°C to 37°C. It occasionally rises to 45°C, just before the onset of the monsoon rains. During monsoon, from mid-June to September, temperature is much lower but humidity accentuates the sensible heat. Winter though mild and short with the pleasing sun, is generally perturbed when the peaceful anticyclonic conditions are substituted with the wind chill effect of the northerly blows. Heavy fog in the morning, lasting till afternoon, and frost during nights are hallmarks of the severe winter spells during January, which is the coldest month. Mean annual rainfall is a little over 600 mm. The Coefficient of variation of rainfall is considerably large. Mild to moderate droughts are common. 87 percent of total rainfall happens in the months of south-west monsoon. Whereas the rainy days with more than 15mm rainfall, for the effective soil moisture absorption, are 11 days only. All these conditions affect the agricultural fortunes and the overall economy of the area.

1.11 Aligarh City in Historical Perspective

An appreciation of urban history is vital to the student of urban social geography. The social relationships, class structures, ideologies and institutions forged during earlier stages of urban development can be directly traced to the modern city, where they continue to shape urban life-styles and to constrain the behaviour of people, business and governments... By examining the historical development of cities it is therefore possible to identify both the physical and the social bases of modern urbanism (Knox, 1982, p. 5).

There is ample evidence that Aligarh city was inhabited around 1500 BC (Siddiqui, 1981). In fact, in 1000 BC, it was thought that a well-developed

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17 Aligarh District Gazetteer, 1981.
WARD MAP OF ALIGARH CITY
2001

Source: Based on information of Municipal Corporation of Aligarh

Note: For ward identity see Appendix-I.

Fig. 1.2
settlement grew there. The origin of the ancient name of the city “Kol” is debatable. With the end of the ancient period city’s growth declined.

The city acquired its basic character during the medieval period (1200-1800 AD) when Muslims ruled it (Nevill, 1990). The city remained under the rule of Delhi Sultanate (1194-1596). The important dynasties which ruled the city were Slave, Khilji, Tughlaq, and Lodhi. Later on, the city came under the control of Mughals and became capital of administrative Sarkar during the rule of Akbar. Umar Khan built the fort of Muhammadgarh in 1525, which later came to be known as Aligarh. Balai Qila or Upper fort on the great mound, remained the socio-economic and political hub. It was inhabited with the densest population. Aligarh was strategically so important that it remained a walled city throughout the medieval period. In the 18th century Sabit Khan the Governor of ‘Kol’ constructed a fort named Sabitgarh in 1717 and improved the city infrastructure. The Marathas and Jats had rivalries during 18th century sequentially occupying the city (Smith, 1872). Finally Marathas took control of Aligarh fort in 1785 in the wake of old Jat and Rajput feuds.

The French governors Count De Biogne and Cullier Perron were the commanders of Aligarh, appointed by Marathas. The latter tried to facilitate European market through Indian agricultural products. In the early 19th century, British increased their influence in this city and in 1803 General Lake conquered the town of ‘Kol’ and made Saheb Bagh, earlier developed by Perron, as his headquarters. In 1804 the city was formally named as Aligarh. And the first railway line was opened up in 1863 from Tundla to Aligarh.

1.12 Morphological and Functional Characteristics of Aligarh City

The city lies in the central low lying part of the district. Its expanse is approximately 9 kms in north-south direction and 6 kms in east-west extent. From the city centre radiate out roads in all the directions. Recent urban sprawl is taking place along the roads. The city has been divided into sixty municipal wards (Fig. 1.2). The growth of the city had been in a concentric pattern due to labour

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GROWTH OF ALIGARH CITY

ANUPSHAHD ROAD

TO MANZURGARH

KM 0.5 0.25 0 0.5 1 1.5 KM

DELHI GRAND TRUNK ROAD

TO DELHI GRAND TRUNK ROAD

INDUSTRIAL TRAINING INST

JIMCH

ENG COLLEGE

UNIVERSITY

NORTHEN RAILWAYS TO TUNDLA

RAMGHAH ROAD

KHAI ROAD

IGLAS ROAD

BHARI MANDI

TURKMAN GATE

DELHI GATE

UPARKOT

 Fortune

RUSSELGAJ

EYE HOSPITAL

WOMEN'S COLLEGE

RUSSELGAJ

GRAND TRUNK ROAD

AGRA ROAD

Fig 1.3
accessibility (Fig. 1.3). There is now major change in this trend. Due to recent advancement in transportation and communication facilities a linear corridor growth has been induced along the major roads.

The city witnessed three marked phases and the similar number of pockets of historical growth. The south-eastern and southern parts of the city around Achal Taal belong to historical antiquity of more than one thousand years. This earliest settlement is the current heartland of Hindu population. The onset of Muslims in India paved the way for settlement of Muslims in the Upper Kot area during the medieval period (1200-1900 AD). With the British supremacy, a separate Civil Lines area was developed on the eastern side of the main railway track. This is a post 19th century phenomenon. Later on, establishment of Aligarh Muslim University and recent commercial growth has paved way to the fringe area development. However, the south-eastern and south-western parts of the city have seen most of the expansion and increase in population density.

The city is famous for its lock industry which has remained a small-scale labour intensive enterprise. Other industries of significance are metallurgical, building fitting material, iron foundries, electrical goods, brass works, readymade garments etc. The agro-based industries are also booming.

1.13 Ward-wise Density of Population

The important consideration here is to visualize the density of population as an inhibiting factor for the collective life of a social group living in a particular city (Appendix I). It is pointed out that there exists a close relationship between the nature of social structure, population density and the quality of life of the people.

The Fig. 1.4 shows the spatial pattern of the population density in Aligarh city on the basis of data obtained from the Municipal Corporation of Aligarh. The figure depicts five density choropleths ranging from the very low of less than 25,000 persons/sq.km. to very high density exceeding 1,25000 person/sq.km. This large variation entails significant ward-wise differences in the open space availability, built-up density and the consequent congestion. The city structure comprises of the following features.
DISTRIBUTION OF POPULATION DENSITY
ALIGARH CITY
2001

Source: Based on primary data generated through household survey at ward level.

Fig 1.4
The ward-wise percentage population to the total, ranges between 0.68 percent to 3.58 percent. The range of aggregate population is from 4,797 and 23,976 persons for Sudamapuri (Ward No. 42) and Nagla Kalar (Ward No. 18) in year 2001 respectively.

Out of the sixty wards forty six wards have either pre-dominant Hindu or Muslim population comprising more than 80 percent of the total population of the pre-dominant community.

Remaining fourteen wards represent a secular distribution of the inhabitants ranging between 20 to 80 per cent.

The areal extent of wards varies in a very disproportionate way. It varies between 0.034 sq.km to 2.716 sq.km.

Thus a varying pattern of density of population emerges.

The distribution of population density reveals a concentric pattern (Fig. 1.4). The very high and high density wards, eleven in number, are found in the central part of the city i.e. the old city. In this part of the city more than 80,000 persons per square km. The medium density wards, seven in number, are found to encircle these densest wards. The very low density twenty three wards are generally newly developed Civil Lines wards or peripheral wards of the city. The low density twenty wards are found to be interspersed between medium and very low density wards. The map shows that more than half of the area of the city has less than 25000 people per sq.km.

It would be pertinent to examine the relevance of population density in the people. It is appropriate to justify the density of population as a negative factor in determining the overall quality of life of city dwellers, because density signifies

- Overcrowding, and congestion.
- Higher pressure on community resources and municipal facilities i.e. a situation of over-population.
- Congested pattern of housing and street system.
The old city area of Aligarh records the highest density due to its long history of settlement. This part of the city carries a pre-British imprint of the society. The high density situation indicates that early inhabitants had a propensity to cluster together due to strategic and security reasons creating a walled city. The lower density wards found in the eastern part of the city are popularly termed the Civil Lines. The important feature of these wards is that they have most of the government offices as well as the Church and the Aligarh Muslim University. The new rich and educated class Muslims and Hindus prefer to inhabit this part of the city. The average size of the wards is very large in comparison to the old city and density is very low. The new peripheral wards also represent low density areas generally occupied by uneducated and poor people who have no place in the poor wards of the city centre. The term Hindu and Muslim applied here carry the same definition which is used by the Census of India. Sikh, Jain, Buddhist communities have not been included in this study.

1.14 Religious Composition of the Population

Figs. 1.5 and 1.6 show the spatial distribution of Hindu and Muslim populations. The distribution is more or less sectoral in nature. The sectors of Hindu majority wards are mainly in the eastern, north-western and southern parts. Sectors of Muslim majority wards are in north-eastern and south-western parts. There is one wedge of mixed population wards in the north of the city. The central part of the city has Hindu, Muslim and mixed population. The tendency of separate communal enclaves became pronounced during the British period. The newer Muslim settlement in the Civil Lines has been developing around Aligarh Muslim University. These Muslims are educated and economically well-off. They constitute an intellectual, technical, managerial and specialized work force of the University teachers, doctors, engineers and professionals (Fig. 1.6).

The population of Hindus generally in the eastern and southern part of the city is a business community. Practitioners of law, medicine as well as bank employees are also noticeable. Muslims vis-a-vis Hindus lack such a powerful economic class which is compensated by a Muslim intellectual enclave here due to Aligarh Muslim University. The high income Hindu wards are found around Marris Road, Centre Point and Ramghat Road. This zone is emerging as a new Central
Source: Based on primary data generated through household survey at ward level.

Fig 1.5
DISTRIBUTION OF MUSLIM POPULATION
ALIGARH CITY
2001

Source: Based on primary data generated through household survey at ward level.

Fig 1.6
Business District. The old CBD had been Railway Road and Baradwari of the old city. Still, this area is humming with commercial activities.

Fig. 1.5 reveals that in as many as twenty seven wards Hindus constitute more than 80 percent of the total population. On the other hand a total number of nineteen wards have more than 80 percent Muslim population. Four wards report 60-80 percent Muslim population. There are three wards having 60-80 percent Hindu population. Four wards report mixed population having 40-60 percent of either community. Hence the social segregation of religious populations is closely associated with the geographical segregation through ward boundaries in Aligarh.

In a country like India where religion has a dominant role to play in social and political life, this spatial pattern of religious population at city level determines the nature of power leverage in elections. The neighbourhood becomes very prominent place, as wooing of voters of particular community involves promises of good roads, sewerage, and other municipal and infra-structural facilities.

The axiomatic assumptions for the study proposed here, are:

- In democracy as minority social groups have a numerical disadvantage, they are systematically deprived of proportional leverage in total life domain of the country due to institutional bias against them.

- As a result, in terms of space, minority dominated wards in a city are more prone to create pockets of misery and deprivation.

The present study and its discussions are governed by these assumptions.
Chapter-2

REVIEW OF LITERATURE

- Emergence of Works on Social Relevance of Space
- Levels of Material Well-Being: A Traditional Approach
- Perception, Deprivation, Quality of Environment and Well-being
- Gender Perspective, Human Development and Quality of Life
- Efforts to Conceptualize Social Welfare
- Well-Being Studies in India
- Critical Analysis of the Literature Review
Chapter – 2

REVIEW OF LITERATURE

Review of literature is considered to be a very important step in a scientific enquiry. The problem at the disposal of the researcher is well understood, explored and analysed when her knowledge about the theoretical aspects and concrete empirical evidence concerning the research problem is thoroughly scrutinised. This effort of review helps the researcher in grasping the idea about the depth and extent of the studies in the concerned field.

The researcher finds herself in the position to explore those avenues, still untouched as well she is able to identify the lacunae and weaknesses of the previous studies. The ability to sift through facts, and to integrate the existing knowledge makes the researcher more critical, cautious and systematic in her outlook. Above all, the effort to review the existing relevant works equips the researcher with better ideas and tools of research to carry on the study under pursuance.

2.1 Emergence of Works on Social Relevance of Space

The study of socially relevant issues and concepts was tangentially witnessed in some scholarly geographical work of the 19th century and early part of 20th century. But these studies acquired prominence and significance in the discipline by 1960s. Inclusion of social problems and other relevant studies of social space in geography might be considered a paradigm shift from conceptual point of view. It furnished the discipline with a fresh air to breathe, in a situation when the tightening noose of spatial logic and economic regionalization through models and theories was suffocating it. But this new thrust was not able to establish an independent framework of geographical inquiry. However much effort was made by Smith (1973, 1977), Knox (1974) and others to establish social welfare approach as a

The central theme in geography. It became just another approach to see the spatial realities in geography. Moreover, the methodology of this research tradition, throughout the period, has been guided by empirico-positivistic philosophy. The emergence of social well-being studies in geography is embedded in the real world problem. By now, no satisfactory theoretical spatio-social formulation of social well-being has been envisaged.

The studies in this tradition have a historical context. The social indicators movement of 1960s was a reaction within the discipline of geography due to disenchantment with the prevalent non-human approach of spatial modelling and hard statistics of development measurement. The approach was reductionist and spatially deterministic. During 1960s the Americans faced Vietnam War and racial riots in 1969. A large number of radical and liberal Marxists found a reinvigorated base among young geographers. Relevance of the living environment, locality and its impact on well-being got currency. Through these studies, an exploitative face of America was projected by these geographers.

In this context, we come across a series of studies done on social well-being under the impact of relevance movement of the 1960s. Some important factors were responsible for consolidation of social indicators movement as a serious academic pursuit as well as policy tool in the United States. The dominance of economic statistics with monetary units as common denominator was found unable to take into consideration many qualitative and socially relevant aspects of national life. The first thrust of the social indicators movement led to the publication of Toward a Social Report in 1964 by the Department of Health, Education and Welfare, HEW.

It provided a broad, if relatively brief, review of the state of the nation on a wide range of social conditions.

Almost simultaneously, a parallel social indicators movement also started in Great Britain (Moser 1970, Shonfield and Shaw 1972). The Urban Planning

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Directorate of Britain had used a level of living framework to assess the differences between regional and social well-being in relation to the provision of urban service functions (Ministry of Housing and Local Government, 1970). The study started by selecting some reliable indicators of socio-economic well-being. Subsequently, this operational definition was expanded to include a range of urban service functions. These reliable indicators, represented through available data, were correlated with 68 variables which were highly correlated with the reliable indicators. Thus they were added to these reliable indicators to form the operational definition of well-being.

2.2 Levels of Material Well-Being: A Traditional Approach

Along with the governmental initiatives academic efforts were also taken during late sixties and early seventies to study levels of material well-being. An early attempt by Lewis (1968) was made to study the regional variation of the north-eastern United States in terms of levels of living. He operationalized this concept with a set of variables throwing light on the character of in-migration, education, employment, housing, communication, political empowerment, health and social stability. Data for each of the described variables for the selected counties were ranked from ‘best’ to ‘worst’ and combined to form a single index. Each variable was given equal weightage. But in this study Lewis didn’t provide a conceptual definition of levels of living.

Wilson (1969), an economist, made a highly ambitious attempt to measure inter-regional and inter-state variations in social well-being. He selected nine goals out of the goals included in “President’s Commission on National Goals” (1960). They included status of the individuals, equality, democratic process, education, economic growth, technological change, agriculture, living condition, health and welfare. He used 85 variables related to these goals producing nine indicators.

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9 Wilson, J.O. (1969), Quality of Life in the United States: An Excursion into the New Frontier of Socio-economic Indicators, Midwest Research Institute, Kansas City, M.O.
The study made by Smith\textsuperscript{10} (1973) for inter-state and intra-city analysis of well-being was, in fact, a major break-through in this direction. He identified various degrees of consensual indicators. On the basis he found that there is complete or nearly complete agreement on the inclusion of four conditions; income and wealth, employment, health and education for good life. In addition to there was a great degree of agreement on another four conditions, such as, social status and mobility, public order and safety, the state of the family and the living environment.

Thus, the selection of indicators by Smith was heavily dependent upon the expert consensus. Any theory or model did not apparently guide the empirical work. In the latter study environmental aspect was also included to throw light on the importance of the immediate living environment in day today life and well-being. He used $Z$-score additive model to calculate score for each criterion of well-being to develop a composite index of social well-being. He applied weighted standard additive score method to find noticeable difference from the unweighted score ranking of the states. Using principal component analysis he analysed the data of inter-state differential of social well-being. He found that two major components; general socio-economic well-being and social pathology determine more than 50 per cent of the variance in well-being. The most important indicator was income, being a reflective index of good housing, high occupational status, good education and good access to health care.

Drewnowski\textsuperscript{11} (1974) tried to differentiate between the state of the human well-being at any point of time and the level or flow of the sources of well-being on which this state depends. The former was seen as a stock analogous to product or income. Increase of well-being was closely dependent and resulted from the level of flows during a given period of time.

The study of levels of living in England and Wales by Knox\textsuperscript{12} (1975) incorporated twelve major constituents of well-being with one or more aspects.

\textsuperscript{10} Smith, (1973), op.cit.
Subsequently, 53 appropriate indicants were used. Then the data underwent principal component analysis. Out of six major components, first three were found more important. These components were termed as 'level of living' 'familialism' and 'sub-urbanisation'. The researcher tried to develop an index for overall well-being of England and Wales using rank scores of the four diagnostic variables. It was assumed by Knox that the correlation between measurable and non-measurable aspects of quality of life is high.

Zehner (1977) attempted a comparative study of quality of life between the communities inhabiting new planned urban centre vis-a-vis conventional communities. He developed four levels of indicators related (i) with dwelling (ii) with immediate neighbourhood (iii) with the community, and (iv) with overall life satisfaction. His findings revealed that factors like dwelling, neighbourhood and community had only limited effects on life satisfaction. These differences were not as important for life satisfaction as economic security, health, job, marriage and family life. In this study, at neighbourhood and community levels, differences in satisfaction began to emerge between more and less planned environments.

Knox and Cottam (1981) in their paper adopted a welfare approach to examine key aspects of the human geography of the Scottish highlands. Not only the objective circumstances of people's life but also their own assessment of specific aspects of life was taken into consideration. The method of cluster analysis was used and four categories of settlement zones were identified.

2.3 Perception, Deprivation, Quality of Environment and Well-Being

The early researches were concerned with measurement of objective condition of well-being. But a few studies were undertaken on the theme of the quality of life from a socio-psychological perspective. A study dealing with comparison among Scandinavian countries on the above said theme (Allardt 1973)

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recognised having, loving and being as three dimensions of over all individual need satisfaction. The Delphi Method (consulting oracle) used by Dalkey and Rourke\(^{16}\) (Environmental Protection Agency, 1973) was to identify group value-judgement about the parameters to determine quality of life. A study of college students by this procedure had produced a ranking of different determinants. First, of them was loving, caring and affection and so on. Second stress was on self-respect followed by peace of mind and emotional stability.

Tepperman and Curtis\(^{17}\) (1995) in their paper described the steps taken to develop a measure of life satisfaction which appeared useful for analysis of sample survey data of adults from the United States, Canada and Mexico. The procedure undertaken was factor analysis. The result was based on composite measure of six variables. The constituent items had face validity, and the factor structure was similar across countries and also across sub-groups within the countries. The factor structure was also similar in 1981-82 and 1991-92 and the factor scores based on these structures were highly correlated with variables that were customarily good predictors of life satisfaction and happiness. With the help of these results a level of confidence was gained for applying the life satisfaction measure for further multivariate analysis of the data which aimed at explaining variation in satisfaction.

Walford\(^{18}\) (1986) examined how social indicators might be used to measure the rural deprivation. This study raised questions whether the social area classification so produced depicted deprivation or merely signalled changes in service provisions and policies. In the same vein Pacione\(^{19}\) (1993) in his paper, studied the urban crisis as a multi-dimensional concept which involved a host of inter-related forms of disadvantage. According to him, term ‘multiple-deprivation’ described a situation in which a range of social, economic and other problems coincided to create an environment of compound disadvantage for those who were


affected. It was, in fact, an attempt to study the well-being condition of disadvantaged residents of Glasgow city which was manifested in their powerlessness and their polarization. Paper analysed the capital investment decisions of major public and private agencies and the impact of these efforts to resolve the urban crisis in Glasgow. He concluded that inspite of the efforts there was no visible improvement in the life of disadvantaged group from 1981. An alternative urban policy was discussed. Author has used multivariate analysis to reveal urban crisis.

Bradford and Tyer\(^{20}\) (1995) also attempted to develop an urban deprivation index. In this study a single index was rejected; instead a matrix of results was accepted which appeared more appropriate for the complexity of geography of deprivation. Key issue being faced, while constructing an urban deprivation index, was especially regarding the need for flexibility because government used an index for many purposes and at different spatial scales. Authors discussed the profiles of various districts to illustrate the use of the matrix.

A similar study of social well-being, though with a different purpose, was undertaken by Garza\(^{21}\) (1996) to find out socio-economic imbalances in the metropolitan area of Monterrey. It included housing conditions and basic services provision and their temporal changes between 1970 and 1990. The study revealed the limitation of using municipal boundaries for intra-urban analysis, as many clusters of micro areas with very low level of socio-economic development were found in some of the better-off municipalities. Six variables used were related with income, level of education and types of housing. Author noticed that class structure of Mexican society was reflected in organization of the urban space in a particular pattern which is defined by geographic, economic and social factors. Governmental interventions would influence these factors. He pointed out that as long as the low level of income and high level of under-employment characterized by blue collar categories did not improve it would not be possible to solve the urban problems. Proper coordination of activities might improve the situation.

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Carolyn et al.\textsuperscript{22} (1997) described the methods used to study inequalities in health status and environmental conditions between different groups in the cities of Sao-Paulo and Accra. The findings of the study included a discussion not only of inequalities in health status between the best quality and worst quality zones in both cities but also how health risks differed by age group. Authors also developed indicators of deprivation of social environment. Findings on inequality showed a deprived periphery and privileged core in Accra was associated with city’s history. In Sao-Paulo most severe inequality existed not in basic living conditions but in income.

Many studies have been undertaken to highlight inequality in environmental quality and basic services found within urban areas. Lewin and Strauss\textsuperscript{23} (1999) studied the inequalities in access to basic services in Cape Town due to inequitable distribution of resources on the basis of race-group during apartheid era. They discussed an initiative to develop environmental health indicators in Cape Town, South Africa and to provide decision makers with environmental health propositions, and the community with better health information and to assess the impact of environmental hazards on health. While Follegatti\textsuperscript{24} (1999) described the progress made in improving quality of environment of the city of Ilo over the last 15 years and discussed the reasons for its success. The paper discussed the combination of local factors as well as a broader national and international context.

2.4 Gender Perspective, Human Development and Quality of Life

Notable studies on well-being have also been made from gender perspective. Kabeer\textsuperscript{25} (1996) argued that most of the discussions of poverty had been conceptualized keeping in mind a male actor and male-centric notion of well-being.


The assumption behind income, consumption and well-being measures was that any shortfall in income or consumption would lead to the shortfall in choice and would be manifested in lowered well-being. But the author put forward the point that by introducing the factor of gender, these measures inadequately captured women's experience of poverty. Forms of poverty experienced by women were more culturally pronounced than that of men and hence it could not be easily understood through the same conceptual tools. Fadda and Jiron\(^{26}\) (1999) in their paper discussed how to study quality of life from a gender perspective. They had differentiated the concept of quality of life from environmental quality and measured them. The paper further discussed the methodological basis for undertaking research on quality of life with particular emphasis on differentiating the perceptions of women and men. The paper ended with a description of how a questionnaire had been developed to look into more details at their differences in two low-income settlements in Santiago.

Gormely\(^{27}\) (1995) tried to give an alternative treatment to income to modify Human Development Index developed originally by UNDP. The HDI envisaged by UNDP was a composite index constructed from the measure of life expectancy, education and per capita income. Gormely argued the contribution of per capita income to human development was inappropriate and led to misleading HDI rankings. The existing measures allowed per capita income of a country below the average index value to contribute a greater portion in development than that of a country above average income. The index developed by the author resulted in an appreciable alteration of country's ranking.

Subramanian\(^{28}\) (2001) in a study of urban social deprivation picturised a high level of global deprivation rendered, significantly, worse by extremely unequal distribution of resources among different countries. He suggested that a developing country should see to itself and similarly placed countries in order to overcome the deprivations faced by them. In this study he developed an index called Capability

\[^{28}\text{Subramanian, S. (Feb. 8\(^{th}\) & 9\(^{th}\), 2001), Well-being and the World Today-I & II, The Hindu, New Delhi.}\]
Failure Ratio (CFR). It was a straightforward average of the headcount ratios of deprivation in three dimensions of human achievement; those of knowledge; child survival and decent income-related standard of living. CFR's components value computed for a set of 174 countries. The author identified four major processes creating the present situation of deprivation; colonialism, international trade, international debt burden, and structural adjustment.

2.5 Efforts To Conceptualize Social Welfare

Assessing the most important studies on the definitions and measurement of well-being, Paim (1995) highlighted that well-being was a broad concept defined in various ways. But it could roughly be divided into two broad categories: objective and subjective. The former was income related definitions, but it had serious limitations when used to measure well being. Rather consumption related variables were more appealing because they were flexible with regard to the variables included. According to him before using any variable the nature of the study should be judged and unidimensionality of the variable should be ensured to ensure a sound conceptual framework for the study.

Smith (1977) in his book, 'Human Geography: A Welfare Approach' offered the restructuring of geography around the theme of welfare. Since the end of the 1960s studying the conditions of human society became a major concern of geographers. The welfare approach to geography involved judgements for selecting a just structure among alternative structures or states of the society. In geography the judgements are between alternative spatial arrangements. This approach leans heavily on economics and on the literature concerned with 'social indicator'. The approach adopted here attempts to suggest ways in which the geographer may address the question of 'what should be' along its traditional concern with 'what is'.

Smith (1994) in his book ‘Geography and Social Justice’ made an emphatic effort to put social concern at the centre of human geography. He visualized a movement which was imminent and wanted to align human geography

to this movement. He observed and highlighted the increasing gap between have and have-nots both within and among the countries. He argued that social scientific method of research was not a justification for avoiding values or moral judgements. He further emphasized that value-free sciences had never existed in reality and the moral dimensions needed to be part of the study and practice of human geography. In this book Smith reviewed mainstream and counterstream theories of social justice. He highlighted theories of need and social well-being. He presented some empirical studies to justify his points.

Kakwani\textsuperscript{32} (1995) in his paper studied the impact of structural adjustment programme of the World Bank on the living standards of the people in the developing countries. The main objective of the article was to test the hypothesis that whether the adjustment leading countries had a superior (or inferior) performance to the non-adjustment leading countries during the 1980s. He used a new dummy variable regression model to test this hypothesis. This model controlled initial conditions, external shocks and other exogenous variables which affected differently. He measured the standard of living through several socio-economic variables, important of them were per capita income, life expectancy at birth, infant mortality rate and literacy rate.

Social justice had been raised as a moral issue by Smith\textsuperscript{33} (1995a) in the geographical discussion. Smith projected the connectivity between morally justified differentiation in social justice with that of a spatially concerned community. Smith\textsuperscript{34} (1995b) examined the obstacles of partiality. A case was made for social justice as equalization with John Twai’s principle of advantage to society’s worst-off acting as a constraint. Such a conception of social justice gains strength, being viewed as an integral component of a good way of life which responds to the universality of basic needs, at the same time recognizing cultural diversity in the manner in which they are met.


Jeanlet (1996) dealt with the theme of humanizing the city in his paper. He viewed that the spectre of social, political and psychological breakdown was stalking the cities of both north and south of the globe. Urban life had broken down. The city, which was once the cradle of democracy, had become a synonym of exclusion and violence. According to the author, this pessimistic observation should not prevent us from realizing that city dwellers are in search of citizenship, despite or perhaps because of this situation. To respond to this we must not hesitate to deconstruct in order to create new awareness among everyone involved in the city so as to recover it. Cities must be humanized. We must break with economism, create a new ethics of the city for the service of the people and strengthen local ability to reconceptualize it completely.

2.6 Well-Being Studies in India

A few works on social well-being in Indian context are available. This tradition is not fully established yet. Desai (1985) in her paper undertook the study of perception and behaviour of residents of different neighborhoods toward quality of environment in Ahmedabad through the measurement of perception. It was found that its impact on human behaviour varied according to individual characteristics and community characteristics in term of caste, religion, language, occupation etc. It also varied by time and space. Further, it depended upon nature of inter and intra-neighborhood interaction of residents. This study was attempted on a relative small scale.

Mukherjee (1989) study of quality of life which grew out of true surveys of quality of life in India in 1980 and 1982 and the status report on the quality of life research in 1984. The study made appraisal of the relationships within and across the subjects and the objects in the light of a successive relation that could be drawn between the qualitative and quantitative assessment of the quality of life, as knowledge accumulated on the phenomena. The study also eschewed empiricism as an ideology because that may lead to the quest for 'pure' knowledge.

Ahmad, J. (1989)\textsuperscript{38}, Aijazuddin (1993)\textsuperscript{39} and Ahmad, A. (1993)\textsuperscript{40} discussed the socio-economic backwardness of Muslims in terms of post-independent structure of Muslim society with special emphasis on its backwardness on an educational front.

Kulkarni\textsuperscript{41} (1990) attempted to study the spatial pattern of social well-being in Gujarat. The objective of the study was three fold. It was to measure the levels of social well-being in a micro-regional framework, examining inter-district and inter-taluka differences in social well-being. And to examine the extent of resemblance and contrast in patterns of urbanization. He used Knox Index for the purpose of measuring levels of well-being.

Fakhruddin\textsuperscript{42} (1991) emphasized the impact of social, environmental and residential structure upon the quality of life of the residents of Lucknow city. The study aimed at finding deprived zones of the city using appropriate indicators of well-being.

Swaminathan\textsuperscript{43} (1993) in her paper raised the fallacy of income norms to assess poverty in Bombay slum. She argued that there were many things in life which could not improve, simply by an increase in income. She found that for people living in an adverse environment an increase in income did not better their living environment. Thus their qualitative aspect of life was more dependent upon the environmental condition than on the economic aspect of their life.

Anjum\textsuperscript{44} (1997) in her paper assessed the environmental quality of Modinagar, an important industrial centre. She attempted to find out the overall habitat condition, environmental degradation and the quality of life. Srivastava and

\textsuperscript{38} Ahmad, I. (1989), \textit{The Problem of Muslim's Educational Backwardness in Contemporary India : An Inferential Analysis}.

\textsuperscript{39} Aijazuddin, A. (1993), \textit{Muslims in India : Their Educational and Demographic Structure}, Inter India Publication, New Delhi.


\textsuperscript{42} Fakhruddin (1991), \textit{Quality of Urban Life}, Rawat Publication, Jaipur.


Varma\(^{45}\) (1997) studied the socio-economic conditions and the impact of social customs on the economic life of schedule castes-dominated Sagar city, through interviews and personal observations. The study found that the schedule castes were proportionally more unemployed with a low level of literacy. Further, untouchability and ill-treatment meted to them from upper castes worsened their quality of life. Ahmed and Shamim\(^ {46}\) (1998) highlighted the regional disparity in socio-economic conditions of Bihar state using income method to form a composite index. Out of 31 districts, almost 50 per cent of them recorded only a medium level of living. Northeastern and north-western parts of the Bihar Plain reported least development.

Sarma\(^ {47}\) (1999) in his paper tried to underscore the importance of human development, instead of economic development, and presented a comparative picture of quality of life in the different states of India. He calculated the Human Resource Development Index (HDI) for the states. According to values of HDI of different states, Punjab occupied the top most position, while Bihar ranked the lowest.

In a study to develop indicators for environmental services in Lucknow, Revi and Dube\(^ {48}\) (1999) described how community indicators were used to support a dialogue between representatives from communities lacking basic services and the service providers. This was a participatory approach employed by academics to involve people whose well-being was affected by the policies of those who monitor these services. The paper detailed about the neighbourhoods selected, interviews done, local organization approached and meetings had with officers. It also dealt with the procedure of drafting of indicator-set presented at a workshop and how different parties agreed on an indicator-set. It was a refreshing approach to achieve an agreed framework of indicators to assess the quality of life of the people.

Mazumdar\(^ {49}\) (2001) threw light on the concept of quality of life by acknowledging it as a multidimensional phenomenon. Each of these dimensions was


measured in different units. In order to reduce the dimensionality problem many methods had been suggested in the literature related to spatial analysis. In his paper, the author selected five sets of quality of life indicators and proposed a methodology, which was described in this paper in full length. In this study it had been assumed that all the cities could be mapped on multi-dimensional space and each city was assumed to be presented by a vector. The author developed an index of overall quality of life facilitating comparison between cities.

The report of the National Council of Applied Economic Research (NCAER) on the relative socio-economic deprivation of Indian Muslims confirmed a high incidence of poverty and deprivation of Muslims amongst all citizens of India. Muslims as a social group were considerably more deprived than Hindus as a whole. However, if the schedule castes and tribes were considered separately then the relative deprivation between Muslims and non-scheduled castes and scheduled tribe Hindus was very large, so was the differential between scheduled castes and scheduled tribes, Hindus and high caste Hindus.

The published works on Aligarh city with respect to well-being studies is almost non-existent. However, a partially related study was conducted with a theme of household and health by Rahman (1998). The work undertaken by him was mostly based on primary data generated through household and field survey. The sampling was done on the basis of religion and income which was considered by the author as a good representation of the population. The whole discussion revolved round the household environmental condition, sanitary condition and resource condition etc. There was almost no conceptual framework of the research study, but only a descriptive interpretation. The questionnaire for this study was adopted from an already existing source. The general hypothesis developed for the study was poverty as the greatest and the most immediate influence on the life of the residents. In other words, the higher is the income lesser will be the household and environment related diseases but higher will be the occurrence of diseases related with the wealthy lifestyle.

50 The Times of India, New Delhi. (August 28th, 2002), Minority Report.
Some findings of the work are enumerated below:

(i) Most severe health and household environmental problems were faced by the poor.

(ii) The problems of poor households tended to be community oriented, related to management of shared resources. Among high income groups it was more of an individual problem.

(iii) Different environmental problems were closely inter-related and could not be dealt with independently by different agencies.

Rahman’s views are elitist. He comments that as Mohallas of higher income and lower income groups are adjacent, poor are responsible for polluting the Mohallas of the rich by throwing garbage as well as waste waters on roads. On the contrary, the wastage and the per capita garbage has been found more in quantity among the higher income social groups in the Indian cities. The rhetoric seems to be of the same kind which the developed countries use against the developing countries for global ecological malaise. Author does not try to delve deep in interpreting the results. He does not talk about the reasons of poverty and low level of well-being, rather dwells upon the effect which poverty has on urban environment and its worsening effect upon the rich people. In another study of Aligarh city, Saxena (1997) emphasised that the proposed Master Plan (1980) of the city was outdated as compared with the population growth of the city. She talked about the lack of basic amenities of civic life and its impact on social life. The author concluded that municipal failure of civic authorities led many problems to crop up in Aligarh city where demand of increasing populations was not met in terms of amenities and facilities.

2.7 Critical Analysis of the Literature Review

Most of the studies mentioned here have used secondary data. Thus many variables selected for the assessment of the social well-being are only an indirect measurement of the well-being of the social groups. Many of these studies are made

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on a broader geographical scale, i.e. inter-state and inter-city levels. Efforts of individual academics carry the limitations of time and money on the study, in comparison to governmental efforts. Indicators and variables selected in most of the studies have more empirical validity than theoretical justification.

Reviewing the existing literature it is found that the of use statistical techniques in the study of spatial variation of social well-being generally standard additive z-score technique and multivariate analysis (factor analysis or principal component analysis). In few studies rank score methods have also been applied. The objective of applying these techniques is to develop an overall index of social well being and finding most important factors determining the state of well-being.

In view of the researcher, for a social construct which is acknowledged both academically and socially, a normative approach beginning with agreed social axiom may be applied. The development of these social axioms needs meticulous intertwining of various theories of needs, rights and justice. In case of well-being, it is not yet conceptualised as such, whatever of it exists is at consensus level. It indicates that we still live in an ethically and policy-wise amorphous society where social phenomena are selectively identified as determinants of social well-being. This amorphity of social realities is due to partial view of society where individual theorists differ from each other, much distant from the policy makers. The social reasoning to understand what exactly we mean by social well-being is more than a geographical exercise. The close interdisciplinary collaboration of the social scientists under the ageis of governmental collaboration is the required framework for these studies.
Chapter-3

CONCEPTUAL FRAMEWORK OF SOCIAL WELL-BEING

- Evolution of Well-being Concept
- Objective and Subjective Assessment of Well-being
- Needs and Well-being
- Well-being: A Generic Concept
- Understanding Deprivation
- Spirituality and Well-being
- Measuring the Quality of Life
- Indicators of Well-being and Aligarh City
Chapter – 3

CONCEPTUAL FRAMEWORK OF SOCIAL WELL-BEING

The study of social well-being in geography is the inevitable result of the relevance movement which started in 1970s. It aimed at addressing those human problems which were afflicting the society at large. It was launched to groom geography as a socially relevant discipline. Hence, geography began to address the welfare issues which provided a new framework for micro-level enquiries. Micro-level spatial analysis has enhanced the role of geography in the developmental planning. Through social relevance movement the emphasis of enquiry in geography shifted from the study of marginal land to the marginal social space.

3.1 Evolution of Well-being Concept

A rather late arrival of welfare approach in social sciences in general and geography in particular, has several historical, political and psychological reasons, e.g. the Vietnam war, environmental degradation, crime explosion. The manifestation of social injustice through these crises in cities led a group of social scientists to promote the radical approach. Especially, with geography, the issue of distribution was taking new urgency (Smith, 1977). The breakthroughs in the studies of social well-being took place in the west. The intellectual yearning to solve social problems has to pass through many phases. Even geographically, it is not equally practiced. Thus developing countries, like India, are lagging far behind in addressing these problems through intellectual and academic pursuits. All efforts in this field are disproportionately revolving around the descriptive empirical studies. These studies are generally concentrated around two major aspects. Firstly, the selection of appropriate indicators reflecting the totality of social well-being, and secondly, the selection of appropriate geographical units for the purpose of generalization (Kulkarni, 1990). The variables used in

construction of the indicators are still not a direct measure of well-being but its surrogates, e.g. good access to health facilities is often used as a indicant of health, whereas the intensity or duration of illness experienced would be a more direct way of measuring health condition.

Ideally, data relating to the well-being should be in the form of flow data i.e. measures of satisfaction per unit of time because it would be more of a help to academics as well as policy makers. Secondly, data should be related to output. Though it is sometimes ambiguous because the output data in some cases may be intermediate data for other cases (Knox, 1975). The adoption of the geographical scale affects both the selection of indicators as well as patterns of social well-being in terms of generalization. The smaller is the unit of the study of social well-being greater details and accuracy are produced and more immediate life conditions are exposed. Whereas at meso and macro levels micro differences are merged and hence a different level of generalization emerges. Hence, micro-level studies of social well-being are more realistic (Kulkarni, 1990).

In Indian society there is a history of social and spatial discrimination. The reasons may lie in the unequal resource endowment as well as unjust social structure spawned around the dogmas of religion, culture and social hierarchy. The social injustice and economic disparity within a social system are intricately related with the expression of socially unjust spatial structure. At broader national level, there are regions of relative deprivation. At regional level, few urban centers which attract industries and services are better-off than most of the remaining centers. But a definitive picture of inequality emerges at the intra-urban and intra-rural levels. In the former case analyzing the spatial structure of city and distribution pattern of amenities and facilities provides a most realistic account of actual economic and socio-political processes taking place. The health and viability of the socio-spatial structure of the city can quite conclusively be judged through the extent of spatial inequality in the social well-being of the relevant social groups in a city.

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4 Kulkarni, (1990), op.cit.
The geographical perspective of social well-being studies is not well-developed theoretically. The basic concern which lies before is to identify an association of geography of well-being with a social theory of urban social system. Till now, geography has mainly borrowed the theoretical framework for well-being studies from economics (Smith 1977)\(^5\). Harvey\(^6\) (1973) elaborates that

There is an urgent need to combine social imagination with geographical space. In true sense the social imagination confirms that man realizes the meaning of his existence only in the context of society he lives in. According to him geographical perspective "enables the individual to recognize the role of space and place in his own biography to relate to the space he has around him and to recognize how transactions between individuals and between organizations are affected by the space that separates them. It allows him to recognize the relationship which exists between him and his neighbourhood."

The symbiosis of the two has produced the concept of social space i.e. mental schema of social group about the space. He talks of conceptual and methodological difficulties for understanding this relationship. Thus the major task before geographers studying social well-being is to make geographical perspective relevant in social explanation.

The concept of social well-being is partially normative in nature. Its formulation is based on the premises of needs and wants. What is considered as need is positive as well as normative in nature. Moreover, concept of social well-being has cultural and technological overtones. Many themes in the social sciences at a certain level of enquiry are normative in nature. Hence, unanimity at conceptual level is very difficult to attain. Accepting principles of equity and justice leading to overall 'balanced' spatial distribution of well-being of different social groups at any given scale should be the starting point for such a geographical enquiry. But there is a note of caution here. The overdependence on theory to seek explanation of empirical phenomena may not always be socially relevant.

Social geography enquires the quality of life and the quality of habitat to estimate social well-being in spatial perspective. These studies need to be policy oriented. Academics and NGOs need to work for 'social planning', a planning which

\(^5\) Smith, (1977), op.cit.

\(^6\) Harvey, D. (1973), Social Justice and the City, Edward Arnold.
sees people in space. As well-being of people in a capitalist society cannot be expected to be achievable collectively (Jones and Eyles, 1966). Therefore, needs of various sections of people on the basis of class, ethnicity, gender, age and caste (in case of India) should be addressed while undertaking the social planning, to eliminate injustice.

3.2 Objective and Subjective Assessment of Well-being

The objective and subjective well-being evaluation is well-marked in the recent social science studies. According to Knox and Cottam (1981) people’s sense of satisfaction with various aspects of their life is very important parameter of welfare. The traditional objective measures are unable to gauge this aspect of well-being. There is an increasing evidence of the fact that there is a wide gap between people’s objective living condition and subjective assessment of their life.

Mukherjee (1989, p.26) elaborates...

The economist and the planner tried to appraise the quality of life by means of quantitative, behavioural variables, exclusively, which they regard objective. The psychologists, on the other hand tend to be engrossed with the qualitative perceptual variables, which they acknowledge to be subjective. The dichotomies they supposed and maintained between quantity and quality, behaviour and perception, and objective and subjective may not be held rigidly by many scholars. However, the contemporary operation of the quality of life research is noticeably directed into two schemes of the so called objective, behavioural, quantitative variations or the so called subjective, perceptual qualitative variation, of the manifestation of life.

Mukherjee (1989), Jones and Eyles (1966), Austin, Honey and Eyle (1987) all have acknowledged that the objective indicators of social well-being are only one dimension of reality. Perception affects behaviour, and the amount of information about the objective condition of life affects our perceptual world. Kromrey (1987) also substantiates this difference between the subjective

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7 Jones & Eyles (1966), An Introduction to Social Geography, Oxford University Press.
10 Ibid.
11 Jones & Eyles, (1966), op.cit.
12 Austin, C.M. & et al. (1987), Human Geography, West Publishing Company.
perception and objective realities of people's well-being. The difference between perceived and objective well-being does carry the influence of the extraneous factors (Mourn, 1983, p.161)\textsuperscript{14}.

- People cannot judge in general the quality of amenities they require because in most of the cases varieties available in the market and money available is more responsible for their choice rather than their own desire or assessment.

- In today's urban life people desire more due to competitiveness, advertisement, propaganda than their needs or wants and creating a confused criteria of judging subjective well-being.

- Subjective assessment many a times depends on temperament of a person and the availabilities of means, so it can vary without any regular reason.

One should not ignore the fact that it is the existing social, economic and political structure which contributes towards generating social 'goods' and 'bads'. The economic, political and social processes generate varieties of mental space and degrees of psychological well-being among different social groups or individuals. Though quality of life depends upon many factors which are internal to an individual, an individual cannot be expected to survive outside the social structure and built-up environment in which he is living. Therefore, it cannot be denied that harmonious relations, meaningful life, job security, decent income, privacy of family life, good future prospect of children, satisfactory political grounding and high spiritual and moral condition of life and religious cohesion in most of the cases, are going to generate perceptual happiness for the individual.

3.3 Needs and Well-being

The quality of life is inherently associated with the degree of fulfilment of individual and collective needs and wants. Higher is the degree of fulfilment of the needs and the wants, greater is the quality of life. According to Knox "well-being is... the satisfaction of the needs and wants of the population". Except a few basic needs which are scientifically established, most of the needs and wants are culturally and historically specific. As needs and wants are fulfilled in specific social, economic and political context they vary from one place to another.

Many attempts were made to classify needs. One of the most important classifications is the hierarchical arrangement of needs presented by Maslow in 1954. He presented the argument that the higher needs emerge as lower ones are satisfied. He proposed five categories of needs: relating with survival, security, belongingness and love, esteem or need for recognition and finally the self-actualization. (i) The first and lowest level of need is survival, which involves the struggle to sustain life by acquiring food, drink, clothing, shelter etc. (ii) The second level of need is concerned with security, involving safety of the environment and protection from physical danger. (iii) The third level of need is for affection, fulfilling inter-personal relationships, conforming to group norms and so on. (iv) The fourth relates to prestige, status and dominance. (v) Finally, at the highest level is desire for self-fulfilment i.e. living up to one’s own potential and capability. This view is corroborated by many psychologists and sociologists. But in later years he revised his theory and put self-transcendence, meaning thereby, living for a purpose higher than ‘self’ as the highest human experience\(^\text{15}\). According to this view the need of an individual or group varies according to space and time. It depends upon the stage of development of the society. The primitive society will be preoccupied with survival and security concerns. Whereas the developed society will be concerned about ‘self actualization’ or ‘personal fulfillment.’

Smith (1994, p.128)\(^\text{16}\) refers Griffin (1986, pp.41-42) to prove the point that some needs are basic.

They are needs we all have just by being human.... We usually speak of basic needs as if they were not only basic but absolute: humans need food and rest and health not for anything; they just do... they are what we need to survive, to be healthy, to avoid harm, to function properly ... well-being ... is the level to which basic needs are met.

There are various ways in which analysis of basic needs can be approached. Namely, ‘target setting’ approach and ‘structural’ approach. The variant of the former is ‘income’ approach.

**Target setting approach:** This type of analysis evaluates the efficiency and appropriateness of current policies and programmes, to meet the short-term target

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and ultimately the long-term goals. The critics of this approach view it as paternalistic in essence and elitist in assessment. The argument in favour of the variant income approach is that people should receive sufficient income to meet their basic needs.

**Structural approach**: According to X, the needs are determined by the structural arrangement of the production and distribution. This approach argues that most of the socio-economic structure are based on systematic deprivation of welfare of the people (Standing & Szal, 1979, pp. 5-6)\(^\text{17}\).

Coats and et al. (1977)\(^\text{18}\) identified a new approach to categorise the needs, as follows:

- **Normative need**: These are the needs which are defined by administrators, experts, or professionals in a given situation for establishing housing standards or poverty line. These are also called absolute or basic needs.

- **Comparative need**: In this approach needs are identified in advance by making comparison between provision of best-off area and actual provision in a particular area or community. Thus a gap between these two areas is identified which is called comparative need.

- **Expressed need**: If felt needs are translated into consumer behaviour and identified as market demand then these needs are called expressed needs.

- **Relative deprivation**: In this case needs can be equated with want or latent demand. Needs are relative deprivations because the goods, services or amenities desired by a particular defined group depends on the cultural norms and expectations of a particular society. Concept of literacy may be functional as well as desirable in the modern civil society, but it is meaningless for the interior African tribes. Hence even most of the barest needs are culture-specific.

Zimbalist\(^\text{19}\) (1977, p.77) highlights the exasperation of the ‘need-research’ in following terms.

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And this flexible nature of social need more transient then permanent, more relative than absolute, more 'subjective' than 'objective' can be seen with particular clarity in the study of the archetypal need of human beings for social survival in the form of a minimally adequate standard of living. As a research target it is peculiarly frustrating one receding as one approaches.

3.4 Well-being: A Generic Concept

Social well-being is used as a generic term for the family of overlapping concepts including level of living, the quality of life, social satisfaction, social welfare and standard of living etc. But there always remained a problem to define these terms precisely.

Standard of living is concerned with the circumstances aspired by a group. There is a distinction between economic welfare and social welfare. Economic welfare refers to the satisfaction which people get from the consumption of goods and services procured by money or available as public provision. While social welfare includes things, which contribute towards quality of human existence. The notion of quality of life suggests the cumulative distribution of important public and private goods such as health care, education and welfare services, protection against crime, the regulation of pollution per capita, resources availability etc. Lastly, social satisfaction is especially concerned with the collective psychological response to the objective conditions of reality. As there is no social theory even of speculative nature, hence components of social well-being are generally consensus based (Coates et al., 1977)20.

Quality of life implies a rather personalized concept. Knox considers the ‘level of living’ as the best concept to develop social indicators. Smith says the human well-being, whatever it connotes to, is not capable of being measured at present or in the future in a generally accepted way.

The spectrum of well-being is wider than that of welfare according to an economist’s definition, incorporating judgement about the natural environment and built-up environment (Lee, 1979, p. 53)21. Many models have been developed to

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20 Coates et al. (1977), op.cit.
conceptualize welfare, all of them being politically neutral. But they failed to take into account the factor of people's satisfaction (Meier 1986, pp.24-5).^22

Operationally, quality of life has been defined in a UNESCO report (1977) as "the satisfaction of an inclusive set of human need." Quality of life is an inclusive concept which covers all aspects of living including material satisfaction of vital needs as well as more transcendental aspects of life, such as personal development, self realization and a healthy eco-system (Dube, 1983)^23. The notion of the quality of life carries with it a clear connotation of evaluation, of the environment, of overcrowded central cities and suburbs of increasing (or decreasing) affluence on the quality of life and so on (Zehner 1977, p2)^24.

Environmental quality has been accepted as the undisputed component of the quality of life in wake of continuously increasing immense pressure on the environment. Environment has emerged as the globally acclaimed factor of good living, especially, in the developed countries. However, in most of the studies leisure, economic security and family life have the highest importance for good living.

The concept of quality of life is understood as a social construct. It is not a set of material condition. It is not the mere satisfaction experienced by an individual but rather, a dialectic between what is being observed by others and what is experienced by the self (Fadda, 1999)^25. There are people who are able to feel happy even in the worst environmental conditions, while others cannot live happily even in the best environmental conditions.

The concept of 'quality of life' represents more than the 'the private living standard' and refers to available and accessible social and public infrastructure as well as an environment without serious deterioration or pollution. Such conditions are not generally met in our cities since a large part of the inhabitants live in

24 Zehner, (1977), Indicators of Quality of Life in new Communities, Ballinger Publishing Company.
dwellings and neighborhoods lacking basic facilities and services. The concept of quality of life is multifactorial in nature ranging from narrowly conceived personal well-being to wider environmental and social setting. GDP may convey a fundamental message about well being but it is difficult to develop an adequate index because of hard-to-measure qualities, and perceptions are more important components of the quality of life (Smil, 1993). An operational definition of the concept of social well-being, eventually relates to human happiness or the capacity of an individual to realize his/her perception of good life (Smith, 1973, p.67).

According to Gilpin (1976, p. 30) quality of life in current usage is a phrase, which appears to cover a miscellany of desirable things, not recognized or not adequately recognized in the market place. Some qualities of the life of a community, which cannot readily be valued or measured include such matters as civil liberties, compassion, justice, freedom and fair play. Secondly, there are such things as health and education, clean air and water, recreation, wild life, enjoyment of wilderness desirable 'goods' which are partly or wholly outside the market economy.

The concept of Human Progress Index mentioned by Gilpin is an effort to formulate the comprehensive term of social well-being at macro level.

Human Progress Index is a proposed index of gross national welfare, or total human progress as opposed to purely economic progress. The need for such an index had arisen from widespread discontent with the use of the concepts of the Gross Domestic Product as the measure of human progress. An integrated human progress index would reflect a set of social and environmental indices as well as economic indices. The index would be influenced by such factor as the depletion of non-renewable resources, trend in air and water pollution; in the effects of development, on noise level; hours of work and travel time; access to cultural and recreational activities; the depressing effects of heavy unemployment; and the range of educational opportunity open to the child.

Lohani (1984) thinks, the objective of development is to improve quality of life (QOL) of the people which is visualized in terms of standard of living (SOL). He considers SOL = \( \sum \) production / population.

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27 Smith (1973), op.cit.
According to him in addition to this, environmental deterioration is a massive challenge afflicting the realization of SOL. So he proposed the change in the model of QOL which is as follows

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QOL = \frac{\Sigma \text{Production} - \Sigma \text{Losses Service/Time}}{\text{Population}} + \frac{\text{Experience/Time}}{\text{Population}}
\]

As it is clear that this model includes losses because material goods maintain limited usefulness, material comfort needed for good life depends upon the services. And as services become abundant experience becomes very important. It is not always that the increased services always mean experiences of enhanced well-being. Hence this model, to be more realistic, includes the element of experience.

At policy level social sector development implies the broad improvement in the quality of life of its people. The term social sector generally involves education, health and nutrition etc. Emphasis is on human development as against human resource development. The UNDP defines Human Development ‘as the process of enlarging people’s choices’. The concept includes within its ambit empowerment, co-operation, equity in basic capabilities and opportunities, sustainability and security. In this approach, people are in the central position and measures such as education, health and nutrition are meant for their intrinsic value and their role in enhancing the basic capabilities of the people. This approach emphasizes acquiring education, health and nutrition, which is considered as basic human rights (Gupta, 2002).^30

In fact, human development and sustainable development are the concepts implying the well-being of the people. Sustainable development has a component of quality of life as people’s perception of their life situation is acknowledged as valid. Thus, according to Kopardeker (1986) what we understand by the term development is the transformation of economic and social conditions of the people (on certain ideological basis).^31

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In short, the social well-being of a group of people is a state of living condition based upon their share of social goods and bads. Due to an equitable and balanced social structure and its efficient functioning, the inhabitants experience peace, prosperity and progress in spatial and temporal context. Social well-being is a function of the nature of economic, political and social structure of the society. The just and equitable society means its economic, political, religious institutions etc. play their roles in such a way that no social group is exploited.

From geographical perspective spatial justice is very pertinent. One can define ‘socio-spatial justice’ as a ‘fair distribution of the benefits and burdens which arise from the human transformation of nature.... Justice must extend to the nature of distributive processes (i.e. ownership of means of production, socio-political mechanisms for allocation of social surplus) themselves to ensure the material, psychic and cultural well-being of all people’ (Gleeson, 1996)\(^{32}\). Justice implies full participation of all social groups in national and community life and a geographical enquiry should aim at realizing a social space in which both material well-being and social participation is guaranteed for all.

Thus all the political processes should harness the means and measures in such a way that no social groups could be marginalized illegitimately (Thomas & Stirling, 1996)\(^{33}\). And if there exist some marginalized groups then the process of their integration and assimilation should take place. This should be done not only in economic sense because economic growth may bring material benefits to people, but development is much more than this. It is a process of enrichment in every aspect of life. The term development should have the connotation of social justice. The term social justice embraces both fairness and equity in the distribution of a wide range of attributes, which need not be confined to material attainments alone. Although the primary focus is on those attributes which have an immediate bearing on people’s well-being or the quality of their life and habitat (Smith, 1994, p. 26)\(^{34}\).

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The concept of distributive justice of well-being requires formulating parameters of an ideal equitable society which become a reference for judging the existing social situation. In the existing inequitous social system a section of economically, politically and socially privileged people polarize the aggregate of well-being disproportionately in their own favour. To correct this situation, there is a need of welfare measures from the government to improve the situation. The equitable social system with sustainable social development ought to produce the desired state of well-being for those social groups which are left behind in the race of industrialization and are trapped in a vicious cycle of mass poverty and unemployment.

3.5 Understanding Deprivation

If a social structure systematically denies to a certain social group the possibility of enjoying some or all of the basic goods of the society, then it needs to be improved upon. The deprivation faced by a certain group is closely related with the history of development of the society in terms of labour division and private property system etc. Well-being of a group is dependent upon the position which it occupies in the social ladder. It becomes skewed when these differentiations are closely related with specific caste, ethnicity, religion and of course gender.

In the study of social well-being, deprivation has always been a very important theme. Two theories of deprivation derive their origin from the urban ecological perspective. The ‘cycle of deprivation’ emphasizes that children born into deprived households and into deprived neighborhoods (built-up environment) have fewer opportunities because of their limited access to alternative paths and possibilities. Therefore, a cycle of deprivations is perpetuated. In adulthood, like their parents, they find themselves failing to compete successfully in the labour and housing markets. ‘The culture of poverty’ theory suggests the existence of a general group attitude in which low-key aspirations and fatalistic assessment of achievements is typical.

The remaining two theories have a broader interpretation. ‘The institutional management approach’ suggests that the allocative system of government and private institutions fails to channel goods and services in a way to reduce
deprivation. Thus, at policy level, reform is needed in allocative system. The ‘structural class conflict’ theory suggests that all the policies to eradicate deprivation are palliative. The root cause of these problems lie in a particular social formation i.e. capitalism. It enhances inequality through artificial methods. Thus, remedy lies in changing the social structure and attitude.

The structure of the society is responsible for a particular social formation creating a weaker section in society. Once this weaker section is created it maintains a marginalized position in economic, political and social systems, having lesser leverage in the society. This group is especially neglected by the government agencies which allocate most of the resources, in the capitalistic set up, to those groups which have stronghold on the policies of government. This aggravates the problem of already marginalized group. It is further accentuated by the cycle of deprivation as children born to these people have lesser opportunity to schools and reasonable homes and appropriate employment. This oft-repeated cycle of deprivation leads to culture of poverty, which is marked by fatalism among the people of these groups. They develop a negative and less progressive attitude. This dampens their spirit and compels them to lead a life of misery.

Hence, it is possible to develop a link between social formation, allocation process, marginalization of social groups of their residential area and attitudinal lapse on the part of the people of weaker section. This can help in explaining low level of well-being ascribed to certain social groups.

Class is most important group in the economic structure. If the powerful class distributes resources in its own favour as expected, the spatial structure would reflect this distribution of power in society. Those in the mainstream political discourse generally refuse to acknowledge that marginalized groups are illegitimately excluded.

3.6 Spirituality and Well-being

Among all the discussion made about various aspects of well-being at conceptual level, one very important need of human beings is generally ignored. That

is the spiritual and religious need of the people. The study of religion has been in the realm of sociology and anthropology, but in geography it is generally neglected. But according to Pacione (2000)\(^{36}\) ‘despite differences, Christian (and other) Churches (religion if one prefers) subscribe to certain shared basic principles or foundational beliefs including the ones which relate to inter-personal relations and social justice in terms of distribution of society’s benefits and burdens’. Though the materialistic positivistic thoughts of post-modern period have considerably moulded the aspiration of society, as well as labelled the position of the religion as a private domain of beliefs, superstitions and taboos.

It is spirituality which brings inner peace, which is extremely relevant in a society which is trapped in the modern day stressed, anxiety fretted life-style. Even at a larger societal level importance of religion and spirituality for the well-being of society is aptly recognized by Einstein (1998)\(^{37}\).

Spirituality defines personal relationship between God / Supreme power and man or a coherent and meaningful relation with the Universe around him. It does not carry a cultural concept. Rather it is a personal concept. Spirituality is responsible for inner peace, because it gives answers to many questions, which has perpetually been afflicting man and lying outside the realm of positive science. At this level spirituality may be considered a very relevant aspect of social well-being of people. Although reinforced by recent research\(^{38}\), the greatest problem is the measurement of spirituality to the effect of universal applicability.

Thus the task ahead is to differentiate between religiosity and spirituality and to identify domains of spirituality to develop appropriate indicators. In the case of religions, however they may differ, their positive role in the society cannot be ignored. Religion is the source of ethics and moral codes defining the outline of spirituality and social conduct for most of the people. In fact evolution of society has seen the corresponding evolution of moral code and ethics, very closely associated with the teachings of a particular faith. Thus another task is to identify the broad outline of moral teachings of the major religions. It is required to develop indicators


to assess the conformity or deviation from particular moral tenets. This may help to measure spiritually because it is very much expected that spirituality must lead to observance of some moral code of conduct. It is our unfortunate state of social inquiry that we are still far away from measuring such an important aspect of human existence, which affects the inner-most life of people throughout the globe.

3.7 Measuring the Quality of Life

Measuring quality of life or social well-being lies in two separate domains i.e. objective and subjective measurements. These two carry different requirements with them. The measurement is a process through which a conceptual understanding is changed into operationalized definition to generate data. This is done in the case of social scientific enquiry through a questionnaire. But measuring social well-being has always been a difficult exercise. Because the unanimity of the concept has still not been attained, even in the case of objective measurement of social well-being. Beyond the few basic necessities, the criteria become value-laden and subject to cultural interpretations. Further, needs are specific to particular geographical scale. Certain needs like civic amenities are city specific which are irrelevant at regional and national level.

An attempt must be made to quantify the standard level of a need to be fulfilled. The methodology to be applied is to follow people’s preference, expert opinions or simply to attest the demand of rationality and logic in specific cases. Even one aspect of a major domain of well-being has various dimensions. Housing condition involves occupancy characteristics, quality of housing and quality of building. Normally accepted indicators should be selected for each dimension and variables should be identified for each of them. And most importantly, they can be dealt statistically undergoing the rigour of the analysis.

Social well-being has many qualitative aspects like aesthetic condition of living place etc. To measure these aspects statistically becomes difficult as well as some times ridiculous. Gould\(^{38}\) (1988, p.6) has convincingly said

Sometimes these ways (statistical) of marshalling evidence are perfectly appropriate, and may be the only feasible possibility of bringing evidence to bear on a particular question. But this possibility should not force all research into it. We have to be very careful to distinguish between what is simply significant in a statistical sense and what is meaningful.

In elaborating the above mentioned observation Gould\(^{39}\) (1988, p.6) says, ‘the trouble is that significant does not mean meaningful, and “meaningful” means capable of being given persuasive interpretation at least for the historically contingent moment’.

The development of a geographical matrix for comparing results of social well-being can be attempted keeping places in the columns and attributes of well-being in the rows. With its help bivariate and multivariate correlation analysis can be attempted. If there are two places of almost similar characteristics it would be easy to identify a regional association between them and if more than two areas are involved then it would be called multilocational analysis (Alvi 1995, p.174)\(^{40}\).

Mukherjee\(^{41}\) (1989, pp.98-9) logically explains the transition of qualitative nominal measurement of attributes of social well-being to the quantitative ordinal numeral distinction in operation with respect to culture. He believes that ‘knowledge has accumulated to the extent of measuring the admixtures on a unit interval scale and producing objects on a mass scale for consumption by individuals”. According to Harvey\(^{42}\) (1973, p.105), the need of measurement of social condition led to the beginning of the social indicator movement having a geographical dimension in the form of territorial social indicators which highlights the geographical inequalities of social well-being.

3.8 Indicators of Well-being and Aligarh City

Smith (1973) identifies a set of seven indicators.

a) Income, wealth and employment.

b) The living environment, including dwelling and neighborhood.

c) Physical and mental health.

\(^{39}\) Ibid.


\(^{41}\) Mukherjee, (1989), op. cit.

\(^{42}\) Harvey, (1973), op. cit.
d) Education, including attainment and quality.
e) Social order, involving personal and family problems as well as crime and public order.
f) Social belonging, consisting of democratic participation and segregation.
g) Recreation and leisure.

Having a close insight of the work done by Smith (1973), Knox (1975), Zehner (1977) and the observations made by Knox (1982), Coates et al. (1977), Kulkarni (1990) and UNDP’s successive Human Development Reports and a host of other works, the researcher has developed several groups of indicators for the purpose of enquiring ground realities of well-being in Aligarh city. It also facilitates the assessment of macro and micro-level of well-being of different religio-social groups.

The present researcher has attempted a classification of the following groups of indicators:

(1) Demographic structure and family type
(2) Education and Employment
(3) Income and Wealth
(4) Housing and Health Conditions
(5) Recreation and Leisure
(6) Political leverage and women Empowerment,
    Indicators of the built-up environment.

For the sake of lucid discussion these indicators are categorized into three groups. First part comprises of indicators of built-up environment, second group of indicators deals with the sustainability and resource potential of the social structure of Aligarh city, including demographic and social, economic, educational indicators. The last category of indicators directly deals with the measurement of performance of Aligarh city as manifestation of its sustainability potential. They deal with employment, income, housing, health, recreation, political and women’s empowerment. In the coming chapters the researcher is going to discuss these three sets of indicators separately. Finally, the state of social justice in Aligarh city is discussed in Chapter VII.
Chapter-4

BUILT-UP ENVIRONMENT AND WELL-BEING IN ALIGARH CITY

- Built-up Environment: An Indicator of Environmental Well being
- Spatial Dimension of Built-up Environment
- Components of Municipal Environment
- Quality of Roads in Aligarh City
- Non-Solid Waste Management in Aligarh
- Solid Waste Management in Aligarh
- Density of Street Light in Aligarh
- Public Water Supply Points in Aligarh City
- Cleanliness and Maintenance in Aligarh
- Open Space Availability
- Level of Noise Pollution
- Perception of Neighbourhood Security
- Overall Housing Condition
Chapter – 4

BUILT-UP ENVIRONMENT AND WELL-BEING IN ALIGARH CITY

In geography the man-environment relationship is progressively being conceptualized. We are at the fifth conceptual level of environmental development i.e. eco development. It emphasizes restructure of society and economy to ensure development worked with nature rather against it (Barrow, 2005). Urban land-use, if seen from socio-ecological perspective, is an evolutionary and dynamic set-up to reorganize and reconstruct environment with a cultural overtone. Social groups around the world are in the process of acquiring new concepts and skills in the process of utilization of their neighbourhood environment. The dynamism and multiplicity of the process has resulted in varieties of urbanization, some healthy and some disorganized (Reddi, 1989).

In a complex, disorganized and competitive urban society of north India the maintenance and upgrading of the city's built-up environment is a difficult task before the local government. Therefore, the quality of city's environment has emerged as one of the major indicators of overall well-being of city dwellers. The quality of city's environment in terms of built-up municipal environment reflects upon the actual position of a social group in creating its social space and exercising negotiation power in the decision making process in day today community and city life.

4.1 Built-up Environment: An Indicator of Well-being

The built-up environment of a city is a cumulative reflection of competitive manipulation of the physical environment to meet the collective needs of progressive social organization. It takes place through the spatial re-arrangement of the various natural and man-made phenomena. Though nature of built-up environment

characterizes an inertia, however, improved political and social institutions and better technology helps in upgrading its quality. In developing countries like India the built-up environment of an urban habitat reflects an incoherent attitude of the society towards its living environment. In fact, quality of built-up environment is closely related with the level of economic development, the degree of cultural attainment and history of social organization.

In the present study, the built-up environment includes (1) the household environment and (2) the municipal environment. Household environment here means the orientation and the qualitative aspect of indoor infrastructure. The municipal environment includes all those major aspects of neighbourhood amenities and facilities outside the private housing structure, which belong to the community as a whole for their utility and are under the control of municipal authorities for their maintenance and development. These two components of city’s built-up environment have a crucial bearing on the day-to-day life of the people.

In the present situation of urban India the city’s built-up environment is an overlooked issue except in the metropolitan cities and state capitals. The resource allocation for maintenance and development of city’s environment is highly politicized and public apathy is extreme. Therefore, the study of physico-social conditions of the localities which form the areal clustering of the phenomena determining quality of built-up environment, becomes realistic and of spatial urgency. Certain fundamental causes need to be identified to explain as to why the built-up environment of two contiguous neighbourhoods exhibits dissimilar characteristics. Does the physical quality of localities vary according to the religio-cultural composition of the groups residing there?

The main concern of the study is to trace out the spatial variation in the quality of built-up environment. It is a common observation that localities of lowest economic status invariably have the worst municipal environment in a city. It needs to be analysed that most neglected areas attract downtrodden people or that an area inhabited by the poor prompts the civic authorities to abandon its maintenance. This is a pertinent question of social policy concern. Further, it is

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necessary to know whether the sight of filth, choked sewerage, heap of garbage, pitiable conditions of streets is basically the reflection of cultural poverty of a particular social group or a manifestation of cumulative bias of municipal governance towards them or a combination of both. According to Meikle\(^4\) (2002, p. 37), ‘The relationship between the poor, local government and other actors in the political context are critical to their well-being’.

Living environments whether it is a submicro-housing environment; an immediate neighbourhood environment or an overall city environment, constitute a part of the total existence of the civil society. The last two ideally come under public sector. Thus market forces apparently do not control them to a great extent. So a group can be poor but should not necessarily be living in a poor environment and vice-versa. It can be ascertained that a few important factors which are crucial in determining the quality of local environment include economic and political empowerment of the residents concerned.

As one could understand, through the discussion in the previous chapter concerning the concept of well-being, that the attainment of satisfaction or happiness is core to all human pursuits. And the social goods which enhance this feeling can be accepted as indicators of well-being in Aligarh. In case of Indian cities, the quality of built-up environment, which is not even maintained at the basic level has full potential of becoming strong indicator of well-being. Because, a modest upgradation of any aspect of built-up environment is likely to generate a high degree of satisfaction among the residents.

4.2 Spatial Dimension of Built-up Environment

It is the locational and distributional attributes of built-up environment of Aligarh city which is the subject of present evaluation and analysis. It involves a qualitative assessment of the built-up environment. In the following paragraphs, the researcher attempts to present her empirical observations and rationale to explain the spatial characteristics of built-up environment of Aligarh city and to relate it with the well-being of its dwellers.

The study of built-up environment of Aligarh city requires the consideration of the immediate living environment in terms of housing conditions at the sub-micro level and its municipal environment which forms the major component of the urban habitat including perception of residents toward it. The management responsibilities for these two types of environments lie in the private and public hands respectively. Thus, the relationship between these two environments may not be compatible in all the senses. The real difference between private and public maintenance is too big because the approach of community participation is almost an alien concept in Aligarh. Rather, the politics of class, caste and religion is a quite dominant force determining variation in quality of municipal environment and the level of public consciousness as a whole.

Various components of municipal environment like roads, street lights, waste disposal system, sewerage system, open space and public park facility form the basic municipal spatial structure as their location and distribution involve some pragmatic principles. The inadequate provision and unjust distribution of these amenities minimizes the efficiency and productivity of the affected social groups. Under such an environment civic rules and several other norms of living get severely eroded. The struggle to avail the meager municipal amenities creates an unnecessary competition and friction among various social groups and becomes an important civic electoral agenda.

The above mentioned aspects of the built-up environment are an integral part of the synoptic perception of a common city dweller. He usually works, lives, entertains and plans under the constraint of these spatial elements of the built-up environment. It can be said that the influence of the built-up environment upon the subjective reality of an individual is no less than that of his indoor housing environment. The cumulative effect of low qualitative value of housing environment is most adverse environmental constraint affecting the quality of life. If it is associated with poor municipal environment life situation is most deplorable.


Most of the indicators selected for measuring the quality of the built-up environment in Aligarh city are given a normative categorization. Data for these indicators has largely been derived from an elaborate questionnaire based extensive field surveys. Data so obtained has also been supplemented by unpublished municipal records. Keeping in mind the time, resources, data availability, desirability of accuracy and purpose of the study, the researcher preferred the qualitative assessment.

4.3 Components of Municipal Environment

The components of the city’s built-up environment being determined by the physical layout of the city in terms of roads, sanitation system, recreation facilities, open space etc. under the direct control of municipal institutions constitutes municipal environment.

4.3.1 Quality of Roads in Aligarh City

Roads are very crucial infrastructure in the sense that they connect spatially isolated locations and hence create a network of spaces. The diversified city morphology needs an efficient network of roads for accessibility and locational choices for services and facilities. Roads are the human response to the spatial constraint of the earth’s surface. In a city, density and quality of roads determine the spatial efficiency of the built-up environment. The area of Aligarh city is 36.37 square kilometers and total length of roads is 614 kilometres. The road density is 17 km/sq.km. Here discussion is concerned with the quality of roads and its spatial pattern in Aligarh city. For this purpose the researcher visited the concerned wards and made observations in qualitative terms. Those roads having access to the inner residential areas and connecting main roads are taken into consideration.

The quality of roads includes three aspects in the present study. First of them is the nature of road. It has three categories: concrete road, coal tar road and bricked, kutch or unmetalled road. Second aspect is the width of road which has three relative categories, (i) good (ii) reasonable, and (iii) poor. Third is the surface smoothness of road, having three categories, (i) good (ii) reasonable and (iii) poor. Each category of these three aspects has been given rank values in descending order of utility and significance. Finally, the average of these values have been obtained to
assess the overall quality of roads. Analysing separately it is found that thirty one out of sixty wards reported concrete roads in their residential area facilitating 50 percent of the city population. Whereas, eighteen wards reported coal tar roads affecting 25 percent people and the remaining eleven wards reported kutcha or bricked, roads affecting remaining 25 percent of the city population. It is crucial to note that out of the eleven wards with inferior roads eight wards belong to Muslim community. It partially includes Dodhpur and Lekraj Nagar wards as well. Wards with two-thirds of its roads of the same nature belongs to that particular category.

In considering the width of roads, the street, more than 15 feet wide are placed in good category, between 7-15 feet in the reasonable category and less than 7 feet in the poor category. On this basis it is found that an overwhelming thirty two wards of total sixty wards reported narrow streets. Twenty four wards reported roads with reasonable width whereas only four wards reported roads with good width. It is interesting to note that all these four wards have influential Hindu community and newly developed colonies. In the reasonable category, twelve wards are Hindu dominated, six wards are Muslim dominated and remaining six wards are of mixed population. Out of thirty two wards with narrow roads sixteen wards are Muslim dominated. Thus an overview of the road width reveals a congested Muslim neighbourhood without proper street spacing system.

The surface smoothness of roads is a qualitative aspect and its assessment is done by the observation of pot holes, ditches, roughness of the surface material related with the age, quality of material and techniques involved in building the roads. For this purpose, a different strategy is applied. One best road from the point of view of surface smoothness and one worst road of Aligarh city have been accepted as reference. Then through personal observation roads are categorized into three groups. The best road is represented by Ramghat road and the worst road is that of Sarai Qutub. Roads nearing two extremities have been kept in best and worst categories and rest of them are put in the middle category. Thus, only five wards of the total sixty wards are found to have good surface smoothness. They are Gambhirpura, Masudabad, Sarai Lawaria, Manik Chowk and Zohrabagh. Out of
these five wards four are Hindu dominated. Twenty two wards of the total sixty wards have reasonable smoothness of road. Out of these twenty two wards only eight wards are Muslim dominated. Nearly thirty one wards have poor smoothness of the road out of which half of them belong to Muslim community.

Finally, an overall quality of road index is developed which gives an average of all the three aspects. It also involves three categories on the basis of average rank score. These three categories have the rank scores of 7-9 as good, 5-7 as reasonable, and 2-4 as poor. Only fourteen wards of the total sixty wards belong to good quality of road category affecting 21 percent of population. Twenty eight wards have reasonable quality of roads affecting 43 percent of the population and the remaining eighteen wards have poor quality of roads affecting 36 percent of population. Of good category, two-thirds wards are Hindu dominated. Only one fifth wards are Muslim dominated. Of eighteen poor category wards, ten wards are Muslim dominated whereas only six of these wards are Hindu dominated locales.

Table 4.1

Quality of Road in Aligarh City

(Percentage of wards)

<table>
<thead>
<tr>
<th>Aspects of quality of road</th>
<th>Good</th>
<th>Reasonable</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hindu</td>
<td>Muslim</td>
<td>Mixed Pop.</td>
</tr>
<tr>
<td>Metalled/unmetalled road</td>
<td>50</td>
<td>18.75</td>
<td>31.25</td>
</tr>
<tr>
<td>Width of road</td>
<td>100</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Surface smoothness of road</td>
<td>80</td>
<td>20</td>
<td>-</td>
</tr>
<tr>
<td>Overall quality of road</td>
<td>64.4</td>
<td>21.1</td>
<td>14.5</td>
</tr>
</tbody>
</table>

Based on data generated through field survey by the researcher in 2003.
The general index of quality of road represents an average of the road condition. The rank value is merely indicative in nature rather than an exercise in accurate measurement. Thus the score value of quality of road is loose and is only a statistical abstraction. Table 4.1 given above provides an idea about the disparity which exists with reference to the quality of roads between Hindu majority community dominated and Muslim minority community dominated wards as well as the mixed population wards.

The Table clearly shows a disparity, which exists, between the majority and the minority community wards with respect to quality of roads. In the good category of all three aspects of the quality of road, majority community wards have more than 50 percent share whereas the minority community wards have less than 20 percent share. In the poor category of each aspect of the quality of roads the majority community wards have less than 36.3 percent share whereas the minority community wards have more than 50 percent share. Proportion of mixed population wards is nominal in all these categories.

An analysis of the data further reveals that the number of Muslim and Hindu dominated wards is roughly 1:1.4 in favour of Hindus in Aligarh. The wards with good category roads have a ratio of 1:3 in favour of Hindus ie. Almost two times more good roads are found in Hindu wards than in Muslim wards. Whereas the wards with poor quality roads have a ratio of 1:3.7 against Muslims, i.e. two and half times more poor roads are found in Muslim wards than in Hindu wards. A heavily skewed inequality exists between the majority and minority populous wards. A bias in the availability of municipal resources and the built-up environment is abundantly evident. Muslim wards in general, irrespective of their economic status, suffer from the low quality of accessibility network (Plates 1 and 2). In fact, it is the quality of roads which determines the stress and strain borne by rickshaw pullers, pedestrians, etc. Tear and tear of vehicles, accidents, crowding and congestion of traffic leading to a longer dwell of pollutants and a slow diffusion of the smoke. This causes a serious health hazard to the shopkeepers who bear the brunt of air pollution of more than 10 hrs a day.

The analysis of Fig. 4.1 highlights certain spatial characteristics of the quality of roads. It shows that the north-eastern zone of the city lying in the Civil
WARDWISE QUALITY OF ROADS
ALIGARH CITY
2003

Source: Based on primary data generated through field survey at ward level.

Fig. 4.1
Quality of Roads Differential in Aligarh City

Plate 1. Distributive Justice Scenario of Municipal Government
Sir Syed Nagar, Very High Income and High Educational Status,
Minority Populated, Civil Lines Ward, No. 49

Plate 2. Strong Political Leverage along with Very High Income is Necessary
for Good Dispensation of Municipal Amenities
Mahavir Park Colony, High Socio-economic Status, Majority Populated,
Civil Lines Ward, No. 51
Lines and mostly Muslim dominated has the worst quality of roads. Another area of worst quality of roads is found along the rim of the old city i.e. the western and southwestern part of the city. The rest of the city has more or less good or reasonable quality of roads. It can be said to a certain extent, that two-thirds of the peripheral wards of the city have poor quality of roads in relation to the core area. But the most striking point is that the wards reporting good quality of roads are scattered throughout the city. They have closer relations with the socio-economic characteristics of the population. For example the wards like Sarai Lawaria (Ward No. 12) in old city have concrete roads with good upkeep, thus the quality of roads is well maintained.

4.3.2 Non-solid Waste Management in Aligarh

Sanitation is the one of the most important requirements for the healthy and clean environment. The sewerage and drainage system is the flush line for the city’s non-solid refuse. The effluence from homes, offices, schools factories etc. is removed through drains. Thus without these drains and sewerage one cannot think of a properly clean city. But like any other amenity of Aligarh city’s built-up environment the condition of drains is also very poor in Aligarh. The overall condition of the city’s sewerage is found to be in pittiable condition (Plates 3 and 4).

The nature of drains is considered as a set of three characteristics, (1) unattended or attended (2) Stagnant or flowing (3) Spill-over or contained. Nature of the drains is assessed on these bases, and rank values are assigned to each characteristic. On this basis total scores are calculated for each ward. Then according to range of the scores five qualitative categories are formed; right from very high to very low.

Fig. 4.2 has been prepared on the above lines. The figure reveals that not a single ward lies in the category of very good condition of drains. This is a tragic situation, wherein a city is sprawling and becoming over-crowded with such a great speed and has no commensurate measure of drainage system even in a single ward. But many wards are found to have good condition of the drains. Twenty three wards involving 40 percent of the total population have reported good condition of drains. In the Medium category belong only two wards i.e. Bania Para and Sarai Kaba. Again the category of poor drain conditions represents twenty three wards involving
WARDWISE NATURE OF DRAINS
ALIGARH CITY
2003

Fig. 4.2

Source: Based on primary data generated through field observation at ward level.
Condition of Drainage System in Aligarh City

Plate 3. Drainage System is the most important challenge in Aligarh: A View of Open Main Drain Passing through High Status Residential Area. Sir Syed Nagar, High Income and Very High Educational Status, Minority Populated, Civil Lines Ward, No. 49

Plate 4. No Rain Yet All Drain: A View of Low Lying Ward with Very Poor Drainage
Vishnupuri, Medium Income Status, Majority Populated, South-eastern Ward, No. 32
38 percent of the total population. Lastly, nine wards having 15 percent of total population are found to belong to very poor category of the drains. Thus thirty three of the total sixty wards have worst conditions of the drains. Out of twenty three wards of good drainage conditions thirteen of them belong to a Hindu community and seven wards are Muslim populous.

The spatial pattern of drainage conditions of the city highlights a few facts. Firstly, the old city area has better drainage conditions than the Civil Lines area. Few wards like northern most Hamdard Nagar, Badam Nagar, University ward, Zohra Bagh, Begpur, Sudamapuri, Begum Bagh etc. have better conditions of drains. The peripheral region especially in the north-western part of the city reports worst quality of drainage. An overall core periphery relationship emerges with core having better condition of drains. This is because the old city wards have better slope and gravity induced drainage. The peripheral expansion of the city without any plan is a major factor of their poor drains.

4.3.3 Solid Waste Management in Aligarh

With advancement of civilization and change in life styles the question of collection and disposal of solid waste all over the world has posed a problem which cannot be effectively tackled with any manner of adhocism (Bhargava, 1981). More so in case of urban areas. Every city has its own municipal system to carry on this task. The dustbins are provided in the each locality of the city to collect solid waste and refuses. Aligarh city has been divided into 7 sanitation wards. Each sanitation ward includes several municipal wards. For the purpose of collection of solid waste a system is being developed by the Municipal Corporation of Aligarh. Safaiwalas (sweepers) are appointed for each municipal ward. Rickshaws, tractors, handcarts, buffalo carts etc. are allotted to each municipal ward. Through these carts and vehicles refuse is dumped in the main road dustbins. Total number of dustbins (main road), rickshaw and safaiwalas in Aligarh are 150, 135 and 1,150 respectively in 2003. Table 4.2 highlights the comparative situation of solid waste disposal of two sanitation wards of Upper Kot (Muslim dominated) and Achal Taal area (Hindu dominated) of the old city.

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Table 4.2

Solid Waste Management in Aligarh: A Comparative Analysis

<table>
<thead>
<tr>
<th>Sanitation Ward No. 1</th>
<th>Sanitation Ward No. 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Majority Population Dominated)</td>
<td>(Minority &amp; SC population dominated)</td>
</tr>
<tr>
<td>Municipal ward No.</td>
<td>Population (No. of persons)</td>
</tr>
<tr>
<td>12</td>
<td>8,052</td>
</tr>
<tr>
<td>27</td>
<td>5,835</td>
</tr>
<tr>
<td>37</td>
<td>9,720</td>
</tr>
<tr>
<td>39</td>
<td>6,254</td>
</tr>
<tr>
<td>46</td>
<td>6,788</td>
</tr>
<tr>
<td>50</td>
<td>10,844</td>
</tr>
<tr>
<td>59</td>
<td>4,797</td>
</tr>
<tr>
<td>25</td>
<td>8,976</td>
</tr>
<tr>
<td>26</td>
<td>7,919</td>
</tr>
<tr>
<td>38</td>
<td>16,188</td>
</tr>
<tr>
<td>7</td>
<td>52,290</td>
</tr>
</tbody>
</table>

Based on data obtained from Municipal Corporation of Aligarh, 2003.

The sanitation ward no. 1 constitutes majority populous wards and the sanitation ward no. 4 has minority populous wards as well as scheduled castes population. Both the sanitation wards belong to low economic ladder, and the latter one is educationally depressed as well. On an average these wards have very high density of population.

In sanitation ward no. 1, one safaiwala takes care of little more than 300 people whereas in the sanitation ward no. 4 which is Muslim and scheduled caste populous, nearly 925 people are served by one safaiwala. There is a glaring difference between them regarding the municipal performance and facilities. But on the basis of number of dustbins, sanitary ward no. 4 is more privileged than sanitary ward no. 1. In case of ward no. 4 physical infrastructure is compensated by the reduction of effective manpower. If we take the view of Aligarh city as a whole then it emerges that on an average 625 persons of the city depend upon one sweeper. And roughly 4 dustbins/sq.km. are found in having density of population of 18,231
pers\textsuperscript{s}/sq.km. Though concentration of these dustbins may vary from one ward to another. In that sense ward no. 1 is more privileged than ward no. 4.

However, the official information is on paper, what reality is requires field verification. It may endorse or nullify the claim of present sanitation system of the city. For this purpose, on the basis of observation, three categories of dustbin availability are formed. These are adequate, inadequate and non-existent respectively. In the wards' first category the garbage heaps on the street are not encountered. This condition is further substantiated by observing that dustbins of these wards are well contained and municipality undertakes the task of regular disposal. In the second category are the wards in which usually small garbage heaps were noticed at few locations and dustbins are found over-filled with garbage. In the last category lie those wards where such no dustbins are observed and big garbage heaps have been found at various locations (Plates 5 and 6).

On the basis of this categorization only eight wards affecting 14 percent of total population are found with adequate facility of garbage collection. Six wards of these are Hindu populous and two wards are Muslim populated. Thirty two of total sixty wards involving little more than 53 percent of total population have inadequate facilities of garbage collection, of which fourteen wards belong to Hindus and eleven wards belong to Muslims. To the third category belong twenty wards involving 33 percent of the population where there are no dustbins, Of which seven wards are Hindu dominated and eight wards belong to Muslim populous areas, the remaining five wards belong to the mixed population.

Thus the details of garbage disposal reveal a considerable bias in favour of Hindus in the first category. The second category is some what balanced from the point of view religious composition. But in the last category a bias against Muslims is noticed. The proportion of Muslim and Hindu population in Aligarh City is 1:1.4 whereas the Muslim and Hindu wards with non-existent dustbin have a proportion of 1:0.87 respectively, i.e. there is 13 percent less chance of a Hindu ward to have non-existent dustbin. In the top category of adequacy of dustbin the proportion of Muslim and Hindu wards is 1:3 in favour of Hindu population wards, there is three times more adequate solid waste disposal found among Hindu wards. Thus, a fact which has become very evident is that the
Source: Based on primary data generated through field observation at ward level.

Fig. 4.3
Situation of Garbage Disposal in Aligarh City

Plate 5. The Adverse Trio: Open Space Used as Drainage Outlet as Well as Garbage Dumping Site
Jamalpur, Lower Middle Income Status, Minority Populated, Fringe Ward, No. 30

Plate 6. Where is the Dustbin? Any Vacant space can do as Strategic Garbage Dumping Ground as Cultural Practice
Lekraj Nagar, High Income Status, Minority Populated, Civil Lines Ward, No. 44
inadequacy in provision of garbage disposal for Muslim populous wards is as true as in the case of quality of roads found in the Muslim wards. Hindu wards are proportionally more privileged of these amenities than the Muslim wards. And Muslim wards are proportionally more deprived, in terms of quality of these amenities.

A closer view of the Figure 4.3 reveals some noticeable pattern: The western part and eastern part of the city's periphery show an absence of garbage collection facility. Further, few wards like Turkman gate, Sarai Qutub, Khaidora, etc also had worst garbage disposal management. The wards with adequate facilities have a social association without any spatial regularity. University Area (Ward No. 57) is maintained by Aligarh Muslim University and is one of the best-managed wards from the point of view of garbage collection. The wards reporting inadequate facility of garbage collection are mostly lying in the Old city, north-eastern part of the city and in the south-eastern part of the city. Another fact is that those wards which have adequate facility of garbage disposal belong to high-income group influential people. As a whole, fifty four wards having 90 percent of total population are lacking proper garbage management system. Hence, Municipality has got a big task before it to re-organize its working system. The field observation endorses this situation.

4.3.4 Density of Street light in Aligarh

Street light facility is an important indicator of safety and security conditions of the wards and a good municipal upkeep. Street lights help prevent the accidents and the easy mobility of the people, particularly the old people, women and children. In Aligarh city, it is highly relevant like any other municipal facility, as the general dilapidated condition of the city's infrastructure has already made the life of general public very exasperating.

The lighting system of the city has been divided into 6 sections under which lie ten municipal wards each. Light inspectors and supervisors are responsible for the assessment of the real situation of the street light and other related facilities. The Table 4.3 below furnishes some insight in the state of street light facility in different part of Aligarh city.
Table- 4.3

Distribution of Street Lights in Aligarh City

<table>
<thead>
<tr>
<th>Section No.</th>
<th>Zonal Location</th>
<th>Percent population</th>
<th>No. of working street lamp-posts</th>
<th>No. of non-functioning lamp-posts</th>
<th>Total</th>
<th>Percentage non-functioning lamp-posts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>S.E. Part (the Civil Lines)</td>
<td>18.2</td>
<td>1,684</td>
<td>523</td>
<td>2,207</td>
<td>23.69</td>
</tr>
<tr>
<td>2</td>
<td>N.E. part (the Civil Lines)</td>
<td>20.94</td>
<td>1,989</td>
<td>110</td>
<td>2,099</td>
<td>5.24</td>
</tr>
<tr>
<td>3</td>
<td>N.W. part of the city</td>
<td>17.83</td>
<td>1,620</td>
<td>239</td>
<td>1,859</td>
<td>12.85</td>
</tr>
<tr>
<td>4</td>
<td>Upper part of Central old city</td>
<td>12.3</td>
<td>1,171</td>
<td>52</td>
<td>1,223</td>
<td>4.25</td>
</tr>
<tr>
<td>5</td>
<td>S.W. part of the city</td>
<td>14.62</td>
<td>1,041</td>
<td>395</td>
<td>1,436</td>
<td>27.50</td>
</tr>
<tr>
<td>6</td>
<td>Lower part of central old city</td>
<td>16.11</td>
<td>2,789</td>
<td>400</td>
<td>3,189</td>
<td>12.57</td>
</tr>
<tr>
<td>Total 6</td>
<td></td>
<td>100.00</td>
<td>10,294</td>
<td>1,719</td>
<td>12,013</td>
<td>14.30</td>
</tr>
</tbody>
</table>

Based on data obtained from Municipal Corporation of Aligarh, 2003 and field observation.

The Table above reveals that south-western section of the city has the lowest number of the working lamp-post5 as well as the non-functioning lamp-posts, accounting for 27.50 percent of the total lamp post. A sizeable number of minority populous wards are located in this sector. This fringe area inhabits the weaker section of the society. Hence the bias against the weaker section is very evident.

The north-eastern part of the city, including the University and other better off Muslim localities, are much privileged from the point of view of total number of working street lights, accounting for 1989. They have the second highest number of lamp-posts and with second lowest percentage of non-functioning lamp-posts i.e. 5.24 per cent. Roughly one-fifth of city5 population lives here. The very surprising
WARDWISE DENSITY OF STREET LIGHTS
ALIGARH CITY
2003

Source: Computed from secondary data obtained from Municipal Corporation of Aligarh.

INDEX       DENSITY
-------------
600 AND ABOVE
450 - 600
300 - 450
160 - 300
BELOW 150

Fig. 4.4
fact is that the south-eastern part of the city including many high income Hindu wards has reported second highest, i.e. 23.69 percent of non-functioning lamp-posts and in total only 1,684 working lamp-posts. The lower part of the old city, astonishingly, has reported highest number of total working street lights whereas only 16.11 percent of total population resides here.

The maintenance of streetlights is not up to mark, as nearly 14.30 percent street lights of city are not functioning. On an average 70 people are served by a functional street light. Spatial analysis of the density of street lights is of great relevance and is given in Fig. 4.4.

Data collected from the respective offices is processed to find out the number of street lights per square km. Then the results are divided into five categories from very high density to very low density. According to the processed data thirteen wards have reported more than 600 street lights per square kilometre. Manik Chowk, Sarai Pakki, Sarai Lawaria, Tantanpara are those wards reporting more than 900 streetlights per square kilometre. In the next category of 450-600 street lights per square kilometre lie nine wards. In the third category of 300-450 street lights per square kilometre lie nine wards. A total number of eighteen wards lie in the low category of 150-300 street lights per sq.km. And finally in the very low category of less than 150 street lights per sq.km. lie eight wards. These wards include Banna Devi, Chuharpur, Bhujpura, Pala Sahibabad, Nagla Ashak Ali etc.

The spatial pattern of density of street lights (Fig. 4.4) largely depicts a core-periphery relationship. All the wards with very high density of street lights are concentrated in the centre of the city i.e. lying in the old city. Then there is outer encircling band of high and medium density wards. The peripheral region of the city is least provided with this facility. Thus a strong relation of distance decay is observed from the city centre to the periphery in this facility.

Out of thirteen wards of very high density of street lights seven are Muslim dominated wards surrounding University ward, whereas only five wards are Hindu populous. Remaining one ward is of mixed population. On the other hand out of eight wards in very low category five wards having Muslim population and only two wards are Hindu dominated. The explanation of this situation can be sought in
the spatio-temporal growth of the city. The factor which seems to be responsible for
the lower density of street lights in the peripheral wards is because of their larger
operational areas as compared to the small central old city wards.

4.3.5 Public Water Supply Points in Aligarh City

As per the Census of India (2001) 90.21 per cent of total urban households had access to safe drinking water facilities. For Uttar Pradesh this value was 97.20 per cent as an average. For Aligarh city the relevant information is being provided by the Water Works Department of the Aligarh Municipal Corporation. These factual informations provide an aggregate picture related with overall water supply situations in Aligarh city. According to the information received from the concerned department, every day supply of potable water is 76.8 litres per head. An estimated 53 million litres of water is supplied daily. The total number of connections to municipal water supply is 35,500. Out of which 33,028 i.e. 93 percent connections are in the domestic sphere. 21 people are served by one tap. There are 102,004 households enrolled with the tax department in the year 2001. Though this data excludes several thousand households which are not enrolled, even then the reality is miserable. For every 3 households there is one water supply connection. Thus it can be inferred that almost two-thirds household of Aligarh City are not having municipal water supply connection. These under privileged people entirely depend upon the municipal water supply points on the streets. These connections include taps and hand pumps. Because of inadequate water supply one can invariably observe long queues of women and children waiting for their turn to collect water.

The total number of all types of hand pumps is a meagre 3,060 which have been installed for public utility. Twelve overhead water tanks are serving and functioning in the city. Daily generation of water is 53.7 million litres in Aligarh city. All the water supply requirements are met by the underground water reservoirs. There are scarcely any water recycling plants in the city. From the medical and hygienic point of view the quality of potable water supply carries a big question mark in the city. Water borne diseases, particularly diarrhoea and dysentery are very common and severe during the rainy season in the lower part of the city.

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4.3.6 Cleanliness and Maintenance in Aligarh

Aligarh city has a long history prior to the planning period. Due to congestion and crowding the city's cleanliness has become beyond the control for the authorities. The civic consciousness of the people is low. People scarcely consider outside home environment as their own and responsible for its maintenance. In the view of the researcher, the lack of community consciousness is largely responsible for general degradation of the municipal environment.

Keeping all these considerations, the researcher attempted to assess qualitatively the maintenance and cleanliness situation of Aligarh city. Following aspects are kept in mind during field observation. These are the cleanliness of the streets, general appearance and maintenance of buildings and condition of sewers creating an overall impression of the locality. Five categories are framed. Unfortunately no ward was found to be qualitatively clean and well-maintained. Though many wards are with good and attractive private buildings the municipal upkeep of the area is in disarray.

In the fair category lie only four wards affecting 5.94 percent of population, of which three wards are Hindu dominated and one is the University ward. In the moderate category lie nineteen wards affecting 21 percent of total population of which ten wards are Hindu dominated and four wards are Muslim dominated. Twenty eight wards belong to poor category of cleanliness affecting 56.68 percent of population and nine wards are found to be very poor in cleanliness conditions affecting 16.37 percent of population.

The spatial pattern of cleanliness conditions (Fig. 4.5) reveals that the western peripheral wards of the city reported the worst cleanliness conditions. Few wards like Jamalpur and Sudamapuri have also reported worst maintenance. Wards belonging to fair category are scattered and rest of the city lies under moderate and poor cleanliness conditions. Thus 93 per cent of the city wards need a complete face lift of their municipal environment. There is an urgent need to redefine the municipal and citizen relationship as well as institutional strengthening to meet this challenge (Plates 7 and 8).
WARDWISE OUTDOOR MAINTENANCE AND CLEANLINESS IN ALIGARH CITY
2003

Source: Based on primary data generated through personal observation at ward level.

Fig. 4.5
Municipal Cleanliness and Maintenance in Aligarh

Plate 7. Old City Needs Renovation. This is an indigenous sanitary practice in some localities in Upper Kot Area
Bani Israilan, Lower Middle Income Status, Minority Populated, Core City Ward, No. 55

Plate 8. Municipal Neglect. No Civic Consciousness: A Typical View of Aligarh City
Sarai Mian, Low Socio-economic Status, Mixed Population, Old City Ward, No. 19
4.3.7 Open Space Availability

Open space literally means the vacant area which is not allocated for residential, industrial, commercial and administrative buildings. It belongs to the community as a whole. The municipal data is related only with the parks or playgrounds. Thus this criterion was rejected in favour of actual open space availability around or near the residential areas, based on observation.

The impact of open space around a residential area is of great significance. First of all, it provides better chance of pollution diffusion through adequate flow of air circulation. Secondly, it gives the realistic feeling of not being congested and crowded. Thirdly, it gives children a chance to play outdoor, which bolsters their stamina, physical fitness and social attunement and consolidates a feeling of belongingness towards the locality they live in.

Most of the Civil Lines wards and the large size wards of the fringe areas of the city have good open space availability. The wards of the old city have high built-up density and the open space availability is far too meager (Plates 9 and 10). Data shows that only University ward (Ward No.57) has extremely good availability of open space. As this ward is a planned area comprising parks, sports fields, gardens and avenues; enough open space is available. In the next category are lying Ward Nos. 31, 52 and 14 namely, Firdaus Nagar, Saheb Bagh and Banna Devi. All of them lie in the northern fringe except Banna Devi which by virtue of being thinly populated has enough open space.

In the third category are three wards Begpur, Badam nagar and Bhamola. The latter two lie in the north-eastern part of the city. In the fourth category lie ten wards. Very poor open space availability is reported in forty three wards. Thus nearly 90 percent of total wards are reported to have inadequate open space availability. Fig. 4.6 shows that the northern most part of the city has more open space in comparison to all other parts of the city.
WARDWISE OPEN SPACE AVAILABILITY
ALIGARH CITY
2003

Source: Based on primary data generated through field survey at ward level.

Fig. 4.6
Open Space Availability in Aligarh City

Plate 9. Many uses of Open Space but Most of them are Municipally Unhygienic
Jeevangarh, Low Socio-economic Status, Minority Populated, Fringe Ward, No. 47

Plate 10. All Lanes Lead to Another Ones: Community Open Space is Unknown Concept in Aligarh’s Older Part
Usman Para, Low Socio-Economic Status, Minority Populated, Old City Ward, No. 2
4.3.8 Level of Noise Pollution

Noise pollution is becoming a major problem in urban areas. The traffic noise, the factory noise, the political and social campaigning noise from loudspeakers are instant sources of fatigue and health erosion. Sound level is measured in decibel units. Instead of using any instrumental measurement of sound level the researcher has considered the personal experiences and responses of the residents. The noise pollution acknowledgement is quite in accordance with the nature of roads along which residential areas are located. Those households located along the main roads complain of higher noise pollution. The residents of the streets complained lower noise pollution and those from the bylanes complained of minimum noise pollution.

The Noise Pollution (Regulation and Control) Rules, 2000 developed the following notification. The standard limits mentioned are (a) industrial area 70-75 dB, (b) commercial area 55-65 dB and (c) silence zone of 40-50 dB. Wards are divided into five categories depending upon the level of noise experienced by residents and verified by the researcher.

Two wards namely Usman Para (Ward No. 2) and Sudamapuri (Ward No. 42) found to experience highest level of noise pollution. In Usman Para even the narrow alleys of residential areas were found to have many small scale lock factories creating high noise signals. The other ward i.e. Sudamapuri is found to be very noisy too due to heavy traffic as well as very bad condition of roads accentuating this problem. Houses are situated along the busy roads thus noise pollution level is quite high. In the second category of high noise pollution levels are found twelve wards of which five wards are Muslim dominated and only two wards are Hindu dominated. Other wards in this category have mixed population. In the moderate noise pollution category are found thirty wards. Of these, eleven wards belong to Muslim population and fifteen wards are Hindu dominated. The remaining four wards in moderate category are mixed population wards. In the reasonable category are reported eleven wards and in the lowest category are found only five wards (Fig. 4.7).

10 Ibid.
WARDWISE NOISE POLLUTION LEVEL
ALIGARH CITY
2003

Source: Based on primary data generated through personal observation at ward level.

Fig. 4.7
Thus we see that a total number of forty four wards out of sixty wards involving 75 percent of population have moderate to very high level of noise pollution. This is not good for the residents because noise pollution not only prevents the relieving of tensions it rather adds to it, and undermines the quality of life.

4.3.9 Perception of Neighbourhood Security

Neighbourhood security is very important factor which indicates freedom from the anti-social elements who threaten the peace and stability of urban life. Perception of insecurity, though quite different from the actual crime rate, may be far more threatening than the real crime. Perception of security, to a considerable extent, is related with the confidence in security mechanisms. The data collected on this aspect reveals an important fact. The wards inhabited by economically well-off people have a higher perception of social insecurity than the wards generally inhabited by the have-nots. A large number of respondents corroborated this fact.

Data has been collected on the opinion held by respondents of different wards. On the basis of percentage of respondents reporting different levels of security perception, five categories are developed. Very high security perception category has 85-100 percent of the respondents of a particular ward feeling secure. The very low security perception category has reported 25-40 percent of respondents of a ward feeling secure.

In the very high category belong sixteen wards. A total of seven of these sixteen wards are Muslim populous and the other seven wards are Hindu populated. The remaining two are mixed population ward. In the high security perception category are nineteen wards. In the moderate category are found twelve wards. In the low security category are six wards. In the very low security category a total number of seven wards are found.

The very low security perception category wards are generally high economic and social status wards and all of them except Nagla Masani ward lie in the Civil Lines area of Aligarh. Nagla Masani is a very low-income ward, to the extent that it does not offer scope for more than petty crimes even in its immediate locality. Another ward Begum Bagh also has the same characteristics as the former
WARDWISE PERCEPTIONS OF NEIGHBOURHOOD SECURITY IN ALIGARH CITY

2003

Source: Based on primary data generated through household survey at ward level.

Fig. 4.8
has. Dodhpur, Zohra Bagh, Mahavir Park and Begpur wards all reported the lowest degree of social security perception.

The spatial pattern of social security reveals (Fig. 4.8) the very low level of security perception in the northeastern part of the city in the Civil Lines. While the old city and southern and south-western parts of the city have the high degree of security perception.

4.4 Overall Housing Condition

The housing environment is a sub-micro, built-up indoor environment. It is the most immediate environment one lives in. House is a symbolic extension of one's self. Quality of housing is an index of health and well-being. The size, structure and orientation of the house vis-à-vis sunshine and aeration are important aspects of the immediate built-up environment one lives in. The long-term consequences for health and well-being and the adaptation to the psychological and physiological problems associated with the residential environment are often unknown.

The importance of proper housing is paramount for children, women and aged people whose greater time is spent within the precinct of their houses. The condition of hygiene, space availability, aesthetic element, quality of building structure, availability of sunshine and proper ventilation are some very important aspects determining the quality of housing.

As already discussed, the long-term effect of poor housing is not readily known but many studies have corroborated the fact that poor quality of housing leads to stress, frustration, irritation, friction, decreased sense of privacy and social privilege and adversely affects the overall personality of the residents. Here we are concerned with the qualitative aspects of the housing environment.

The researcher has selected three criteria to judge the condition of housing in a particular ward. These are apparent housing conditions, cleanliness and aesthetic condition. Apparent housing condition includes all the major visible aspects of

WARDWISE OVERALL HOUSING CONDITION
ALIGARH CITY
2003

Source: Based on primary data generated through personal observation at ward level.

Fig. 4.9
housing, such as, plumbing, condition of walls, dampness, ventilation, electrification etc. In second aspect of cleanliness inside the house, few things are observed, like general cleanliness of the house, arrangement of articles in the house, indoor sanitation condition etc. Aesthetically, it is difficult to assess the situation but many things which reflect refinement and cultural surplus are also observed such as paintings, flower decorations and over all coherency and style of arrangement of the living space giving tangible aesthetic pleasure due to deliberate effort.

Each aspect of quality of housing condition is assessed in five categories from very high quality category to very poor category. Those households found to lie in very high and high categories are added together. Now, to measure the overall quality of housing condition, the percentage of the households corresponding to these three aspects i.e. apparent condition, cleanliness and aesthetic condition are averaged. The obtained results create a new generalized picture of overall quality of housing condition. It is this data which is depicted in Fig. 4.9 and discussed henceforth.

Table 4.4 would be helpful in assessing the comparative situation of the majority and the minority community populated wards and mixed population wards in terms of the quality of housing environment. The data suggests that the overall quality of housing condition in twenty out of sixty wards is very high. In these wards 80-100 percent of the houses are perceived as very good in the apparent housing condition, cleanliness and aesthetic appearance. Out of these twenty wards thirteen wards are Hindu dominated and only 4 wards are Muslim dominated.

### Table 4.4

**Overall Quality of Housing Condition in Aligarh City**

(Number of wards)

<table>
<thead>
<tr>
<th>Housing Quality Category</th>
<th>Households (Percentage)</th>
<th>Majority community</th>
<th>Minority community</th>
<th>Mixed population</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>80-100</td>
<td>13</td>
<td>4</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>High</td>
<td>60-80</td>
<td>8</td>
<td>1</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>Medium</td>
<td>40-60</td>
<td>1</td>
<td>6</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Poor</td>
<td>20-40</td>
<td>4</td>
<td>7</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Very Poor</td>
<td>0-20</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

*Based on data generated through household survey by the researcher in 2003.*
In the high category of housing quality are sixteen wards. Out of these sixteen wards eight wards are Hindu dominated whereas only one ward is Muslim dominated. Seven wards belong to mixed population. In the medium level housing condition are eleven wards of which only one ward Baradwari is Hindu dominated. Whereas six wards are Muslim dominated and remaining four belong to mixed population. In the poor condition of housing category out of eleven wards four are Hindu dominated and seven wards are Muslim dominated. In the very poor housing category lie only two wards. They are Shahjamal (Muslim populous) and Shivpuri (Hindu populous).

Table 4.4 shows that in the top two categories of very high and high quality housing condition the proportional distribution of wards between Muslims and Hindus is unfavourable for Muslims. Muslims, because of very low general employment status and income levels have not been able to cultivate a good housing environment for themselves. Hindus have three and two times favourable situation in the top two categories respectively.

In the medium category a heavy bias is observed in favour of Muslim wards as it is very clear from this Table. In the poor and very poor housing categories the Muslim wards are in large number than the Hindu wards. What appears as a generalization is that the Muslim wards are less likely to have good housing conditions than those of the Hindu wards, despite the compensating effect of the wards around Aligarh Muslim University. The analysis of Fig. 4.9 reveals certain spatial patterns of overall housing condition. The most prominent areas of high quality housing conditions are in the Civil Lines especially in the north-east and the southern part of the city. Few wards of good housing environment are also found in the old city area such as Mamu Bhanja and Ashoknagar.

It is crucial to note that in case of most of the indicators of quality of built-up environment affecting overall social well-being the distribution pattern of infrastructural facilities in Aligarh city does not attest to the geographical principle of distance decay. However, there is ample evidence of the law of social decay operative in Aligarh particularly in the minority populous areas.
Quality of Built-Up Environment in Aligarh City

Plate 11. High Quality of Built-up Environment
Vikram Colony, Very High Income and Very High Educational Status,
Majority Populated, Civil Lines Ward, No. 40

Plate 12. Medium Quality of Built-up Environment
Delhi Gate, Medium Income Status, Mixed Population, Old City Ward,
No. 3

Plate 13. Low Quality of Built-up Environment
Bhujpura, Low Income Status, Minority Populated, Fringe Ward, No. 23
Need of Municipal Face-Lift in Aligarh City

Plate 14. Municipal Attitude Toward a Low Income Labour Class Ward
Jeevangarh, Low Income Status, Minority Populated, Fringe Ward, No. 47

Plate 15. Lower Middle Income Wards, May Have Juxtaposed Extremities
of Municipal Environment
Begum Bagh, Low Socio-Economic Status, Majority Populated, Peripheral Ward, No. 22
The findings of this chapter substantiate the hypothesis that lower quality of built-up environment reduces overall well-being as both are directly related. Further, the Civil Lines area has emerged with better quality of built-up environment than the congested old city or the fringe wards of the city (Plates 11, 12 and 13). Overall Aligarh city has a poor municipal environment needing a planned face-lift (Plates 14 and 15). Economically better off wards are able to manage a very good housing environment and hence compensating for their poor municipal environment. It seems that the zones of modern and recent growth within the city don't have a common community base due to migrant population. There is lack of concerted local pressure on municipal authorities. It is well-reflected in the chaotic municipal environment inspite of very high educational and economic status of these wards.
Chapter-5

SOCIAL STRUCTURE AND THE SUSTAINABILITY POTENTIAL IN ALIGARH CITY

- Socio-demographic Structural Changes in Aligarh City
- Variation in Family Size and Its Correlates in Aligarh City
- Economic Viability of Aligarh City
- Distribution of Average Monthly Income in Aligarh City
- Per Capita Monthly Income in Aligarh City
- Family Size and Income Levels in Aligarh
- Family Type and its Occupational Dynamics
- Household Size and Its Correlates in Aligarh City
- Literacy and Educational Attainment in Aligarh City
- General Literacy Situation in Aligarh
- Adult Male and Female Literacy in Aligarh
- Higher Education in Aligarh City
- School Enrolment in Aligarh
Chapter – 5

SOCIAL STRUCTURE AND SUSTAINABILITY POTENTIAL IN ALIGARH CITY

The quality of life of a society is the function of social structure and the sustainability potential of various social groups. Sustainability potential does not only represent the aggregates of material well-being, it rather depends upon the equitable distribution of goods and services. The provision and maintenance of social justice is crucial rather than a theoretical availability of equal opportunities. Hence, in the interests of the weaker sections or the minorities a proportionate, tangible provision is required rather than only the legal or constitutional opportunities. A spatial view of the structural components of the society in Aligarh city will furnish a realistic assessment of its sustainability potential. This assessment at ward level helps in getting an account of the micro-level structural characteristics in Aligarh in response to the changed regional, national and global economic situation.

Sustainability potential, as the term connotes, is the inherent strength and capability of a social system to sustain its progress towards a commonly perceived goal of attaining socio-economic parity. The inherent strength of a system is reflected through the absence of obvious social tensions, deprivations and pessimistic outlook of the communities. It demonstrates the presence of positive aspiration and the just distribution of privileges and provisions in proportion to the population size of different social groups. The objective of this chapter is to discuss the nature of family structure, the literacy rate, education level, percentage employment and its economic viability in terms of resource generation as basic components of social structure of Aligarh city.

5.1 Socio-Demographic Structural Changes in Aligarh City

The social structure of Aligarh city still carries the mark of pre-independence social hierarchy of clans among the Muslims and as usual the caste system among the Hindus. The structure of family is embedded in this broad system. The University opportunities and post-liberalization global economic restructuring has given rise to consumeristic middle-class which largely inhabits the Civil Lines area.

It is remarkable that the family structure in Aligarh is adjusting with the modern western concepts as a clear cut response to its changed economic structure to maintain its economic viability. In a broad view, the spatial mosaic of family structure provides a picture of tradition, modernity and transition with clearcut boundaries.

The form and function of family closely influences the economic structure. The urban capitalistic system hinging upon manufacturing and service sector has given way to large scale rural-urban migration. This helped in breaking the traditional joint family system into nuclear family system though it is a sweeping theoretical statement. The actual process in Aligarh or any other north India city is showing various levels of family adjustments from typical nuclear to extended family system. Joint family is undergoing through a major transition phase. In fact the proportion of nuclear family has become a potent indicator of urbanity.

The joint family system is found to exist in various socio-economic groups in Aligarh city depending upon their social values, family size, nature of economy and occupational structure. In general well-off business class, belonging to majority community, has greater propensity of joint family system in Aligarh, as finding of this study substantiates. It is mainly the emergence of middle-class of service sector economy which has witnessed transformation of joint family into nuclear family. In Aligarh the trend of nuclearization of family is highly visible and well-established. For the growing middle-class population effective upbringing of children has become most important goal of the parents. The inclination of parents in the relatively developed wards e.g. Begpur, University area and its peripheral wards with nuclear family system is to restrict the number of off-springs. Increasing age of marriage among women in these wards and the adoption of family planning measures has helped in limiting the number of children. The peripheral wards of Upper Kot area and the business dominated wards of eastern periphery still show the high incidence of joint family. Decreasing size of the family has become most desirable process to attain a higher level of well-being in Aligarh city even among the business sector and the low-income groups.
5.2 Variation in Family Size and its Correlates in Aligarh City

The family, defined by Micopaedia Britannica is ‘a group of persons united by the ties of marriage, blood or adoption, constituting a single household, and interacting with each other in their respective social positions of husband and wife, mother and father, son and daughter and brother and sister. Thus, a family in the simplest terms, is the union of a man and a woman along with their offspring usually living in a private and separate dwelling”.

The data collected to assess average family size of different wards of Aligarh city has been divided into five categories such as very large, large, medium, small and very small family size having 7-8, 6-7, 5-6, 4-5 and 3-4 members per family respectively.

Table 5.1

Social Demography – Average Family Size in Aligarh

<table>
<thead>
<tr>
<th>Average family size (No. of persons)</th>
<th>No. of majority populous ward</th>
<th>No. of minority populous ward</th>
<th>No. of mixed population ward</th>
<th>Total</th>
<th>Aggregate population of wards</th>
<th>Percentage of population</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-8 Very large</td>
<td>1</td>
<td>4</td>
<td>-</td>
<td>5</td>
<td>44,266</td>
<td>7.36</td>
</tr>
<tr>
<td>6-7 Large</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>75,340</td>
<td>11.26</td>
</tr>
<tr>
<td>5-6 Medium</td>
<td>12</td>
<td>13</td>
<td>3</td>
<td>28</td>
<td>341,550</td>
<td>48.76</td>
</tr>
<tr>
<td>4-5 Small</td>
<td>12</td>
<td>4</td>
<td>6</td>
<td>22</td>
<td>218,295</td>
<td>32.62</td>
</tr>
<tr>
<td>3-4 Very small</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*Based on data generated through household survey by the researcher in 2003.*

As Table 5.1 reveals a total number of five wards have reported very large family size. They are Ashoknagar, Jeevangarh, Shivpuri, Banipara and Saneechari Penth. In the large family size category also there are five wards. These are Shahjamal, Nagla Kalar, Sarai Kaba, Naunang gate and Firdaus Nagar. Around one sixth of the total population of Aligarh lives in very large and large family size, having 6-8 members per family. Out of 18.62 per cent of the total population in

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these two categories nearly 70 per cent is minority Muslim population. Around 30 per cent is majority Hindu population. Five wards are Muslim dominated. Two wards are Hindu dominated and remaining three wards are of mixed population.

In the medium category of average family size of 5-6 members lie twenty eight wards representing 48.76 percent of the city population. Out of these, thirteen wards are Muslim dominated, twelve wards are Hindu dominated and remaining three wards are of mixed population. The small family size category of 4-5 members reports twenty two wards representing 32.6 per cent of the city population. Of these, twelve wards are majority populous, four wards are minority populous and six wards are of mixed population. However, no ward reports very small family size of 4 or less members. This shows that there is scarcely an ideal family size in any ward of the study area with nearly 100,000 households and nearly 0.7 million strong urban population. The Muslim-Hindu differences result to different levels of economic development or socio-economic levels. This is the result of underlying difference in region, residence, clan and schooling.\(^3\)

A very interesting account which emerges is that out of nine wards having very low incidence of joint family seven of them have reported medium to large average family size of 5-7 members. Conversely, four wards of very high incidence of joint family three have reported small average family size of 4-5 members. Out of five wards of high incidence of joint family three of them have reported small family size and other three have reported medium size of family. Thus there is an inverse relationship between size of family and incidence of joint family. Comparing the data of higher education in Aligarh city with the size of family it is evident that most of the wards like Krishnapuri, Zameerabad, Nagla Pala, Begpur, Zohrabagh and Janakpuri etc. which have reported more than 60 percent of female adults to be at least graduate have small average family size of 4-5 members. This in fact, is an ideal situation keeping in mind the overall demographic scenario of India. Again, a revealing fact emerges by comparing data of average family size with nature of employment for all the wards. It has been found that four out of five wards of very large family size category report 60-80 percent of their households.

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AVERAGE FAMILY SIZE
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig 5.1
being engaged in the fragile economy of daily and weekly wages. Further, three out of five wards belonging to large average family size category have reported 40-80 percent of their members involved in the activities of daily wages. An alarming feature of these seven wards is that six of them have 80-100 per cent Muslim population. Fig. 5.1 shows spatial pattern of average family size in Aligarh. Old traditional parts of the city and the north-western part of the city show larger average family size. It appears that the whole city is represented by 4-6 members family size which is found in fifty wards of the city. On the basis of above data a generalization is attempted for Aligarh city. The wards with large average family size, which are few in number are generally minority populous, showing lesser incidence of joint family system and are characterized by daily and weekly wages employment, which are located in the old city area especially Upper Kot.

5.3 Economic Viability of Aligarh City

The command of resources of livelihood is most basic pursuit of humans. Economic viability is mainly discussed in terms of average monthly household income and per capita monthly income of different wards. The assessment of this aspect of economic structure of the city will help us to identify the pockets of high economic growth, stagnation and degeneration. It will help to assess the income distribution in terms of social groups and municipal wards. An overall picture of Aligarh’s economic strength will be revealed in terms of distributive social justice.

5.3.1 Distribution of Average Monthly Income in Aligarh City

Average monthly income for each ward is calculated by adding total income of all the earners sampled in the ward which is divided by the total number of the earners. The data processed has been grouped into five average income levels. They are very high, high, medium, low and very low levels with monthly income slabs of Rs. 14,500-17,500, Rs. 11,500-14,500, Rs. 8,500-15,500, Rs. 5,500-8,500 and Rs. 2,500-5,500 respectively.
Table 5.2

Average Monthly Income in Aligarh City

<table>
<thead>
<tr>
<th>Income levels</th>
<th>Income (in Rs.)</th>
<th>Majority populous ward (No.)</th>
<th>Minority populous ward (No.)</th>
<th>Mixed population ward (No.)</th>
<th>Total wards (No.)</th>
<th>Ratio of total population</th>
<th>Percentage of population affected</th>
<th>Ratio of income</th>
<th>Percentage share of total income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very high</td>
<td>14500-17500</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>6.82</td>
<td>1</td>
<td>14.22</td>
</tr>
<tr>
<td>High</td>
<td>11500-14500</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>1.41</td>
<td>10.04</td>
<td>1</td>
<td>14.31</td>
</tr>
<tr>
<td>Medium</td>
<td>8500-11500</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>11</td>
<td>2.39</td>
<td>17.02</td>
<td>1.71</td>
<td>24.26</td>
</tr>
<tr>
<td>Low</td>
<td>5500-8500</td>
<td>8</td>
<td>5</td>
<td>4</td>
<td>17</td>
<td>3.88</td>
<td>27.66</td>
<td>1.85</td>
<td>26.53</td>
</tr>
<tr>
<td>Very low</td>
<td>2500-5500</td>
<td>7</td>
<td>9</td>
<td>7</td>
<td>23</td>
<td>5.40</td>
<td>38.46</td>
<td>1.43</td>
<td>20.48</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>27</td>
<td>19</td>
<td>14</td>
<td>60</td>
<td>-</td>
<td>100</td>
<td>-</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Based on data generated through household survey by the researcher in 2003.*

Table 5.2 reveals that only four out of sixty wards report their average monthly income to be more than Rs. 14,500 and find themselves in the very high income level. They are Banna Devi, Begpur, Janakpuri and Dodhpur (Sir Syed Nagar). Begpur and Janakpuri are majority populous wards and Dodhpur is the only minority populous ward. Banna Devi is mixed population ward. Although very high income wards represent only 7.12 per cent of the total city population, they command 14.22 per cent of the total income. This depicts a skewed wealth distribution in Aligarh.

Only five wards belonging to high income category report their average monthly income between Rs. 11,500-14,500 per month. These are Kishore Nagar, Krishnapuri, Zohrabagh, University Ward and Avas Vikas Colony. Of them two wards each belong to majority and minority respectively, while one is the mixed population ward. The high average monthly income category wards represent 10.04 per cent of the city population and share 14.31 per cent of the city income. The total nine wards of the very high and high average monthly income command 28.53 per cent of the income.
WARDWISE AVERAGE MONTHLY INCOME
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig 5.2
In the medium category of average income lie eleven wards. Of these eight wards are majority populous and two are minority populous wards and two wards are of mixed population. They are Jai Ganj, Naurangabad, Durgapuri, Kanwariganj, Nagla Pala, Ghanshyampuri, Niranjanpuri, Badamnagar, Lekhrajnagar, Dorinagar and Manik Chawk. The medium average monthly income wards represent 17.02 per cent population while they command 24.46 per cent of the total income. In the low and very low categories of average monthly income lie seventeen and twenty three wards respectively. Out of these forty wards fifteen wards are majority populous and fourteen are minority populous wards and eleven wards are of mixed population. The low and very low average income categories wards represent 66.12 per cent of the population while their income share is 47.01 per cent of the total income.

It is revealed that all the higher and medium income categories wards possess income shares more than their population percentage. Only low and very low income wards have income share much less than their population percentages. It also shows that the economic odds are heavily biased against the weaker sections. Table 5.2 reveals an increasing ratio of population as the ratio of average monthly income decreases. Roughly 6 times more persons are found with very low average monthly income than those which report very high average income. The Table also highlights that medium income category is generally majority populous and lowest income wards are generally minority community wards.

Fig. 5.2 shows that interestingly all the wards of very high and high average income groups lie outside the old walled city. Aligarh Muslim University has helped in the establishment of neo-rich Muslims. Small scale industrialists and other landed aristocracy of yester-years also form the rich enclave. In case of Hindu community, their educational achievements and business establishments are real force behind their high income status. Geographically, the well off wards occupy the north-eastern and southern-most part of the city. Low average income wards occupy the central part including the old city as well as newer peripheral fringe except north-eastern and southern part. In some cases lower average income areas adjoin the very high income wards of University, Dodhpur and Zohrabagh. The low average income areas adjoining these higher income wards are Jeevangarh, Jamalpur and Badam
DISTRIBUTION OF AVERAGE MONTHLY INCOME

Fig. 5.2.a

Based on data generated through household survey in 2003
Nagar. Such a shadow effect has an explanation of the geography of low mobility. These adjoining low income areas are largely inhabited by the IVth grade employees of the University daily wages labourers and some private sector supporting population. They cannot afford to dwell on the periphery and handle long distances and report duties on their bicycles. The hub of high average income wards is around University, the new CBD of the city i.e. Centre Point and Marris Road, Ramghat Road and the old CBD i.e. Mamu Bhanja and Manik Chawk. These are areas of high socio-economic status and prestige.

A comparison of literacy, higher education and average monthly income demonstrates an obviously close association between them. Often there is a reciprocal relationship between them. All the wards of very low, low and medium level of literacy belong to very low average income group. But nearly half of the total twenty very low average income wards have reported very high and high level of literacy. Of these two third wards are Muslim dominated. Further, all very high and high average income wards have essentially very high literacy rate. Comparing average income level with male and female higher education they are found to be positively correlated with average monthly income. Thus, the spatial association between income and level of education is traceable.

The comparison of the data of density of population and average income reveals that out of eleven very low and low population density wards seven wards belong to very low income group i.e. less than Rs. 5500 per month category, two wards belong to low income group and two belong to middle income group. These wards are overall, economically poorest. Conversely, out of nine very high and high income category wards all of them are very low and low density wards.

5.3.2 Per Capita Monthly Income in Aligarh City

A more immediate account of income status of a ward is its per capita monthly income. There are many reasons to accept it as an important indicator.

- It is the actual income per head because it takes into account the size of household in relation to its total income.
- It accounts for actual purchasing power of the family as well as its material resources.
It determines the effective family saving. Because the large households with greater income in reality save as much per head as small households with lower income, or even less than that.

The per capita monthly income in Aligarh city is divided into five categories. From very high category to very low category are the following slabs of Rs. 2,350-2,850, Rs. 1,850-2,350, Rs. 1,350-1,850, Rs. 850-1,350 and Rs. 350-850 respectively. In the first category of very high income lies only one ward i.e. Begpur. In the next category are eight wards representing 15.93 percent of the city population. In the third category are only five wards representing 8.56 per cent of population. A total number of eighteen wards come under low per capita income category with 25.33 per cent population. And finally in the very low category of per capita income are twenty eight wards which encompass 45.49 per cent population of Aligarh.

Table 5.3

<table>
<thead>
<tr>
<th>Income category</th>
<th>Income (in Rs.)</th>
<th>Majority populous wards (No.)</th>
<th>Minority populous ward (No.)</th>
<th>Mixed population wards (No.)</th>
<th>Total wards (No.)</th>
<th>Percentage of population affected</th>
<th>Ratio of the population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very high</td>
<td>2,350-2,850</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1.19</td>
<td>1</td>
</tr>
<tr>
<td>High</td>
<td>1,850-2,350</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>8</td>
<td>15.93</td>
<td>6.27</td>
</tr>
<tr>
<td>Medium</td>
<td>1,350-1,850</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>8.56</td>
<td>5.14</td>
</tr>
<tr>
<td>Low</td>
<td>850-1,350</td>
<td>11</td>
<td>5</td>
<td>2</td>
<td>18</td>
<td>28.33</td>
<td>19.05</td>
</tr>
<tr>
<td>Very low</td>
<td>350-850</td>
<td>8</td>
<td>13</td>
<td>7</td>
<td>28</td>
<td>45.99</td>
<td>32.21</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

Table 5.3 reveals that out of nine wards of the very high and high per capita income categories five wards are Hindu populous and only three wards are Muslim populous. Whereas in the very low category of twenty eight wards thirteen wards are
WARDWISE PER CAPITA MONTHLY INCOME
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 5.3
ASSOCIATION OF FAMILY SIZE AND INCOME

PER CAPITA AVERAGE MONTHLY INCOME (RS)

AVERAGE FAMILY SIZE (NO. OF PERSONS)

Based on data generated through household survey in 2003

Fig : 5.3.a
Muslim populous and only eight wards are Hindu populous. This indicates a highly unfavourable situation for Muslims in the city. Further, the ratio of distribution of the total population in the five slabs is highly disproportionate, as 19 and 32 times more population lie in low and very low categories in comparison to 1, 6 and 5 times in the top three. Inequality is high in Aligarh city both religion-wise and spatially. Thus, spatial incidence of poverty, illiteracy, vulnerability and disempowerment are synonymous to the old city Muslim population (Fig. 5.3).

5.4 Family Size and Income Levels in Aligarh

The family size as already discussed before has relationship with income of the family. It is not argued that family size is an independent variable upon which the income status of that family depends. Income is determined by many factors and family size generally becomes peripheral in those cases where the larger number of family members is thought to be favourable, as may be the case in business. A theoretical justification is required to make this association valid. But it becomes determinant of the source and levels of income in case of the poor with limited resources.

Table 5.4

Relation between Family Size and Income Levels

<table>
<thead>
<tr>
<th>Family size (No. of persons)</th>
<th>Annual monthly income (Rs.)</th>
<th>Per capita monthly income (Rs.)</th>
<th>Ratio of percentage income</th>
<th>No. of wards</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-8</td>
<td>5,810.28</td>
<td>610</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>6-7</td>
<td>4,699.08</td>
<td>734.33</td>
<td>1.2</td>
<td>5</td>
</tr>
<tr>
<td>5-6</td>
<td>6,533.02</td>
<td>845.37</td>
<td>1.38</td>
<td>28</td>
</tr>
<tr>
<td>4-5</td>
<td>9,799.47</td>
<td>1600</td>
<td>2.62</td>
<td>22</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

Table 5.4 shows that with the decreasing size of the family there is a progressive increase in the average monthly income in different wards (Fig. 5.3a). It is noticed that in case of wards of very large family size and of the large family size the former has higher average family income of the household than the latter. It is so
because wards of the former category generally being poorer than latter have a greater number of earning members. Although aggregating more average monthly income they also have greater incidence of child labour.

The picture becomes very clear when we compare the size of family with per capita monthly income in different categories. Table 5.4 highlights that as family size decreases from 7-8 members to 4-5 members per family, the per capita monthly income increases from Rs. 610 to Rs. 1,600 having a ratio of 1:2.62 which strongly establishes the fact that there is an inverse relationship between size of the family and per capita income availability.

5.5 Family Type and Its Occupational Dynamics

Family type in the present study has broadly been classified into two categories, joint family system and nuclear family system. Large size of the household generally means the existence of joint family. Though joint family system is largely the characteristic of rural society in urban India it still has substantial presence. Joint family system means a family in which two or more families of a unilineal descent live together with their spouses and offsprings in one homestead and may be under the authority of one of the members. Sharing of the food from same kitchen is a remarkable feature of joint family. Though this latter criterion is dwindling very fast, nuclear family on the other hand includes only one married couple with their children or unmarried dependents. Due to structural changes taking place in the economy of urban areas joint family is increasingly becoming outdated and burdensome until drastic changes are brought in the family regarding decision making power and resource distribution. In the contemporary age it is not considered desirable. Certain features of the joint family system are highlighted below:

1. Joint family system gives undue authority to older generation and male dominance is very obvious in decision making process.
2. Due to strict division of labour and sphere of life the females have only a secondary role to play in the domain of domestic affairs.
3. Joint family system is generally considered to be a hot place for internal bickerings among the female members because of non-empowerment.

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frustration and consequently a dispute among the males. However efficient adjustment is to be claimed within a joint family, but a constant effort is needed to maintain relations in good humour. If sensibility lacks among members then the disruption of peace and harmony occurs. This is generally a very obvious situation in fraternal joint family system. It narrows down mental outlook of the members as much of time, energy and other resources are wasted in just maintaining internal balance of relationship.

4. The females are usually trapped in household related work only and devote most of the time discussing relations, tension and stress. Thus finding very little time for their personal development.

5. In comparison to nuclear family, children are not given proper care and attention. And a free and natural expression of love, care and concern for one's own children is neutralized by the responsibility towards others. Due to lesser degree of personal attention of the parents towards their own children at home their competitiveness and personality do not blossom to full potential.

In view of these negative factors many joint families especially among educated business class Hindus in Aligarh have modified the functional aspect of the family leaving the structural aspect almost untouched. Legally and socially, they claim to be a joint family, though internal arrangements, i.e. non-physical environment of the house, is modified to the extent of minimum interference. Separation of kitchen and compartmentalization of house for different families etc. are efforts of minor structural adjustment for this purpose. This is possible only where family is affluent, but not in all the cases. As the houses in Hindu wards are larger and better built, the per capita living space in the Hindu joint families is much larger than the Muslim joint families.

Seen from the angle of gender justice and women empowerment the nuclear family system provides greater opportunities for female head of the family in decision making, though still it largely depends upon the educational and awareness level of the female head. But logically accepted division of responsibility allows a wife to assert herself in a more obvious manner. In fact, increasing education and economic independence makes women more concerned about their immediate
family than taking care of the extended family. Further, women are becoming more overt about their likes and dislikes and to maintain their independence they avoid living with those people with whom they cannot have a warm rapport. Thus nuclearization of family, though largely governed by economic opportunities in the society, indeed reflects the accentuating individualism in the society. The desire of self-satisfaction is overwhelming the traditional social responsibilities and compulsions. Impact of Aligarh Muslim University in modifying occupational structure of Aligarh city mediated through the capitalistic structure of society is favouring nuclear family system in relation to joint family system in Aligarh. Hence the decreasing percentage of joint family has become a very strong indicator of socio-economic transformation. Thus the above argument helps us to accept a premise that smaller is the percentage incidence of joint family in an area, higher would be the quality of life. The common source of income and certain family values are the main reasons of survival and continuity of joint family system.

The distribution of joint family system gives an insight about the family structure in Aligarh city. Table 5.5 reveals that four wards, namely Gandhinagar (15), Jamalpur (30), Niranjanpuri (34), and Manik Chowk (58) have reported 60-75 per cent of households with joint family system. In the second category of 45-60 per cent households with joint family system lie six wards. They are Zameerabad (14), Nai Basti (21), Begumbagh (22), Rasalganj (50), Sarai Bairam Beg (39) and Gambhirpura (17). The most representative categories of joint family in Aligarh city are medium and low, having a range of 30-45 per cent and 15-30 per cent of their households with joint families.

A total number of nineteen wards in the city have 30-45 per cent joint family households. The largest number of twenty two wards have reported 15-30 per cent of the joint family households. The very low incidence of joint family from 0-15 per cent households is represented by nine wards only. They are Sarai Deen Dayal (1), Nagla Kalar (18), Nagla Pala (29), Fridaus Nagar (31), Ghanshyampuri (32), Shivpuri (37), Sarai Nawab (39), University Area (57) and Bhamola (53).

5 Value in bracket is ward number.
Table 5.5

Distribution of Joint Family in Aligarh

<table>
<thead>
<tr>
<th>Incidence of joint family (percentage households)</th>
<th>Majority populous wards (No.)</th>
<th>Minority populous ward (No.)</th>
<th>Mixed population wards (No.)</th>
<th>Total wards (No.)</th>
<th>Ratio of wards</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-75</td>
<td>3</td>
<td>1</td>
<td>-</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>45-60</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>1.5</td>
</tr>
<tr>
<td>30-45</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>19</td>
<td>4.75</td>
</tr>
<tr>
<td>15-30</td>
<td>10</td>
<td>8</td>
<td>4</td>
<td>22</td>
<td>5.4</td>
</tr>
<tr>
<td>0-15</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>9</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

Table 5.5 shows that in the very high category of incidence of joint family more wards are Hindu populous than Muslim. The sole Muslim ward which lies in this category is Jamalpur. The greater incidence of joint family is accounted for by the employment structure. Married brothers live together due to social and business compulsions. Economic compulsion and lack of dwelling place are the major factors in furtherance of joint family system among Muslims.

In the high category of wards with joint family, three times more majority populous wards are found in comparison of only one minority populous ward. But the medium category wards with 30-45 per cent households reporting joint family the majority and minority populous and mixed population wards are equally representative in terms of number respectively. But in the last two categories majority populous wards are as many as ten and four whereas the minority populous wards are eight and three in number. Table shows that in general there is propensity of nuclearization of family and every community is showing more dynamism in adjusting its family structure in response to the changing economic realities.

The spatial pattern does not seem to be very clear. The northern and few central wards have lowest incidence of joint family. A high incidence of joint family is reported from few pockets in the northeastern periphery, south central and northwestern peripheral parts of the old city (Fig. 5.4).
PERCENTAGE DISTRIBUTION OF JOINT FAMILY
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 5.4
A few observations are being made that poor wards reporting high incidence of joint family generally have small size of individual family. Wards reporting high percentage of gazetted employment reported moderate to low incidence of joint family. But higher education of women is strongly, inversely correlated with the incidence of joint family. Out of ten wards of high female education nine wards report low percentage of joint family. If above two indicators are to be considered as social prestige then it can be said that there is a negative correlation between the status of household and the incidence of joint family. In a comparison between the effect of income and that of education, it is found that female education is all the more powerful factor against the incidence of joint family system. The partial explanation of existence of joint family system in Aligarh lies in its traditional association with a particular occupational structure. It is positively correlated with the business class households.

Table 5.6

Association of Joint Family and Business Occupation

(No. of wards)

<table>
<thead>
<tr>
<th>Households with joint family (percentage)</th>
<th>Households in Business (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60-80</td>
</tr>
<tr>
<td>60-75</td>
<td>2</td>
</tr>
<tr>
<td>45-60</td>
<td>1</td>
</tr>
<tr>
<td>30-45</td>
<td>-</td>
</tr>
<tr>
<td>15-30</td>
<td>1</td>
</tr>
<tr>
<td>0-15</td>
<td>-</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

Table 5.6 clearly shows that highest incidence of joint family with 60-75 per cent households is associated with a high incidence of 60-80 per cent business households. There are two wards in this category. In the high incidence category with 45-60 per cent joint family households are found five wards with 40-60 per cent business households. In the medium category of 30-45 per cent households with joint family 20-60 per cent business households are predominant. The number of
wards in these two categories (i.e. 20-40 and 40-60 per cent households) are seven and ten respectively. The low and very low incidence of the joint family is associated with the low and very low percentage of business households. The explanation for this association is that the common source of income of a business household needs cooperative attitude and the presence of male members which neutralizes many domestic frictions. The need of manpower for expanding and maintaining a particular business forges overall bonds among the members of joint family. Usually family tradition and religious values are woven around this basic requirement to perpetuate the system.

5.6 Household Size and Its Correlates in Aligarh City

In view of the data on family structure in Aligarh city it is highly desirable to have an analysis of actual living arrangement of the inhabitants in a dwelling place. The most realistic way to assess the quality of life is through a study of the size of household which affects the quality of life of the residents. According to the Census of India 2001 a household includes all the members of the house living under the same roof and sharing meals from the same kitchen whether they represent a nuclear family or a joint family. It may include a distant relative living with permanent intention.

Table 5.7 depicts only one ward, namely Saneecheri Penth, with very large average household size of 11-13 members. And Nagla Pala has reported very small household size of 3-5 members only. In the category of large household size of 9-11 members household size are five wards, representing 8.59 per cent of the population. They are Shahjamaal, Sarai Kaba, Jeevangarh, Bania Para and Manik Chawk. Out of these five wards, two wards are minority populous. In the medium household size category of 7-9 members lie twenty three wards of which eight wards are minority populous and nine wards are majority populous. This category represents 38.8 per cent of the city population. In the low household size category of 5-7 members are found thirty wards of which sixteen wards are majority populous and only eight wards are minority populous. They cover nearly 50 per cent of the city population. Thus fifty three wards belonging to medium and low household size category

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represent nearly 90 percent of the population of which twenty five are majority populous and eighteen are minority populous wards and twelve wards are of mixed population.

Table 5.7

Average Household Size in Aligarh City

<table>
<thead>
<tr>
<th>Size of household (No. of persons)</th>
<th>Majority populous wards (No.)</th>
<th>Minority populous wards (No.)</th>
<th>Mixed population wards (No.)</th>
<th>Total wards (No.)</th>
<th>Population affected (Percentage)</th>
<th>Ratio of population</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-13</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>1.19</td>
<td>1</td>
</tr>
<tr>
<td>9-11</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>8.59</td>
<td>7.2</td>
</tr>
<tr>
<td>7-9</td>
<td>9</td>
<td>8</td>
<td>6</td>
<td>23</td>
<td>38.8</td>
<td>32.60</td>
</tr>
<tr>
<td>5-7</td>
<td>16</td>
<td>8</td>
<td>6</td>
<td>30</td>
<td>49.62</td>
<td>41.59</td>
</tr>
<tr>
<td>3-5</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1.80</td>
<td>1.51</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

In many cases it is the size of family and not the incidence of joint family which determines the size of household as is the case of Saneecheri Penth, Shahjamal, Sarai Kaba, Jeevangarh etc. Out of twenty eight wards reporting small size of household half of them were reported as small size family. One can see a crucial correlation between household size and living space which determines crowding and congestion. Data reveals that out of six wards with a household size between 9-13 members four of them have 80-100 per cent of their household living in the houses smaller than 100 square yards. In many cases as small as 50 square yards only. Another relationship is that ten out of eleven wards where 80-100 percent of their households are living in smaller than 100 sq.yards represent 7-13 members per household. The opposite situation is found for households with less than 7 members. In the 5-7 members household category from 20 to 80 per cent of the households live in larger than 100 square yard houses. They represent thirteen of the total sixth wards of Aligarh. Thus living congestion is doubly increased. Firstly, larger household size itself means less availability of living space. And secondly, due to socio-economic compulsion these large households have very small actual housing space in comparison to those households whose size is smaller but have a large measure of housing space.
WARDWISE DEMOGRAPHIC STRUCTURE
AVERAGE HOUSEHOLD SIZE IN ALIGARH
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 5.5
An enquiry of the relationship between size of household and income level reveals that 40-60 per cent of the households of 7-11 member size had less than Rs. 3000 monthly income. This category represents eight wards. On the other hand seven out of nine wards with more than Rs. 11,500 average monthly income have less than 7 members in their households. Hence, there is an inverse relationship between the size of household and the income level.

From the above discussion it is rather clear that pattern of changes in the structure of family in Aligarh has a spatial character (Fig. 5.5). Only those pockets are responding to the changes which have greater command on resources and are having every means to maintain and enhance their economic capability. Thus socio-economic viability of Aligarh city to sustain its growth is not very satisfactory from the point of view of social justice. It also reveals that the growth pattern of city is such that many grass-root inequalities persist and many spatial pockets are in phase of socio-economic stagnation or degradation. In this context, disaggregate account of level of literacy and educational attainment of Aligarh city may be attempted as a means of sustainability.

5.7 Literacy and Educational Attainment in Aligarh City

In the present day order, a high socio-economic position necessitates acquisition of education. Function of education is to train, upgrade and diversify human cognitive ability. At social level education helps in acquiring competence and leverage in the resource generation process as well as having command over it.

Concept of literacy here means the ability of a person to read, write and understand at least one of the functional languages, whereas education means formal training to acquire systematic knowledge, becoming equipped technically, intellectually and professionally. We will have ward-wise assessment of the various aspects of literacy and education condition of Aligarh.

5.7.1 General literacy situation in Aligarh

Data collected for average literacy of wards is divided into five categories. These categories are having 85-100, 70-85, 55-70, 40-55 and 25-40 per cent households representing very high, high, medium, low and very low literacy levels. Household literacy means that parents and eligible children are in general literate.
Table 5.8

General Literacy Situation in Aligarh

<table>
<thead>
<tr>
<th>Household literacy (percentage)</th>
<th>Majority populous wards (No.)</th>
<th>Minority populous wards (No.)</th>
<th>Mixed population ward (No.)</th>
<th>Total wards (No.)</th>
<th>Persons affected in percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>85-100</td>
<td>17</td>
<td>9</td>
<td>1</td>
<td>27</td>
<td>49.22</td>
</tr>
<tr>
<td>70-85</td>
<td>7</td>
<td>4</td>
<td>6</td>
<td>17</td>
<td>26.95</td>
</tr>
<tr>
<td>55-70</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>10</td>
<td>13.93</td>
</tr>
<tr>
<td>40-55</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>4.55</td>
</tr>
<tr>
<td>25-40</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>5.35</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

As a whole the city shows a high level of literacy as is clear from Table 5.8. The Table shows that twenty seven wards report very high literacy of 85-100 per cent households. Very high literacy covers 49.22 per cent of the total population. In the high category of 70-85 per cent household literacy lie seventeen wards 26.95 per cent population. Thus out of sixty wards forty five wards of very high to high literacy represent 76.17 per cent of the total population. Only six wards representing 9.90 per cent population report less than 40 per cent of their households as literate. They are Shahjamal, Nagla Masani, Saneeccheri Penth, Nagla Mahtab, Sarai Kaba and Naunan gate. Of the very high and high literacy levels forty one wards, twenty four wards are majority populous and only thirteen are minority populous. Whereas in the six low and very low level literacy wards, two are majority populous and two are minority populous wards and two are of mixed population. Fig. 5.6 shows that highest literacy zone are found in the Civil Lines and along the peripheral areas of the city except the south-western part. Literacy is not found to be strongly associated with the size of family or household. General literacy seems to permeate the city due to socio-cultural atmosphere of Aligarh Muslim University.

5.7.2 Adult Male and Female Literacy in Aligarh

Though literacy movement has got its hold with younger generation the data concerning adult population of the city above 18 years of age with gender differentiation reveals a different story. To understand social ecology and
WARDWISE PERCENTAGE LITERACY
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.
intellectual attainment of a household in which a child grows, or to understand employment structure of a household this assessment becomes very relevant. The data collected for this purpose highlights that the wards of Aligarh report from as low as 25 per cent adult male literacy to as high as 100 per cent adult male literacy. On the other hand the adult female literacy has been noted as non-existent in some wards to as handsomely high as 100 per cent in other. These data are separately divided into five categories for the male and female literacy.

Table 5.9

Levels of Adult Literacy in Aligarh City

<table>
<thead>
<tr>
<th>Households with adult literacy (percentage)</th>
<th>Wards with male literacy (No.)</th>
<th>Wards with female literacy (No.)</th>
<th>Majority populous wards (No.)</th>
<th>Minority populous wards (No.)</th>
<th>Mixed population wards (No.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very high</td>
<td>Male 85-100</td>
<td>38</td>
<td>21</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Female 80-100</td>
<td>11</td>
<td>27</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>High</td>
<td>Male 70-85</td>
<td>11</td>
<td>-</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Female 60-80</td>
<td>7</td>
<td>14</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Medium</td>
<td>Male 55-70</td>
<td>7</td>
<td>-</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Female 40-60</td>
<td>-</td>
<td>14</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Low</td>
<td>Male 40-55</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Female 20-40</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Very low</td>
<td>Male 25-40</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Female 0-20</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

Table 5.9 shows that thirty eight wards report very high adult male literacy and twenty seven wards of total sixth wards report very high incidence of adult female literacy. In the next category are found eleven and thirteen wards respectively. In the low and very low categories of incidence of male and female literacy together are found four and six wards respectively. All the four wards with low adult male literacy are Muslim populous wards. The community break-up clearly shows that very high and high categories of adult literacy in both male and female groups are dominated by majority populous wards. It reveals that the impact of Aligarh Muslim University on the adult population of the minority community is feeble except in a few wards. The local Muslim population does not appear sincere towards education. Low adult literacy wards are roughly equally shared by majority and minority populous wards. Fig.5.7 shows that highest incidence of adult female
PERCENTAGE ADULT FEMALE LITERACY
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 5.7
PERCENTAGE ADULT MALE LITERACY
ALIGARH CITY
2003

Source: Based on primary data generated through household data at ward level.

Fig. 5.8
literacy is sectoral in the north-east, south-central, the old city outside Upper Kot, and mid-western part of the city. Whereas adult male literacy is more ubiquitous as is clear from Fig. 5.8.

5.7.3 Higher Education in Aligarh City

In this study minimum graduation degree or equivalent for male and female heads of the household has been taken as measure of higher education. Data collected to assess the ward-wise situation of higher education in Aligarh city differentiated on gender basis. The data is divided into five categories depending upon the percentage incidence of households of a ward with higher education. The five categories formed have value of 80-100, 60-80, 40-60, 20-40 and 0-20 percent households with higher education respectively, representing very high, high, medium, low and very low categories.

Table 5.10 reveals that in the very high and high categories of male higher education are found twelve wards and seven wards respectively. In the medium category are found nine wards. In the low and very low categories are found eight wards and twenty four wards respectively. So far female higher education is concerned in the very high and high categories are found three and seven wards respectively. In the medium category are found seven wards. In the low and very low categories are found twelve and thirty one wards respectively.

Table 5.10

<table>
<thead>
<tr>
<th>Categories</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Majority populous wards (No.)</td>
<td>Minority populous wards (No.)</td>
</tr>
<tr>
<td>Very high</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>High</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Medium</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Low</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Very low</td>
<td>7</td>
<td>1</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.
WARDWISE PERCENTAGE MALE GRADUATES
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

INDEX PERCENTAGE

80 - 100
60 - 80
40 - 60
20 - 40
0 - 20

Fig. 5.9
Fig. 5.9 shows that north-eastern, southern and north-western part of the city have very high and high incidence of male education. Out of twelve wards in very high category of male higher education eight wards are majority populous. They are Naurangabad, Dorinagar, Janakpuri, Nagla Pala, Begpur, Krishnapuri, Durgapuri, and Avas Vikas Colony. The remaining four wards are minority populous. They are Badamnagar, Zohrabagh, Dodhpur and University area. The reverse situation is found in the very low category. Out of twenty four wards four wards are minority populous and only seven wards are majority populous. Thus more wards of high level of education are found among the Hindus than among the Muslims. Further, of the total nineteen minority dominated wards in the city nine of them have the lowest levels of male education.

Data for female higher education shows that out of six wards only three wards reported 80-100 percent of graduate households. These are Krishnapuri, Zameerabad and Nagla Pala. Two of these are the majority populous wards and one is a mixed population ward. Rest of three categories report seven, seven and twelve wards in high, medium and low respectively. Strikingly thirty one wards are reported to have less than 20 percent of female graduates. Out of thirty one wards eleven wards are minority populous wards. Fig. 5.10a gives a glimpse of comparative status of female higher education in Aligarh city. This figure exhibits that percentage share of wards increases in the lower slabs of female higher education. Except in the low category, Hindu wards have reported higher incidence of female higher education than that of Muslim wards.

5.7.4 School Enrolment in Aligrh City

Data collected under this category belongs to two groups, overall school enrolment and private/English medium school enrolment. Wards are grouped into five categories depending upon the percentage of school enrolment, viz. very high, high, medium, low and very low.
WARDWISE PERCENTAGE FEMALE GRADUATES
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 5.10
COMPARATIVE STATUS OF FEMALE HIGHER EDUCATION

PERCENTAGE

LEVELS OF HIGHER EDUCATION

WARD
HINDU POPULOUS WARD
MUSLIM POPULOUS WARD

Based on data generated through household survey in 2003

Fig: 5.10.a
Table 5.11

School Enrolment in Aligarh city, 2003

<table>
<thead>
<tr>
<th>Categories</th>
<th>Total school enrolment</th>
<th>Private/English school enrolment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percentage households</td>
<td>No. of wards</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very high</td>
<td>85.100</td>
<td>49</td>
</tr>
<tr>
<td>High</td>
<td>70-85</td>
<td>4</td>
</tr>
<tr>
<td>Medium</td>
<td>55-70</td>
<td>4</td>
</tr>
<tr>
<td>Low</td>
<td>40-55</td>
<td>2</td>
</tr>
<tr>
<td>Very low</td>
<td>25-40</td>
<td>1</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

Table 5.10 reveals that forty nine wards affecting 81 per cent of the population report 85-100 per cent of households with children enrolled in school. Four wards report 70-85 per cent of households with school enrolment. Four wards report medium enrolment and three wards report less than 40 per cent enrolment of their children.

Twenty eight wards involving 28-34 per cent of population report more than 60 per cent of their households reporting children’s enrolment in private/English school. Twenty wards reporting 18.33 per cent population have 40-60 per cent of their children into private/English schools. Twelve wards report less than 40 per cent household with English school enrolment. It appears that, the general perception of income level determining the quality of education is substantiated by the findings. Out of twelve wards of low and very low level of private/English school enrolment, eleven of them report very low average monthly income i.e. less than Rs. 3000 per month. Another obvious association emerges in the context of nature of employment. It is found that eight out of twelve wards reporting very low private/English school education have more than 40 per cent of employment in daily wage sector. Fig. 5.11 reveals a marked geographical reality. All the wards of low private/English school enrolment, which is taken as the indicator of growth of education, are found in the old city and the south-western part of Aligarh city. The very high and high enrolment levels are found in the Civil Lines and southern part of the city.
CHILDREN IN PRIVATE SCHOOLS
ALIGARH CITY
2003

INDEX PERCENTAGE

0-20
20-40
40-60
60-80
80-100

Source: Based on primary data generated through household survey at ward level.

Fig 5.11
The analysis of data regarding sustainability potential and resource generation capacity of the city's social structure reveals that Aligarh does not have an inherent vibrant social structure. The study shows that few correlates of healthy social structure in form of size of family, its nuclear status, household size, average monthly income, per capita monthly income, literacy and educational attainment are found only in few wards. It is also clear that small family size, good educational level, good employment status and high income levels are healthy correlates to enhance well-being of a ward of the city. It substantiates the hypothesis that these above mentioned variables are positively related with the level of social well-being.
Chapter-6

INDICATORS OF SOCIAL WELL-BEING FOR ALIGARH CITY

- Employment Scenario in Aligarh City
- Percentage Employment in Aligarh City
- Employment Under Daily and Weekly Wages
- Employment in Business and Industry
- Gazetted Employment in Aligarh City
- Non-Gazetted employment in Aligarh City
- Distribution of Income Levels in Aligarh City
- Distribution of Very Low Income
- Distribution of Low Income in Aligarh City
- Distribution of Medium Income Level in Aligarh
- Distribution of High Income in Aligarh
- Monthly Savings in Aligarh City
- Housing Condition and Dwelling Space in Aligarh City
- Variation in Housing Size in Aligarh City
- Distribution of Small-size Housing
- Distribution of Medium-size Housing
- Distribution of Large-size Housing
- Residential Open-Space Availability
- Health and Well-being Situation in Aligarh City
- Physical Health Condition in Aligarh
- Health Status of Infants in Aligarh
- Health Condition of Other Family Members in Aligarh
- Leisure and Recreational Availability in Aligarh
- Political Well-being and Female Empowerment
- Complaint of Municipal Apathy
- Communal Bias in Municipal Resource Allocation
- Freedom of Women for Economic Pursuits
- Freedom of Women to Travel Alone
INDICATORS OF SOCIAL WELL-BEING FOR ALIGARH CITY

This chapter deals with the social indicators which have a crucial bearing on the well-being of different social groups. These indicators help in quantitative representation of areal differentiation of social well-being and are also termed as territorial social indicators. Essentially social indicators are the measure of welfare levels of different social groups, at varying time and space. The present chapter is concerned with the last group of three sets of indicators.

6.1 Employment Scenario in Aligarh City

Indicators dealing with the economic life of the social groups are the fundamental determinants of well-being. The nature of employment determining the level of income is a conspicuous trait of the capitalistic mode of production. These two aspects of economic condition in themselves are the most important determinants of social status in an urban structure. The employment status of different wards is discussed under five headings. These are percentage employment, daily and weekly wage labour, business and industrial employment, gazetted employment and non-gazetted employment.

6.1.1 Percentage Employment in Aligarh City

In the present study the people gainfully employed are those who are involved in an economic activity on a regular basis and are engaged in such activities for at least two-thirds of the year (The Census of India, 2001). The percentage employment of each ward of Aligarh city includes both adults and minor employees as well as the female employees.

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Table 6.1

Distribution of Percentage Employment in Aligarh

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of wards</th>
<th>Area (sq. km.)</th>
<th>Percentage of total area</th>
<th>Population Affected (No. of persons)</th>
<th>Percentage of total population</th>
<th>Ward No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>1</td>
<td>0.60</td>
<td>1.65</td>
<td>11152</td>
<td>1.66</td>
<td>15</td>
</tr>
<tr>
<td>High</td>
<td>5</td>
<td>2.04</td>
<td>5.58</td>
<td>44617</td>
<td>6.66</td>
<td>11, 45, 52, 54, 59</td>
</tr>
<tr>
<td>Medium</td>
<td>12</td>
<td>5.93</td>
<td>16.17</td>
<td>137027</td>
<td>20.47</td>
<td>2, 14, 26, 30, 32, 40, 43, 49, 51, 55, 56, 59</td>
</tr>
<tr>
<td>Low</td>
<td>30</td>
<td>22.182</td>
<td>60.40</td>
<td>329764</td>
<td>49.32</td>
<td>1, 3, 4, 5, 6, 8, 9, 13, 16, 17, 18, 19, 20, 22, 24, 25, 27, 29, 34, 35, 36, 37, 38, 41, 42, 44, 46, 47, 50, 57</td>
</tr>
<tr>
<td>Very Low</td>
<td>12</td>
<td>5.94</td>
<td>16.20</td>
<td>146527</td>
<td>21.89</td>
<td>7, 10, 12, 21, 23, 28, 31, 33, 39, 48, 53, 60</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

The five categories of percentage of employment i.e. very low, low, medium, high and very high have the following employment range. Very low category depicts wards with 16-20 per cent of employment followed by 20-24 per cent, 24-28 per cent, 28-32 per cent and 32-36 per cent employment in the low, medium, high and very high categories respectively. Table 6.1 shows that only one ward, namely Gandhinagar (15), has the highest employment rate. This is a very old Hindu middle-class ward. In the high employment category are five wards occupying 5.58 per cent of the total area and affecting 6.66 per cent of the total population. These are Krishnapuri, Brahmanpuri, Badar Bagh, Bania Para and Bairam Beg Sarai. In the medium category are twelve wards involving 16.17 per cent area and 20.47 per cent population. They are Usman para, Zameerabad, Saneechari Penth, Janakpuri, Ghanshayampuri, Begpur, Zohrabagh, Dodhpur, Janakpuri, Khaidora, Manik Chowk and Tantan para. The maximum number of thirty wards lie in the low employment category. They represent 49.3 per cent of the city population with 60.4 per cent of

2. Value in the bracket is ward no.
the city area. In the very low category of employment are again twelve wards involving 16.2 per cent of total area and with 21.89 per cent of the total population. They are Naurangabad, Shahjamal, Firdaus Nagar, Jwalapuri, Sarai Nawab Dorinagar, Bhamola and Avas Vikas Colony. The low and very low employment wards in combination represent 70.15 per cent of the city population with 76.6 per cent of the total city area. This condition reveals that most of the city is having low employment, hence low income and therefore poor economic indices of well-being. Those wards which have reported very low average monthly income are generally lying in the slabs of low and very low percentage of employment. Out of twelve wards in the very low category of employment five wards have reported less than Rs. 3000/- average monthly income. However, high income wards generally belong to medium category of employment. Because these wards are of small family size, there is absence of child labour as well as due to lower female employment they do not report high employment rate as the data and observations reveal.

Fig. 6.1 shows that high percentage employment wards are mainly found in the south-central part of the city. Women of these Hindu dominated middle-class wards are more gainfully employed in school and other appropriate avenues. The medium employment wards are mostly located in the north-eastern zone of the city. The rest of the city is having low and very low rate of employment in general.

6.1.2 Employment Under Daily and Weekly Wages

This category includes those workers who get their wages on a daily or weekly basis. They belong to unorganized sector of the cottage and small-scale industrial economy without any affiliation of labour unions. These labourers are particularly employed in lock making factories, building, fitting, small scale enterprises etc. This type of employment is the main cause of economic stagnation and poverty among Muslims in Aligarh city as they are predominant in this sector. Because of the low wages, the general purchasing power is also low. In addition, the daily needs purchases by labourers are ad hoc. They buy goods from their immediate residential localities. Such street shops represent retail pricing and these low wage earners have to buy goods at 15 to 20 per cent higher prices.
WARDWISE PERCENTAGE EMPLOYMENT
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 6.1
Table 6.2

Daily and Weekly Wage Employment in Aligarh

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of wards</th>
<th>Area (sq. km.)</th>
<th>Percentage of total area</th>
<th>Population involved (No. of persons)</th>
<th>Percentage of total population</th>
<th>Ward No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>1</td>
<td>0.107</td>
<td>0.29</td>
<td>9770</td>
<td>1.42</td>
<td>37</td>
</tr>
<tr>
<td>High</td>
<td>6</td>
<td>2.43</td>
<td>6.63</td>
<td>61450</td>
<td>9.18</td>
<td>2,8,16,19,26,34</td>
</tr>
<tr>
<td>Medium</td>
<td>10</td>
<td>6.11</td>
<td>16.65</td>
<td>122387</td>
<td>18.26</td>
<td>3,4,10,12,23,24,25,38,47,56</td>
</tr>
<tr>
<td>Low</td>
<td>10</td>
<td>5.48</td>
<td>14.94</td>
<td>99883</td>
<td>14.92</td>
<td>1,5,21,27,31,35,39,45,50,55</td>
</tr>
<tr>
<td>Very Low</td>
<td>33</td>
<td>22.57</td>
<td>61.49</td>
<td>37597</td>
<td>56.4</td>
<td>6,7,9,11,13,14,15,17,18,20,22,28,24,30,32,33,36,39,40,41,42,43,44,46,48,51,53,57,58,59,60</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

The five-tier wage categories representing very high, high, medium, low and very low status wards with 80-100 per cent, 60-80 per cent, 40-60 per cent, 20-40 per cent, and 0-20 per cent households in daily or weekly wage structure. In the top category is found only Ward No. 37, namely Shivpuri, with 80-100 per cent daily and weekly wage employment. In the next category are six wards involving 6.63 per cent of the total area and 9-18 per cent of the total population. They are Usman Para, Nagla Mahtab, Nagla Masani, Sarai Kaba, Saneechari Penth and Bania Para. In the medium category lie ten wards involving 16.65 per cent area and 18.29 per cent population of the city. They are Delhi Gate, Sarai Pathan, Shahjamal, Sarai Lawaria, Bhujpura, Naunan Gate, Kala Mahal, ADA Colony Area, Jeevangarh and Tantanpara. The low category also represents ten wards affecting 14.94 per cent area and 14.92 per cent population. They are Sarai Deen Dayal, Sarai Bala, Nai Basti, Baradwari, Firdaus Nagar, Sarai Pakki, Sarai Nawab, Brahmanpuri, Rasal Ganj and Khai Dora. Rest of the thirty three wards occupying 61.49 per cent area and 56.21 per cent of the population of Aligarh have very low employment under daily/weekly wages.
Source: Based on primary data generated through household survey at ward level.

Fig. 6.2
The Fig. 6.2 shows an over-concentration of labourers in the old city. In fact, geographically the old walled city wards inhabit most of the daily and weekly wagers because of the unorganized traditional sector of small scale and cottage industries in such dense localities. In this area most of the small household lock factories are located and labour is locally available. These labourers have different wage rates depending upon their skilled, semi-skilled or un-skilled status. Generally for an adult male labourer it varies from Rs. 60/- to Rs. 100/- per day. Nearly 25 per cent work force of the city is daily wager. Its spatial dimension reveals great disparity. 31 per cent of the total labourers concentrated in seven wards at the outer circle of the old city. Whereas 61.58 per cent of these wage earners are located in the seventeen wards mostly in the south-western zone of the city. The poverty of this class of workers has an added dimension which may be termed as ‘deprivation of spatial diversity’ which leads to the spatial inertia or immobility, hampering any social, economic or ecological progress.

It is found that out of seventeen wards with more than 40 per cent of their work force as daily wage earners, sixteen wards belong to very low category of per capita income i.e. on an average less than Rs. 600/- per month per head. Out of these seventeen wards thirteen wards belong to very low average monthly income group, i.e. reporting less than Rs. 4000/- per month per family. Four wards out of seven wards with very high daily wage earners are Muslim dominated. Whereas out of thirty three wards with very low percentage of daily wage earners twenty two of them are Hindu dominated.

6.1.3 Employment in Business and Industry

This includes employment related to manufacturing, wholesale marketing, dealership, hotels and other service sector industries etc. It has been considered as a positive indicator because of the high degree of the command on the resources and the income turn-out from these activities.

---


Table 6.3

Business and Industrial Employment in Aligarh

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of wards</th>
<th>Area (sq. km.)</th>
<th>Population Affected (No. of persons)</th>
<th>Percentage of total population</th>
<th>Ward No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>3</td>
<td>9.95</td>
<td>43222</td>
<td>6.46</td>
<td>1,4,15,60</td>
</tr>
<tr>
<td>High</td>
<td>1</td>
<td>1.13</td>
<td>7135</td>
<td>1.06</td>
<td>4</td>
</tr>
<tr>
<td>Medium</td>
<td>13</td>
<td>14.22</td>
<td>116864</td>
<td>17.46</td>
<td>6,9,12,13,20,21,28,29,43,46,48,58</td>
</tr>
<tr>
<td>Low</td>
<td>10</td>
<td>8.19</td>
<td>78830</td>
<td>11.78</td>
<td>5,7,32,40,42,45,51,55,56,59</td>
</tr>
<tr>
<td>Very Low</td>
<td>33</td>
<td>66.51</td>
<td>423036</td>
<td>63.24</td>
<td>1,2,3,4,8,10,16,17,18,19,22,23,24,25,26,30,31,33,34,35,36,37,38,39,41,44,47,49,50,52,53,54,57</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

Table 6.3 shows five categories of business employment engaging 48-60 per cent, 36-48 per cent, 24-36 per cent, 12-24 per cent, and 0-12 per cent of the total work force of sixty wards in very high, high, medium, low and very low categories respectively. The three wards, Banna Devi, Gandhinagar and Awas Vikas Colony encompassing 9.95 per cent of total area and 6.46 per cent of the total city population, belong to the very high category. In the next category lies only one ward, namely Krishnapuri. In the third and fourth categories lie thirteen and ten wards respectively representing 14.22 per cent and 8.19 per cent of the total area and 17.46 per cent and 11.78 per cent of the total population of the city. The very low category reports thirty three wards including 66.51 per cent of the area of the city and 63.24 per cent of total population of the city.

Fig. 6.3 highlights an interesting spatial inequality which is associated with business and industrial employment. Nearly 23 per cent of the total employment of the city belongs to specialized business and industrial category. Only four wards in themselves share 14 per cent of this employment, whereas forty three wards of low and very low categories constitute 75 per cent of this employment which represent a huge spatial inequality requiring an explanation. Out of seventeen dominant wards fourteen wards represent Hindu community while three have mixed population
PERCENTAGE BUSINESS AND INDUSTRIAL EMPLOYMENT IN ALIGARH CITY

2003

Source: Based on primary data generated through household survey at ward level.

Fig. 6.3
characteristics. Not a single Muslim populous ward is being represented in this category. On the other hand out of thirty three wards with lowest business and industrial employment twenty wards are Muslim populous. Muslim wards overall have only a meager 13 per cent share in this employment whereas they constitute 31 per cent of the sample.

6.1.4 Gazetted Employment in Aligarh City

It includes all employment of gazetted and equivalent rank in the public sector, the managerial, professional, technically qualified employment in the private sector, and independent practices belonging to the quaternary sector of the economy. This class of employment has technical expertise and elite professional skill.

Table 6.4

Gazetted Employment in Aligarh City

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of wards</th>
<th>Percentage of area</th>
<th>Population Affected (No. of persons)</th>
<th>Percentage of total population</th>
<th>Ward No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>3</td>
<td>9.91</td>
<td>39631</td>
<td>5.92</td>
<td>40,43,49</td>
</tr>
<tr>
<td>High</td>
<td>1</td>
<td>2.16</td>
<td>9127</td>
<td>1.36</td>
<td>51</td>
</tr>
<tr>
<td>Medium</td>
<td>13</td>
<td>13.15</td>
<td>43241</td>
<td>6.47</td>
<td>44,57,60</td>
</tr>
<tr>
<td>Low</td>
<td>10</td>
<td>21.87</td>
<td>147345</td>
<td>22.02</td>
<td>6,7,11,13,14,29,31,33,34,36,42,48,53</td>
</tr>
<tr>
<td>Very Low</td>
<td>40</td>
<td>52.91</td>
<td>429693</td>
<td>64.22</td>
<td>1,2,3,4,8,10,12,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,32,35,37,38,39,41,44,46,47,50,52,54,55,56,58,59</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

Aligarh Muslim University is one of the prominent sources of gazetted employment sending qualified people out to local and global market. The recent macro-structural changes of 1990's leading to market economy and information technology revolution has given a fresh impetus to the upwardly mobile urbanites of Aligarh to enter in this sector of employment. Around 10 per cent of total work force of Aligarh city belongs to this sector of employment. The five categories of very high, high, medium, low and very low have 60-75 per cent, 45-60 per cent, 30-45
PERCENTAGE GAZETTED EMPLOYMENT
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig 6.4
per cent, 15-30 per cent and 0-15 per cent of work force in this employment respectively. Table 6.4 displays that only three wards, namely Begpur, Zohrabagh and Dodhpur, belong to the top category. In the next only Janakpuri ward is reported. In the medium category are found Lekhranjagar, University Ward and Avas Vikas Colony. Rest of the fifty three wards occupying 74.78 per cent of the total area of the city representing 577,038 persons, constituting 86.24 per cent of the total population belong to low and very low categories of gazetted employment. The spatial dimension of gazetted employment reveals that Aligarh city is by and large a University supported city. The 37 per cent of the total work force in gazetted employment according to data is concentrated in four wards (Fig. 6.4) lying in the north-east of the city whereas 50 per cent of this employment is located only in seven wards.

The comparison of these wards with high income and high educational attainment wards reveals that invariably high gazetted employment corresponds with higher income and higher male and female educational qualification. Amazingly, none of these wards with very high gazetted employment have reported very high female qualification. The University helps to increase the proportion of Muslims' participation in this sector. These high category gazetted employment wards are almost equally shared by Hindus and Muslims both.

6.1.5 Non-Gazetted Employment in Aligarh City

This sector of employment represents jobs equivalent to clerical position. It serves two purposes. Firstly, it indicates job security. Secondly it projects that section of urban society which has potential to compete with the elite middle class of the society but still indices of high class living and level of desire are not matched. Data reveals that six wards belong to very high category of non-gazetted employment i.e. 48-60 per cent of their work force is in this sector. In the subsequent categories are found three, five, fifteen and thirty one wards respectively with 36-48, 24-36, 12-24 and 0-12 per cent of work-force in non-gazetted category. Fig. 6.5 illustrates that the higher order non-gazetted employment wards lie adjacent to University (Ward No. 57). The northern residential expansion of the city is associated with this employment characteristic. All these wards represent Muslim population.
PERCENTAGE NON-GAZETTED EMPLOYMENT
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 6.5
Table 6.5

Occupational Structure of Aligarh City

<table>
<thead>
<tr>
<th>Category</th>
<th>Daily wages</th>
<th>Business And Industrial</th>
<th>Gazetted</th>
<th>Non Gazetted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of wards</td>
<td>% of pop.</td>
<td>% of area</td>
<td>No. of wards</td>
</tr>
<tr>
<td>Very High</td>
<td>1</td>
<td>1.4</td>
<td>0.29</td>
<td>3</td>
</tr>
<tr>
<td>High</td>
<td>6</td>
<td>9.18</td>
<td>6.63</td>
<td>1</td>
</tr>
<tr>
<td>Medium</td>
<td>10</td>
<td>18.29</td>
<td>16.65</td>
<td>13</td>
</tr>
<tr>
<td>Low</td>
<td>10</td>
<td>14.92</td>
<td>14.94</td>
<td>10</td>
</tr>
<tr>
<td>Very Low</td>
<td>53</td>
<td>56.21</td>
<td>61.49</td>
<td>33</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

Table 6.5 gives an account of occupational structure of Aligarh city under broad four categories of daily wage, business and industrial employment, gazetted and non-gazetted employments. It reveals proportional distributional of population and area of city under the five categories of very high to very low for all four types of employment. Less than 30 per cent of the city population and city area have very high degree of desirable employment. In case of daily wages around 25 per cent of city population and area as well have reported this undesirable employment. In the very low category of gazetted and non-gazetted and business employment are found more than 50 per cent of the city population and one-third of the city area. For daily wages employment and equivalent economic activities, 55 per cent of city population and two third of the city area are affected. It makes clear that the occupational structure of the city is lopsided in favour of undesirable kind of employment which needs more hours of work and physical energy with less remuneration, job security and growth and development of the families concerned.

6.2 Distribution of Income Levels in Aligarh City

The income scenario of different wards of Aligarh city has been discussed by breaking up the monthly household income into very low, low, medium, high and very high categories representing income less than Rs. 3,000 per month, Rs.3,000-5,000, Rs. 5,000-10,000, Rs. 10,000-20,000 and more than Rs. 20,000 per month.
respectively. This categorization of wards in different income groups is associated with employment characteristics of the households. It is associated with the educational level, resource consumption and avenues of occupational mobility and progress as well. Household income data is collected and divided in five categories. Here we are separately dealing with distribution of different categories of income levels.

6.2.1 Distribution of Very Low Income

The very low income category involves those wards which have less than Rs. 3,000 per month household income. These wards are also grouped into very high, high, medium, low and very low categories representing 80-100 per cent, 60-80 per cent, 40-60 per cent, 20-40 per cent and 0-20 per cent, households in each category of very low income level respectively. The distribution of households from 0 to 100 per cent range in all five categories signifies the fact that there are extreme variations in the income level of different wards. Few wards are totally stagnant in resource generation and a few of them are pumping out resources and consuming it with complete command.

In the first two categories of very high and high concentration of very low income lie two wards i.e. Nagla Masani and Nagla Mehtab, one in each category respectively. These two wards together with 22,108 population have families living in abject poverty and a degraded environment. Most of them are daily and weekly wage earners. The medium category of 40-60 per cent households includes eleven wards. They are Usman Para, Shahjamal, Sarai Lawaria, Sarai Kaba, Naunan Gate, Kala Mahal, Saneechari penth, Shivpuri, ADA Colony Area, Sarai Nawab and Bania Para. They involve 13.25 per cent of total city area and affecting 16.51 per cent of the total city population. This category represents the Muslim population at large. In the low concentration category this income level are twelve wards. They involve 18.36 per cent of total area and 21.23 per cent of the total population. They are Sarai Deen Dayal, Sarai Pathan, Jaiganj, Begum Bagh, Bhuijpara, Bara Dwari, Sarai Pakki, Lekhraj Nagar, Jeevangarh, Rasalganj, Khaidora, and Tantan Para. In the
PERCENTAGE VERY LOW INCOME HOUSEHOLDS
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 6.6
remaining thirty five wards of very low concentration, the ratio of Muslim and Hindu population wards is almost 1:2 against Muslim wards whereas the ratio of their population is 1:1.4 only. This shows that the Muslim population has an unfavourable income scenario. Fig. 6.6 shows that wards with greater concentration of low income households are generally concentrated in the central and southwestern part of the city which is largely the old part of the city.

Table 6.6

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of wards</th>
<th>Percentage of area</th>
<th>Population Affected</th>
<th>Percentage of total population</th>
<th>Ward No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>1</td>
<td>1.02</td>
<td>7576</td>
<td>1.13</td>
<td>16</td>
</tr>
<tr>
<td>High</td>
<td>1</td>
<td>2.08</td>
<td>14532</td>
<td>2.17</td>
<td>8</td>
</tr>
<tr>
<td>Medium</td>
<td>11</td>
<td>13.25</td>
<td>110475</td>
<td>16.51</td>
<td>2,10,12,19,24,25,26,37,38,39,54</td>
</tr>
<tr>
<td>Low</td>
<td>12</td>
<td>18.36</td>
<td>142051</td>
<td>21.23</td>
<td>1,4,6,22,23,27,35,44,47,50,55,56</td>
</tr>
<tr>
<td>Very Low</td>
<td>35</td>
<td>46.59</td>
<td>424607</td>
<td>58.96</td>
<td>3,5,7,9,11,13,14,15,17,18,20,21,28,29,30,31,32,33,34,36,40,41,42,43,45,46,48,49,51,52,53,57,58,59,60</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

6.2.2 Distribution of Low Income in Aligarh City

Five categories of wards of very high, high, medium, low and very low incidence of low income level between Rs. 3,000-5,000 represent 52-65 per cent, 39-52 per cent, 26-39 per cent, 13-26 per cent, and 0-13 per cent of total households. Data reveals that only four wards i.e Sarai Deen Dayal, Delhi Gate, Sarai Pathan and Bhujpura, report the very high concentration of low income households. In the next category are eight wards. They are Shahjamal, Naunan Gate, Firdaus Nagar, Sarai Pakki, Shivpuri ADA colony Area, Rasal Ganj and Bhamola. In the medium category are ten wards, including Usman Para, Sarai Bala, Ghambhirpura, Sarai Kaba, Begum Bagh, Khai Dora and Tantan Para. In the low and very low categories there are twenty four and fourteen wards respectively. Fig. 6. 7 shows that wards with very high and high degree of incidence of low income households with Rs. 3,000-5,000
PERCENTAGE LOW INCOME HOUSEHOLDS
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 6.7
PERCENTAGE MEDIUM INCOME HOUSEHOLDS
ALIGARH CITY
2003

INDEX RS.5000 - 10000
66 - 70
42 - 56
28 - 42
14 - 28
0 - 14

Source: Based on primary data generated through household survey at ward level.

Fig. 6.8
income per month lie mainly in the south-western part and the northern peripheral part of the city. Thus the spatial contiguity of these wards with those wards of high incidence of households with very low and low income status is visible. Out of the fourteen wards in the very low category nine wards are Hindu dominated and four wards are Muslim dominated, a ratio of 1:2.5 in favour of Hindu wards. And out of twelve wards of very high and high categories ten wards are Muslim dominated with more than 60 per cent of the population being Muslim in these wards.

6.2.3 Distribution of Medium Income Level in Aligarh

In the medium income slab the wards are divided into five categories of very high, high, medium, low and very low concentration of households depending upon the incidence of 56-70 per cent, 42-56 per cent, 28-42 per cent, 14-28 per cent, and 0-14 per cent, of households respectively with Rs. 5,000-10,000 monthly income. Data reveals that four wards; Naurangabad, Nagla Kalar, Ghanshyampuri and Badam Nagar represent 6.15 per cent of the total population lie in the very high category. In the second category are five wards. They are Sarai Bala, Durgapuri, Gandhinagar, Nai Basti and Ashok Nagar. In the medium category are nineteen wards. In the low and very low concentration categories are ten and thirteen wards respectively. Three out of four wards representing largest concentration of medium income are Hindu dominated (Fig. 6.8).

6.2.4 Distribution of High Income in Aligarh

High income group wards are divided into five population concentration categories according to the percentage of the households in each ward with income of Rs. 10,000-20,000 per month. These five categories of very high, high, medium, low and very low report 68-85 per cent, 51-68 per cent, 34-51 per cent, 17-34 per cent and 0-17 per cent households in each ward in this income level respectively.
Table 6.7

Distribution of High Income in Aligarh City

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of wards</th>
<th>Percentage of area</th>
<th>Population Affected</th>
<th>Percentage of total population</th>
<th>Ward No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>4</td>
<td>11.93</td>
<td>61277</td>
<td>9.15</td>
<td>14,29,43,60</td>
</tr>
<tr>
<td>High</td>
<td>4</td>
<td>9.35</td>
<td>42572</td>
<td>6.36</td>
<td>9,11,40,57</td>
</tr>
<tr>
<td>Medium</td>
<td>7</td>
<td>20.3</td>
<td>81339</td>
<td>12.15</td>
<td>28,35,41,44,48,49,51</td>
</tr>
<tr>
<td>Low</td>
<td>14</td>
<td>15.14</td>
<td>139998</td>
<td>20.89</td>
<td>6,7,13,15,20,30,31,34,36,42,45,46,53,59</td>
</tr>
<tr>
<td>Very Low</td>
<td>31</td>
<td>43.28</td>
<td>363803</td>
<td>51.50</td>
<td>1,2,3,4,5,8,10,12,16,17,18,19,21,22,23,24,25,26,27,32,35,37,38,39,47,50,52,54,55,56,58</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

Table 6.7 reveals only four wards, i.e. Zameerabad, Nagla Pala, Zohrabagh and Awas Vikas Colony lie in the very high category of incidence of high income level households. They constitute 11.93 per cent of the city area, affecting 61,277 persons i.e. 9.15 per cent of the total population. In the second category again four wards are found. These are Kishore Nagar, Krishnapuri, Begpur and University Area. In the medium category are seven wards. In the low and very low categories are fourteen and thirty one wards respectively. Thus 75 per cent of the total wards report less than 34 per cent of their households with income between Rs. 10,000-20,000 per month. Of the top eight wards in the very high and high categories five wards are Hindu populous and only two are Muslim populous. Whereas in the very low category, out of thirty one wards only nine wards are Hindu dominated and ten wards are Muslim dominated respectively. Rest of them are mixed population wards. This clearly reveals that the Muslim population stands for proportionately much share in the high income groups. Fig. 6.9 shows that the clustering of top ranked wards in this income slab is in the north and western part of the city. The rest of the city reports less than 10 per cent of the household in each ward in the high income slab.
PERCENTAGE HIGH INCOME HOUSEHOLD
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 6.9
PERCENTAGE VERY HIGH INCOME HOUSEHOLDS
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 6.10
Table 6.8

Distribution of Income Types in Aligarh City

<table>
<thead>
<tr>
<th>Category</th>
<th>&lt; Rs. 3,000</th>
<th>Rs. 3,000-5,000</th>
<th>Rs. 5,000-10,000</th>
<th>Rs. 10,000-20,000</th>
<th>&gt; Rs. 20,000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of ward</td>
<td>% of pop.</td>
<td>No. of ward</td>
<td>% of pop.</td>
<td>No. of ward</td>
</tr>
<tr>
<td>Very High</td>
<td>1</td>
<td>1.13</td>
<td>3</td>
<td>6.82</td>
<td>4</td>
</tr>
<tr>
<td>High</td>
<td>1</td>
<td>2.17</td>
<td>8</td>
<td>12.91</td>
<td>5</td>
</tr>
<tr>
<td>Medium</td>
<td>11</td>
<td>16.51</td>
<td>10</td>
<td>16.97</td>
<td>19</td>
</tr>
<tr>
<td>Low</td>
<td>12</td>
<td>21.23</td>
<td>25</td>
<td>22.55</td>
<td>19</td>
</tr>
<tr>
<td>Very low</td>
<td>35</td>
<td>58.96</td>
<td>14</td>
<td>57.66</td>
<td>13</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

Table 6.8 shows that none of the wards in the city has reported more than 34 per cent of the households with more than Rs. 20,000 income per month. Fig. 6.10 shows that in the top category are found Janakpuri and Manik Chowk, both are Hindu populous wards. In the second category are reported two wards, Begpur and Dodhpur. The former is Hindu and the latter being Muslim populous ward. Wards of low and medium income levels are more evenly distributed in all categories throughout the city whereas wards with very low, high and very high income levels are distributed more unevenly. This situation has created pockets of poverty as well as prosperity.

6.2.5 Monthly Savings in Aligarh City

To ascertain the geographical dimension of the savings scenario two variables are selected: Average monthly savings, and the percentage of households which can afford the savings. The range of average monthly savings is grouped into very high, high, medium, low and very low categories, with saving values of Rs. 4,000-5,000, Rs. 3,000-4,000, Rs. 2,000-3,000, Rs. 1,000-2,000 and below Rs. 1,000 per month respectively. This is very important variable to estimate the sustainability levels of the inhabitants. Wards lying in the very high savings category are Krishnapuri, Janak puri and Awas Vikas Colony. All these three wards are Hindu populous wards. In the second category are seven wards. They are Naurangabad, Kishore Nagar, Zameerabad and Manik Chowk. These are also Hindu populous
Fig 6.11

Source: Based on primary data generated through household survey at ward level.
PERCENTAGE HOUSEHOLD AFFORD SAVING
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

INDEX PERCENTAGE
88 - 100
76 - 88
64 - 76
52 - 64
40 - 52

Fig. 6.12
wards. In the medium, low and very low categories are found nine, fourteen and twenty seven wards. Of the ten wards of very high and high categories nine are Hindu dominated, except one Muslim dominated Dodhpur ward. A sizeable population in these wards affords very high and high savings. The high saving Hindu wards are characterized by business employment as well as middle-class salaried families. These are mostly very high and high income group wards with more structured and defined ways of saving (Fig. 6.11). The very high savings constitute at least 25 per cent of the monthly incomes. There has been noted a general positive association between high income, high actual saving and higher percentage of savings of the total income. However, Begpur and Dodhpur wards do not comply to this observation because the greater percentage of expenditure on education reduces the apparent saving.

According to data collected, the daily wage earners report to save Rs. 100-200 in a month. Wards with less than Rs. 2,000 per month saving have reported it to be less than 20 per cent of their total income. Those wards with more than Rs. 2,000 per month saving report to save 20-40 per cent of their monthly income.

For getting ideas about percentage households in a ward which may afford the savings, five categories of very high, high, medium, low and very low levels have been formed with a range of 88-100 per cent, 76-88 per cent, 64-76 per cent, 52-64 per cent and 40-52 per cent incidence of households in respective categories. Data reveals that twenty six wards have reported a very high percentage of households able to make savings. In the high and medium categories are found twelve and thirteen wards respectively. In the low and very low categories are found four wards each. Nagla Mehtab, Sarai Kaba, Saneechari Penth and Sarai Nawab are in low category. In the very low category are found Nagla Masani, Naunan Gate, Shivpuri, and ADA colony. Out of the eight wards of these two categories, five wards are Muslim dominated (Fig. 6.12).

6.3 Housing Condition and Dwelling Space in Aligarh City

Housing is a major aspect of social well-being and it is said to be a reflection of a family’s status. The insulation of human living conditions from the nature has become an affair of socio-economic and ecological empowerment. The quality and
material superiority of housing is a symbol of economic and social status in any period of time. The creation of localities of compatible residential status is a response to individual's desire of self-placement within his view of society. Basically this process is governed by the motive of getting maximum residential satisfaction. In fact, the three factors, independence, privacy and control are the most basic determinant of the residents' satisfaction. Further, symbolic importance of living space depending upon the design is equally important (Jones & Eyles, 1966).

The impact of the housing environment on the socio-psycho and emotional status of the inmates is very strong. The major aspect of the housing condition which affects the individual's life and social relationship is the degree of crowding and congestion which may lead to irritation, inter-personal tension, stress, frustration etc. (Sanoff, 1987; Knox, 1982). Contrary to good quality housing is that which provides sufficient space, easy access to services and friends and with very few personal hazards (Blue, 1996).

The physical structure, the size of the house, number of rooms, availability of open space all have a very strong impact on the individual's social and personal well-being (Swaminathan, 1993). Thus taking all these factors into account it is assumed that the size of the housing set-up is a very important factor in determining the well-being of the residents. It is observed that in spite of a decent income level if housing condition is not up to an accepted level of living, a family's well-being is greatly impaired.

### 6.3.1 Variation in Housing Size in Aligarh City

Housing size broadly determines structural requirements of a good residential environment which may determine number of rooms, their size, open space etc. thus directly affecting quality of life in terms of space availability for

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personal growth and inter-personal relationship of the inmates. It also determines a household's socio-economic status, background and prestige. For the purpose of the present study, the size of the houses in Aligarh city has been divided into three categories taking in the realistic account of the housing condition and economic status of different sections of the people of Aligarh city. These categories are housing structure with less than 100 sq. yards, 100-300 sq. yards and more than 300 sq. Only first category has been taken as a negative indicator.

Table 6.9

Classification of Housing Size in Aligarh City

<table>
<thead>
<tr>
<th>Category</th>
<th>&lt;100 sq. yards housing</th>
<th>100-300 sq. yards housing</th>
<th>&gt;300 sq. yards housing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of wards</td>
<td>Percentage of total population affected</td>
<td>No. of wards</td>
</tr>
<tr>
<td>Very High</td>
<td>11</td>
<td>18.72</td>
<td>8</td>
</tr>
<tr>
<td>High</td>
<td>12</td>
<td>20.75</td>
<td>11</td>
</tr>
<tr>
<td>Medium</td>
<td>11</td>
<td>16.65</td>
<td>12</td>
</tr>
<tr>
<td>Low</td>
<td>13</td>
<td>21.32</td>
<td>16</td>
</tr>
<tr>
<td>Very Low</td>
<td>13</td>
<td>22.56</td>
<td>13</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

Table 6.9 reveals that the number of wards in all the five categories of less than 100 sq. yards housing size is almost equally distributed. Incidence of wards with 100-300 sq. yards houses are proportionally less in the very high and high categories, whereas only seven wards out of sixty wards are reported to belong in the very high and high categories with more than 300- sq. yards housing structure.

6.3.2 Distribution of Small-Size Housing

To elaborate, the distribution of small size of housing wards has been divided into five categories belonging to very high, high, medium, low and very low with 80-100 per cent, 60-80 per cent, 40-60 per cent, 20-40 per cent and 0-20 per cent houses of less than 100 sq. yards in respective categories. In the very high percentage of small housing category lie eleven wards representing 18.72 per cent of the total population. In the high category are twelve wards affecting 20.75 per cent of the
PERCENTAGE SMALL-SIZE HOUSING
ALIGARH CITY
2003

INDEX < 100 SQ YARD

80 - 100
60 - 80
40 - 60
20 - 40
0 - 20

Source: Based on primary data generated through household survey at ward level.

Fig. 6.13
population. In the medium, low and very low categories are found eleven, thirteen and thirteen wards respectively.

Fig. 6.13 presents the spatial distribution of very small size of housing in Aligarh. Wards having very high concentration of small houses are located in the old city. Next, high category wards are found mostly adjacent to these very high category wards. They are found in the western half of the city. The south-western zone of the city emerges with the worst housing condition. These are generally Muslim dominated wards belonging to the lowest average monthly income and lowest per capita monthly income. Out of eleven wards having very high percentage of very small size of housing nine of them have reported less than Rs. 3,000 average monthly income. Out of these eleven wards eight wards are Muslim dominated. Thus the most apparent generalization which can be made about this situation is that Muslims who constitute the poorest of the poor in Aligarh city inhabit the most congested and degraded housing environment in the south-western part of the city. This substantiates the claims of the previous studies about the lower well-being status of marginalized social groups.\(^\text{10}\)

Housing structure, generally of 50-75 sq. yards, is most typical of the labourer households. Seventeen wards reporting more than 40 per cent of their total household as daily wage earners have also reported to have more than 60 per cent of housing smaller than 100 sq. yards. Thus the nature of employment which determines the income level ultimately determines the housing size as well.

### 6.3.3 Distribution of Medium Size Housing

The data collected for this indicator has been divided into five categories of very high, high, medium, low and very low, having 80-100 per cent, 60-80 per cent, 40-60 per cent, 20-40 per cent and 0-20 per cent houses of medium size in each category respectively. Out of nineteen wards reporting more than 60 per cent of their houses between 100-300 sq. yards area, twelve wards have reported very high and high level of business and non-gazetted employment and a few gazetted employment

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DISTRIBUTION OF MEDIUM SIZE HOUSING
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig 6.14
PERCENTAGE LARGE-SIZE HOUSING
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 6.15
Table 6.5
Occupational Structure of Aligarh City

<table>
<thead>
<tr>
<th>Category</th>
<th>Daily wages</th>
<th>Business And Industrial</th>
<th>Gazetted</th>
<th>Non Gazetted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of wards</td>
<td>%age of pop.</td>
<td>%age area</td>
<td>No. of wards</td>
</tr>
<tr>
<td>Very High</td>
<td>1</td>
<td>1.4</td>
<td>0.29</td>
<td>3</td>
</tr>
<tr>
<td>High</td>
<td>6</td>
<td>9.18</td>
<td>6.63</td>
<td>1</td>
</tr>
<tr>
<td>Medium</td>
<td>10</td>
<td>18.29</td>
<td>16.65</td>
<td>13</td>
</tr>
<tr>
<td>Low</td>
<td>10</td>
<td>14.92</td>
<td>14.94</td>
<td>10</td>
</tr>
<tr>
<td>Very Low</td>
<td>53</td>
<td>56.21</td>
<td>61.49</td>
<td>33</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.

Table 6.5 gives an account of occupational structure of Aligarh city under broad categories of daily wage, business and industrial employment, gazetted and non-gazetted employments. It reveals proportional distributional of population and area of city under the five categories of very high to very low for all four types of employment. Less than 30 per cent of the city population and city area have very high degree of desirable employment. In the case of daily wages around 25 per cent of the city population and area as well have reported this undesirable employment. In the very low category of gazetted and non-gazetted and business employment are found more than 50 per cent of the city population and one-third of the city area. For daily wages employment and equivalent economic activities, 55 per cent of city population and two-thirds of the city area are affected. It makes clear that the occupational structure of the city is lopsided in favour of an undesirable kind of employment which needs more hours of work and physical energy with less remuneration, job security and growth and development of the families concerned.

6.2 Distribution of Income Levels in Aligarh City

The income scenario of different wards of Aligarh city has been discussed by breaking up the monthly household income into very low, low, medium, high and very high categories representing income less than Rs. 3,000 per month, Rs.3,000-5,000, Rs. 5,000-10,000, Rs. 10,000-20,000 and more than Rs. 20,000 per month.
Source: Based on primary data generated through household survey at ward level.

Fig. 6.16
are found three wards with only 50-60 per cent of their houses having open space. They are Nagla Mehtab, Bara Dwari and Lekhrajnagar (Fig. 6.16).

6.4 Health and Well-being Situation in Aligarh City

The World Health Organization has defined health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Thus ‘health is a state of well-being and indicates that health is not an activity… rather it is the outcome of all activities which make up the lives of individuals, households, communities and cities’ (WHO, 1993, p.3). ‘Physical, economic, social and cultural aspects of city life all have an important influence on health. They exert their effect through such process as population movement, industrialization and changes in the architectural and physical environment and in social organization. Health is also affected in particular cities, by climate, terrain population density, housing stock, the nature of the economic activity, income distribution, transport systems and opportunity for leisure and recreation’ (WHO, 1993, pp. 10-11).

Aspects of the built up environment are also significantly related to disease and its transmission. The higher is the population density in an area the greater is the probability of contact with a person carrying an infectious or contagious disease. So that many urban localities notably those where sanitary standards are low are very prone to epidemics. Health is a biological state of being as a response to the prevailing ecological condition. It is a result of the harmonious and positive functioning of different organs and parts of the body under the balanced control of the brain. Hence human health is basically divided into two broad categories, mental and physical health. Here only physical health condition of household members is being discussed.

6.4.1 Physical Health Condition in Aligarh

Health disorders having manifestation in terms of physical infirmities have been taken into consideration in this category. Two indicators have been selected to assess physical health status of different wards (i) sickness in children below five

HOUSEHOLDS REPORTING INFANT SICKNESS
ALIGARH CITY
2003

Fig 6.17
years of age (ii) sickness in other member of the household above five years of age. The second category includes diabetes, dysentery, diarrhoea, T.B., breathlessness, body ache, cancer etc. among respondents at the time of the survey.

6.4.2 Health Status of Infants in Aligarh

The health problem among children involves the general cough and fever problem to more serious infirmities like polio, measles, etc. Data generated for this purpose is classified into five categories, very high, high, medium, low and very low with a range of 80-100 per cent, 60-80 per cent, 40-60 per cent, 20-40 per cent, and 0-20 per cent household reporting infants and childhood sickness.

Table-6.10

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of wards</th>
<th>Percentage area</th>
<th>Household Affected (No.)</th>
<th>Percentage of total population</th>
<th>Ward No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>3</td>
<td>6.92</td>
<td>6,950</td>
<td>5.13</td>
<td>9,22,50</td>
</tr>
<tr>
<td>High</td>
<td>5</td>
<td>2.63</td>
<td>6,557</td>
<td>8.96</td>
<td>2,3,19,25,26</td>
</tr>
<tr>
<td>Medium</td>
<td>13</td>
<td>20.51</td>
<td>22,830</td>
<td>21.89</td>
<td>4,8,10,18,28,30,31,35,36,37,42,47,59</td>
</tr>
<tr>
<td>Low</td>
<td>16</td>
<td>27.71</td>
<td>24,154</td>
<td>26.85</td>
<td>6,12,15,17,20,21,24,27,33,43,45,51,52,55,57,57</td>
</tr>
<tr>
<td>Very Low</td>
<td>23</td>
<td>42.33</td>
<td>41,513</td>
<td>37.07</td>
<td>1,5,7,11,13,14,16,23,29,32,34,38,39,40,41,44,46,48,49,53,54,55,56</td>
</tr>
</tbody>
</table>

*Based on data generated through household survey by the researcher in 2003.*

Table 6.10 shows that twenty three wards representing 42.33 per cent of the total area and constituting 37.07 per cent of the total population lie in the very low sickness category. Fourteen of these are Hindu wards and few of them are high-income Muslim wards. Contrary to it out of eight wards reporting more than 60 per cent of household with children suffering from sickness six of them are Muslim dominated. These wards are Usman Para, Delhi Gate, Zameerabad, Kala Mahal, Saneechari Penth, Kishore Nagar, Begum Bagh and RasalGanj (Fig. 6.17).
This does not mean that Muslims are less health conscious. There is another explanation for it. Five Muslim wards out of twenty three which have reported very low childhood sickness belong to high-income group. The situation of low health condition among Muslims may be interpreted in terms of the levels of income, nutrition, sanitation and municipal condition of the locality. Most of the children are found to suffer from the cold, cough, fever, dysentery, small pox etc. Except Kishore Nagar all the wards with very high level of child sickness reported less than Rs.8,500 average monthly income. Thirteen and sixteen wards respectively are found with moderate and low incidence of childhood sickness involving half of the city population.

6.4.3 Health Condition of Other Family Members in Aligarh

This data is also divided into five categories of very high, high, medium, low and very low incidence of sickness among other household members. The wards are grouped into five categories according to the percentage of household with specified sickness in any of its members above 5 years of age. The corresponding values of 80-100 per cent, 60-80 per cent, 40-60 per cent, 20-40 per cent and 0-20 per cent of households with sickness, are placed for each category respectively.

Table-6.11

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of wards</th>
<th>Percentage area</th>
<th>Household Affected (No.)</th>
<th>Percentage of total population</th>
<th>Ward No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>14</td>
<td>16.84</td>
<td>24,670</td>
<td>24.28</td>
<td>1,3,8,10,16,17,21,32,34,35,37,43,47,50</td>
</tr>
<tr>
<td>High</td>
<td>26</td>
<td>41.01</td>
<td>41,864</td>
<td>42.81</td>
<td>2,4,9,15,18,19,20,24,26,30,31,33,36,39,41,42,45,46,48,49,51,52,53,55,55,59</td>
</tr>
<tr>
<td>Medium</td>
<td>12</td>
<td>24.83</td>
<td>19,077</td>
<td>20.01</td>
<td>5,6,12,23,25,27,28,38,40,44,56,57</td>
</tr>
<tr>
<td>Low</td>
<td>4</td>
<td>5.65</td>
<td>6,859</td>
<td>6.28</td>
<td>11,13,58,60</td>
</tr>
<tr>
<td>Very Low</td>
<td>4</td>
<td>11.07</td>
<td>9,534</td>
<td>6.54</td>
<td>7,14,22,29</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.
Table 6.11 shows that four wards, namely Naurangabad, Zameerabad, Begum Bagh and Nagla Pala belong to the category of very low incidence of sickness with 11.07 per cent area, 9,534 households constituting 6.54 per cent of the total population. To the low category of sickness belong Krishnapuri, Durgapuri, Manik Chowk and Awas Vikas Colony with 6,859 households affecting 6.20 per cent population and constituting 5.65 per cent of the total city area. It is very clear from the Table above that twelve wards have reported 40-60 per cent of their households with sick family members and twenty six wards have reported 60.80 per cent of their households with at least one sick family member. They involve 41,864 households affecting 42.81 per cent population. Out of twenty six wards belonging to high sickness level nine wards are Hindu dominated whereas twelve of these wards are Muslim. Rest five wards are of mixed population. In the very high sickness category (fourteen wards) almost half of them are Hindu dominated. They involved 24,670 households affecting 24.28 per cent population. On the whole disease, sickness and infirmity is found among all the socio-economic groups with a slight religious bias against the Muslims (Fig. 6.18).

6.5 Leisure and Recreational Availability in Aligarh

Leisure means the availability of time to relax from the work strain and relieve from the mental and physical fatigue during the day. The term encompasses activities in which individuals may indulge of their own free-will either to rest, amuse themselves, to add to their knowledge and improve their skills (Walmsley & Lewis, 1995, p. 201). Leisure and pleasure are not, of course, synonymous (Patmore, 1973) but of course there is an inclination to use the term positively. Leisure relates to time, activities (in this context it becomes recreation) and finally as a mental attitude.


Source: Based on primary data generated through household survey at ward level.

Fig 6.18
To get a realistic account of leisure and recreational activities in Aligarh, three indicators are selected. These are (i) leisure and recreational hours available to wife, (ii) leisure and recreational hours available to husband, (iii) number of households with electronic recreational facilities. Leisure means the time available to the respective heads of the households to be spent on their own as well as according to their own preferences, with complete liberty. Of course, the prescribed day time sleep for good human health is not included in the definition of leisure. Women have reported a wide range of leisure time activity viz. preference to physical and mental relaxation through idle rest, knitting, embroidering, television watching, book reading, gossiping etc. men usually relax through newspaper reading, television watching or socialization as revealed through the survey.

There are several leisure availability categories for the females. In the very low income households, the household maintenance and educational avenues are almost non-existent. Hence, the female have more leisure availability. On the other hand in the medium and high income households women are pressed with many responsibilities of child% education, their upkeep and household maintenance etc. Therefore, the female leisure availability is less vis-à-vis male leisure availability in the high income group.

**Table 6.12**

<table>
<thead>
<tr>
<th>Category</th>
<th>Adult female</th>
<th>Adult male</th>
<th>Household with electronic media</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Leisure time (in min.)</td>
<td>No. of wards</td>
<td>Leisure time (in min.)</td>
</tr>
<tr>
<td>Very High</td>
<td>120-145</td>
<td>5</td>
<td>95-115</td>
</tr>
<tr>
<td>High</td>
<td>95-120</td>
<td>15</td>
<td>75-95</td>
</tr>
<tr>
<td>Medium</td>
<td>70-95</td>
<td>18</td>
<td>55-75</td>
</tr>
<tr>
<td>Low</td>
<td>45-70</td>
<td>20</td>
<td>35-55</td>
</tr>
<tr>
<td>Very low</td>
<td>20-45</td>
<td>2</td>
<td>15-35</td>
</tr>
</tbody>
</table>

*Based on data generated through household survey by the researcher in 2003.*
PERCENTAGE MALE LEISURE AVAILABILITY
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Index Percentage
60 - 75
45 - 60
30 - 45
15 - 30
0 - 15

Fig. 6.19
PERCENTAGE FEMALE LEISURE AVAILABILITY
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 6.20
Source: Based on primary data generated through household survey at ward level.
Table 6.12 reveals that twenty wards belong to very high and high categories of leisure availability report more than 60 per cent of female heads of the households enjoying leisure time ranging two hours to two and half hours per day. The equivalent categories for males show that twenty eight wards report more than 60 per cent of male heads of the households enjoying leisure time between one and half hour to two hours per day. The adult female leisure availability time ranges from 20 to 145 minutes per day. Adult male leisure availability ranges from 15-115 minutes per day. Both are divided into very high, medium, low and very low categories. The above Table shows that eighteen wards are found in the medium category of adult female leisure availability, ranging one and quarter hour to one and half hour per day (Fig. 6.20). Twenty wards lie in medium category of adult male leisure availability i.e. between one hour to one and quarter hour per day (Fig. 6.19). Thus adult females in Aligarh city have more leisure availability than their male counterparts. Forty eight wards have reported to lie in very high and high category with more than 70 per cent households reporting one or another kind of electronic media of entertainment facilities. On the whole six wards have reported to have less than 30 per cent of their households with electronic recreational facilities (Fig. 6.21).

6.6 Political Well-being and Female Empowerment

For the purpose of measuring this aspect of well-being five indicators are selected. These indicators reflect the actual condition of the civil empowerment vis-a-vis bias in administrative performance in the fulfillment of the civic necessities of the relevant urban social groups. Gender empowerment is also a very potent factor in the distributive justice of the power within informal social set-up. This reflects upon the wider social system and the quality of life of the population. Each of these has been dealt with in the following paragraphs.

6.6.1 Complaint of Municipal Apathy

To assess the malfunctioning of municipality the households were questioned about its performance in their own localities. Except two wards, namely, Brahmanpuri (Ward No. 45) and Khaidora (Ward No. 55), all wards with more than 75 per cent of the total household heads considered it
PERCENTAGE MUNICIPAL NEGLECT COMPLAINTS
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 6.22
HOUSEHOLDS REPORTING COMMUNAL BIAS IN RESOURCE ALLOCATION IN ALIGARH

2003

Source: Based on primary data generated through household survey at ward level.

Fig 6.23
towards their localities. The data generated to assess this situation is categorized into five groups of very high, high, medium, low and very low incidence of households with municipal complaints. In each group, wards with 80-100 per cent, 60-80 per cent, 40-60 per cent, 20-40 per cent, and 0-20 per cent households with municipal complaints are given a place respectively.

In the worst category are eight wards with maximum complaint. They are Sarai Bala, Naurangabad, Nagla Mahtab, Durgapuri, Zameerabad, Nagla Pala, Jwalapuri and Awas Vikas Colony. Interestingly most of them are peripheral, newly developed residential areas (Fig. 6.22). Brahmanpuri and Khaidora have less than 20 per cent of their households with any complaint against municipal functioning i.e. having lowest complaint rate. In fact, the respondents of several low complaint rate wards have generally lower perceptions of municipal rights and cleanliness. As a result of this, despite poor sanitation and municipal conditions, the residents did not have any consequential complaints. In the low category are found thirteen wards. They are not spatially contiguous. Few of them are in the old city but most of them are peripheral in the east and southern part of the city. In the high category of complaints are found ten wards. They are Jaiganj, Sarai Kaba, Kanwari Ganj, Begum Bagh, Bhujpura, Naunan Gate, Jamalpur, Shivpuri, Dorinagar and Rasal Ganj.

### 6.6.2 Communal Bias in Municipal Resource Allocation

To assess the level of satisfaction among different religious communities, regarding attitude of municipality in the resource allocation within the city, this particular indicator is being selected. It helps in having a realistic account of the perceptions of the residents about the degree of fairness in resource allocation and their actual needs of the communities being satisfied. According to the percentage of households in each ward reporting dissatisfaction with resource allocation, five categories are formed. They are very high, high, medium, low and very low with 68-85 per cent, 51-68 per cent, 34-51 per cent, 17-34 per cent, and 0-17 per cent, of households respectively lying in each category. In only three wards; Shahjamal, Sarai Kaba and Asak Ali, all of which are minority populous wards, the residents have reported very high level of dissatisfaction regarding municipal resource allocation. They are located in the south-western peripheral part of the city, with worst municipal environment and belonging to lowest economic strata. In the high
category of municipal neglect and dissatisfaction are lying eight wards. They are Sarai Pathan, Sarai Bala, Bhujpura, Naunan Gate, Jamalpur, Zohrabagh, Dodhpur and Sarai Behram Beg. Six of these are Muslim populous wards (Fig. 6.23). In the medium category belong nine wards. They are Usman Para, Delhi Gate, Saneechari Penth, Hamdardnagar, Badamnagar, Jeevangarh, Baniapara and Khaidora. All of these are minority populous wards. Most of them are in the old city and northern peripheral part of the city. In the low and very low municipal neglect categories are predominantly found Hindu populous wards.

6.6.3 Freedom of Women for Economic Pursuits

With increasing level of education, awareness of rights and growing technology, women are increasingly coming out of their home for economic pursuits. The feeling on the part of women to undertake economic activities with dignity, gives a sense of empowerment to them. Keeping these points in view, women respondents have been directly approached. In some cases, their male counterparts also gave account of the freedom of their women for the job. The data collected is divided into five categories of very high, high, medium, low and very low depending upon the percentage households reporting it in different wards. Each category has a corresponding value of 80-100 per cent, 60-80 per cent, 40-60 per cent, 20-40 per cent, and 0-20 per cent, of households respectively reporting economic freedom of females.

A whopping twenty eight wards have reported 80-100 per cent households with women enjoying freedom for paid work. Sixteen of them are Hindu wards and nine of them are Muslim wards. In the high category belong twelve wards, four of them are Hindu wards and five of them are Muslim wards. In the low category are five wards. They are Nagla Mehtab, Shahjamal, Sarai Kaba, Shivpuri and Asak Ali. Except the first all are Muslim wards lying in the south-western part of the city. In the very low category are found only four wards. They are Sarai Deen Dayal, Nagla Masani, Naunan Gate and Saneechari Penth. Two are Hindu and two are Muslim wards. They are extremely poor wards lying in the old city (Fig. 6.24).
REPORTED FEMALE FREEDOM TO EMPLOYMENT
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig. 6.24
6.6.4 Freedom of Women to Travel Alone

An increasing female participation in education and economic activities has seen unprecedented female spatial movement. Thus freedom to travel alone beyond the city of residence in most of the cases is considered as female empowerment. It shows that females have made a niche in the male bastion of independent spatial mobility. The society and government is more or less making arrangements to facilitate female spatial mobility and ushering an era of female empowerment.

The data collected ward-wise for this purpose is divided into five categories; very high, high, medium, low and very low with a corresponding value of 80-100, 60-80, 40-60, 20-40 and 0-20 per cent of households in each category respectively. In the top category of female mobility are found only six wards. They are Naurangabad, Zameerabad, Nagla Pala, Begpur, Janakpuri and Awas Vikas Colony. All of them are Hindu dominated. In the high category of mobility are only three wards, Zohrabagh, Dodhpur and Manik Chowk. The first two are Muslim wards. In the medium, low and very low categories are sixteen, eighteen and seventeen wards respectively. It means fifty one wards have reported less than 60 per cent of their households are in position to allow their women to travel alone. The rest of nine wards of high female mobility are mostly found in the Civil Lines and southern parts of the city. Hindu wards have reported comparatively more female mobility than Muslim wards. The high income and educational status Muslim wards have reported more female spatial mobility. Religious factors and related cultural norms are responsible for lesser female spatial mobility among Muslims, generally being diluted due to their educational and economic needs.

The discussion of this chapter very clearly exposes imbalanced economic and employment structure of the city. The indices of well-being vary largely for different wards of the city. Thus the city has few pockets of privileges especially the
Civil Line and area surrounding the University, whereas the older part and fringe wards in south-west are having low socio-economic indices of well-being. The difference is also traceable community wise. Hindu wards are having better socio-economic indices than Muslim wards as a whole. The findings substantiate the hypothesis that the Hindu wards are having a higher level of social well-being than Muslim wards in Aligarh city. Thus, the performance of social structure of the city is not according to the principle of distributive and social justice.
Chapter-7

SOCIAL JUSTICE AND WELL-BEING IN ALIGARH

- Demographic and Familial Well-being
- Educational Levels and Well-being
- Employment Situation in Aligarh
- Economic Well-being in Aligarh
- Housing Condition in Aligarh
- Health Condition in Aligarh
- Recreation and Leisure Availability
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- Quality of Built-up Environment in Aligarh
- Overall Social Well-being in Aligarh
- Distributive Justice and Well-being in Aligarh
- Social Structure and Socio-Spatial Justice in Aligarh
- Method of Analysis
- Socio-familial Structural Inequalities
- Educational Inequalities in Aligarh
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Chapter – 7

SOCIAL JUSTICE AND WELL-BEING IN ALIGARH

Developing an index for measuring social well-being has always been a fascinating aspect of social enquiry. The aggregate of what is ‘good’ and what is ‘bad’ of a society and which spatial units have the most and least of them is of great interest in the enquiry of social geography. Assigning the quantified values to different spatial units i.e. municipal wards of Aligarh city on the basis of the scores they get by rank score method is meant for ascertaining the spatial dimension of well-being. The obtained maps of inequalities would go a long way in suggesting and implementing the measures of a just social development and planning.

Underlying principle behind this work is that people care not only about difference between them and others but between others as well, which determines the level of fairness perception. Fairness is inversely related with the average of difference in social goods.¹

Nine different aspects of well-being for which composite rank scores are calculated for this study are demographic and family structure, educational levels, employment rates, income slabs, health care, housing conditions, recreational availability, political and gender empowerment and the built-up environment in Aligarh city. All these indices have been plotted and interpreted separately with respect to their spatial distribution in Aligarh city. Finally, a composite index of well-being has been developed for Aligarh city which helps in assessing the aggregate of ‘goods’ and ‘bads’ in different parts of the city. Such a composite index of distributive social justice has helped to ascertain the spatial dimension of well-being.

7.1.1 Demographic and Familial Well-being

The index of demographic and familial well-being for each ward has been developed by aggregating score values of five indicators selected for this purpose. These five indicators are average size of household, average size of family,

DEMOGRAPHIC AND FAMILIAL WELL-BEING
ALIGARH CITY
2003

Fig 7.1

Source: Based on primary data generated through household survey at ward level.
Fig 7.2

Source: Based on primary data generated through household survey at ward level.
percentage incidence of joint family and percentage average employment. The first three
are negative indicators. The index value of demographic structure and family well-
being for all the sixty wards has been categorized into five groups. These are very
high, high, medium, low and very low levels with corresponding values of -1 to -3,
-3 to -5, -5 to -7, -7 to -9 and -9 to -11. The minus value indicates that the
negative value of the index for a ward greater is its well-being. Because every
individual negative indicator is given a value of -5 to -1 according to its decreasing
incidence. An overall negative index value has been obtained for demographic
structure. Data reveals that eight wards constituting 20.27 per cent of area of the city
representing 12 percent of the population lie in the very high demographic well-
being category. These are Krishnapuri, Nagla Kalari, Nagla Pala, Ghanshyampuri,
Begpur, Zohra Bagh, Janakpuri and Avas Vikas Colony. Most of them are lying in
the Civil Lines, in the eastern and southern part of the city (Fig. 7.1). Twenty two
wards belong to high category of demographic well-being. Wards of medium
category well-being numbering eighteen are adjacent to the wards of low category. Eleven wards lie in the low category. Most of them are located in the
old city. They constitute 14.47 per cent of the total area of the city affecting 15
percent of the population, whereas Saneecheri Penth is found in the very low
category of demographic well-being.

7.1.2 Educational Levels and Well-being

The aggregate of scores of wards has been divided into five categories of
very high, high, medium, low and very low educational status with corresponding
values of 35-28, 28-21, 21-14, 14-7 and 7-0. The aggregate of the rank score value
of eight indicators has been taken into consideration (Appendix II). As many as
fifteen wards have very high educational status in Aligarh. Except two wards,
namely Zameerabad and Shivpuri, all of them belong to the Civil Lines and the
southern part of the city (Fig. 7.2). They comprise 20.27 per cent area and 12 per cent
of the population of the city. In the high category are found eighteen wards which lie
adjacent to the wards of very high category. As many as seventeen wards belong to
medium category. Further seven wards, Usman Para, Shahjamal, Sarai Kaba,
Begum bagh, Saneechari Penth, Bhujpura and Jeevangarh, have reported low level of
educational well-being. Only three wards, namely Nagla Mahtab, Nagla Masani and
Naunan Gate, have reported very low educational well-being. The last two categories
represent 19.4 per cent of the city area and 17 per cent of the population.
OVERALL STATUS OF EMPLOYMENT
ALIGARH CITY
2003

Fig 7.3

Source: Based on primary data generated through household survey at ward level.
7.1.3 Employment Situation in Aligarh

The scores obtained for all the wards range between 10 to -5 and have been grouped into five categories. These are very high, high, medium, low and very low with corresponding value of 10-7, 7-4, 4-1, 1-(−2) and −2-(-5). Four indicators are selected for this purpose.

Fig. 7.3 shows that five wards belong to very high category representing 13.35 per cent of area and 7.92 per cent of the population. They are Krishnapuri, Zameerabad, Nagla Pala, Zohrabagh and the University Area. They are scattered in the different quarters of the city. In the high category are found eighteen wards. Most of them belong to the Civil Lines area and the southern part of the city. A total number of eleven wards belong to the medium employment status category. As many as sixteen wards belonging to low category are found adjacent to the wards of very low category, in the south-western part of the city. Ten wards are found with very low employment status. They are Usman Para, Delhi Gate, Sarai Rahman, Nagla Masani, Sarai Kaba, Naunar Gate, Saneecheri Penth, Shivpuri and Bania Para, belonging to the old city.

7.1.4 Economic Well-being in Aligarh

To capture the reality of economic well-being in Aligarh city eleven indicators are selected (Appendix II). Score values obtained have been categorized into five groups; very high, high, medium, low and very low. The corresponding values are 24-16, 16-9, 9-1, 1-(−7) and −7-(-15). To very high category belong eight wards constituting 23.59 per cent of the city area and representing 13.13 per cent of the total population. These wards are Krishnapuri, Zameerabad, Nagla Pala, Begpur, Zohrabagh, Dodhpur, Janakpuri and Avas Vikas Colony. In the high category lie six wards. They are Naurangabad, Kishore Nagar, Ghanshyampuri, Badamnagar, University Ward and Manik Chowk. They constitute 9.41 per cent of the city area and involve 9.3 per cent of the total population. As many as seventeen wards are found in the medium category of economic well-being. A number of sixteen wards are found in the low category representing 9.61 per cent area and 23.9 per cent of the population. Thirteen wards are reported in the very low category. These wards occupy 23.28 per cent of the total city area and affect 22.19 per cent of the total
OVERALL ECONOMIC SUSTAINABILITY
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig 7.4
STATUS OF HOUSING CONDITION
ALIGARH CITY
2003

INDEX
-1 - -1
-1 - 2
2 - 5
5 - 8
8 - 11

PERCENTAGE

Source: Based on primary data generated through household survey at ward level.

Fig 7.5
population. Fig. 7.4 shows that wards of very high and high economic well-being are generally situated in the Civil Lines area, whereas wards of low and very low economic status are generally found in the old city and at its periphery.

7.1.5 Housing Condition in Aligarh City

Rank score value for this aspect of well-being has been categorized into five groups, such as, very high, high, medium, low and very low, having corresponding values of 11-8, 8-5, 5-2, 2-(-1) and (-4)-(-1). A total number of eight wards belong to the very high category of housing well-being. They are Kishore Nagar, Zameerabad, Begpur, Zohrabagh, Dodhpur, Janakpuri, Saheb Bagh and Avas Vikas Colony. They constitute 23.73 per cent of the total area of the city and affect 13.22 per cent of the population. In the high category, twelve wards are found ten wards. These two categories wards are mostly found in the Civil Lines and the southern parts of the city. As many as twenty five wards of the city belong to medium category. In the low category housing condition, are found fourteen wards mostly lying in the old city area. Three wards, Nagla Mahtab, Gambhirpura and Shivpuri have reported worst housing condition. Four indicators, such as, percentage housing of <100 sq.yards, percentage housing of 200-300 sq.yards, percentage housing of >300 sq.yards and percentage housing with open space, have been selected to assess the overall housing condition (Fig. 7.5).

7.1.6 Health Condition in Aligarh City

Human health in India continues to be adversely affected by a wide variety of environmental factors ranging from air quality, water pollution, poverty, poor housing and climatic changes which contribute significantly to all types of health hazards. 700 million people have no access to elementary sanitation (Gupta, 2005, p. 295). The health condition of the wards is divided into five categories such as very high, high, medium, low and very low, depending upon their scores. The score value for each category is 20-17, 17-14, 14-11, 11-8 and 8-5 respectively. Data reveals that six wards lie in the very high category. They are Naurangabad, Krishnapuri, Durgapuri, Zameerabad, Nagla Pala and Avas Vikas Colony. They constitute 12.72 per cent of the city area and affect 12 per cent of population. Except Zameerabad

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OVERALL HEALTH CONDITION
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig 7.6
RECREATION AND LEISURE AVAILABILITY
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig 7.7
belong to the southern part of the city. In the high category are reported sixteen wards. Most of them are located in the Civil Lines and at the outer boundary of the old city. As many as twenty wards lie in the medium category. In the low category are reported sixteen wards, most of them belong to the old city (Fig. 7.6). In the very low category are found only two wards, Shahjamal and Rasalgarh, representing 1.72 per cent of area and 3.23 percent of population. Four indicators, namely, percentage of children below 5 years of age reporting sickness, percentage adults with sickness, mental health and old age activity, are taken into consideration.

7.1.7 Recreation and Leisure Availability

The overall rank scores for recreation and leisure of different wards have been grouped into very high, high, medium, low and very low level categories. The corresponding values of each category are 24-20, 20-16, 16-12, 12-8 and 8-4. Data reveals that only four wards lie in the very high category of recreational and leisure availability. They are Durgapuri, Zameerabad, Jwalapuri and Zohra Bagh. They comprise 8.9 per cent of the total area and affect 6.58 per cent of the population. In the high category lie thirteen wards. Most of these wards are located in the Civil Lines area (Fig. 7.7). As many as twenty four wards report moderate leisure availability. In the low category are found fourteen wards. These wards are mostly in the south-central part of Aligarh city. Only five wards are found in the very low category of leisure availability. Five indicators, namely, female daytime sleep availability, male day time sleep availability, percentage households with electronic recreation, daily leisure/recreational hours available to female head, and daily leisure/recreational hours available to male head, have been selected to develop this index.

7.1.8 Political and Gender Empowerment

For this enquiry four indicators are selected, namely, municipal apathy, communal bias in resource allocation, women in paid work, freedom of women to travel alone. According to the range of aggregate score of every ward five categories are formed. The values assigned to each category are 8-5, 5-2, 2-(-1), (-1)-(-4) and (-4)-(-7) respectively. Twelve wards constituting 24.4 per cent area of the city and affecting 19.28 per cent of the total population are found in the very high category.
Source: Based on primary data generated through household survey at ward level.

Fig 7.8
OVERALL QUALITY OF BUILT-UP ENVIRONMENT
ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig 7.9
In the high category are found twenty two wards. The wards of these two categories are mostly found in the Civil Lines and the southern part of the city. As many as sixteen wards lie in the medium category of political and gender empowerment. In the low category are found six wards. They are Sarai Deen Dayal, Sarai Bala, Nagla Masani, Sanechari Penth, Shivpuri and Bhujpura. These wards are mostly situated in the south-west and the old city area of Aligarh. Only four wards are found to be in the very low category. They are Sarai Rahman, Shahjamal, Sarai Kaba and Naunan Gate, belonging to the old city area (Fig. 7.8).

7.1.9 Quality of Built-up Environment in Aligarh

Seven indicators have been selected to develop an index of quality of built-up environment. The score values of the wards have been grouped into five categories of very high, high, medium, low and very low levels. The corresponding score values for them are 29-25, 25-21, 21-17, 17-13 and 13-9. Fig. 7.9 makes it clear that only two wards, namely Saheb Bagh and University Ward, have very high quality of built-up environment. In the next i.e. high category, are found eight wards. They are Naurangabad, Sarai Lavaria, Firdaus Nagar, Begpur, Ashok Nagar, Dodhpur, Manik Chowk and Avas Vikas Colony. Both the categories constitute 23.41 per cent of area of the city which inhabit 16 per cent of the total population. As many as twenty wards belong to the medium category. Twenty wards are found to lie in the low category. In the very low category are found five wards. They are Shahjamal, Nagla Masani, Begum Bagh, Jamalpur and Sudamapuri. They are spatially non-contiguous. These total twenty five wards representing 36.83 per cent of the area affecting 45.56 per cent of the total population report worst quality of built-up environment.

7.1.10 Overall Social Well-being in Aligarh City

The index of overall well-being in Aligarh city has been developed by aggregating the scores of respective wards for the aforesaid nine aspects of well-being. Thus the final scores obtained for each ward are grouped into five categories of very high, high, medium low and very low levels of social well-being. These categories have corresponding values of 129-105, 105-81, 81-57, 57-33 and 33-9.
OVERALL SOCIAL WELL-BEING
IN ALIGARH CITY
2003

Source: Based on primary data generated through household survey at ward level.

Fig 7.10
The analysis of data reveals that ten wards lie in the very high category of social well-being. Out of these, seven wards are Hindu populous and only three are Muslim populous. Except Zameerabad ward all the wards are lying in the Civil Lines area and in the southern part of the city. These wards are Naurangabad, Krishnapuri, Nagla Pala, Zohrabagh, Dodhpur, Janakpuri, University Area, Manik Chowk and Avas Vikas Colony. In the high category of social well-being are found twelve wards. Most of the wards of this category also lie in the eastern half of the city which has been demarcated by the main railway line. The ratio of Muslim and Hindu wards is 1:3 in favour of the Hindus under this category (Fig. 7.10).

Table 7.1

Levels of Social Well-being in Aligarh City

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of wards</th>
<th>Percentage of area occupied</th>
<th>No. of persons affected</th>
<th>Percentage of the total population</th>
<th>Ward No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>V. High</td>
<td>10</td>
<td>27.24</td>
<td>119,884</td>
<td>17.91</td>
<td>7,11,14,29,43,49,51,57,58,60</td>
</tr>
<tr>
<td>High</td>
<td>12</td>
<td>25.10</td>
<td>132,589</td>
<td>19.81</td>
<td>9,20,28,32,34,40,41,44,46,48,52,53</td>
</tr>
<tr>
<td>Medium</td>
<td>14</td>
<td>18.35</td>
<td>138,630</td>
<td>20.71</td>
<td>5,6,13,18,27,30,31,33,36,42,45,55,56,57</td>
</tr>
<tr>
<td>Low</td>
<td>15</td>
<td>20.80</td>
<td>773,854</td>
<td>26.01</td>
<td>1,3,4,12,15,17,21,23,35,37,38,39,47,50,54</td>
</tr>
<tr>
<td>V. Low</td>
<td>9</td>
<td>8.51</td>
<td>104,130</td>
<td>15.56</td>
<td>2,8,10,16,19,22,24,25,26</td>
</tr>
</tbody>
</table>

*Based on data collected through household survey by the researcher in 2003.*

As many as fourteen wards are found in the medium category of social well-being. In the low category are found fifteen wards. These are found mostly in the old city's peripheral region, and south western part of the city. Only Jeevangarh (Ward No. 47) is lying in the eastern part of the city. In the very low category are found nine wards. They are Usman Para, Nagla Mahtab, Shah Jamal, Nagla Masani, Sarai Kaba, Begumbagh, Naunan Gate, Kala Mahal and Saneecheri Penth. The ratio of Hindu and Muslim wards is 1:3 against the Muslim wards. Except Begumbagh, (Ward no. 22), all the wards belong to the old city and the western most part of the city.
Table 7.1 shows the distribution of wards, their percentage area, aggregate population and its percentage in each category of overall social well-being. The Table highlights that in the very high category of social well-being lie ten wards. These wards occupy 27.24 per cent area of the city affecting 17.91 per cent of the population. In the high category are found twelve wards affecting one fourth of the city area and one fifth of the city population. Most of these twenty two wards lie in the Civil Lines area and the southern part of the city. Thirteen of these wards have more than 80 per cent Hindu population since as only five wards are Muslim dominated. In the medium category are found fourteen wards affecting one fifth population of the city. In the low category are reported fifteen wards affecting one-fourth of the city population and one-fifth of the city area. In the very low category of social well-being are found nine wards affecting 15.56 per cent of the population and 10.86 per cent of the city area. Out of twenty four wards of low and very low well-being eight wards are having more than 80 per cent of Muslim population. Seven wards are Hindu dominated and the rest nine wards are of mixed population having 20-80 per cent population of either religious community (Fig. 7.11).

7.2 Distributive Justice and Well-being in Aligarh City

'The term social justice is taken to embrace both fairness and equity in the distribution of a wide range of attributes, which need not be confined to material things. Although the primary focus is on attributes which have an immediate bearing on people’s well-being or the quality of their lives. Preference for the term social justice rather than justice in general explained by concern with something which happens socially among people in a society. This is taken to incorporate the economic and political dimension of life'. (Smith, 1994, p. 26).

'The inclusion of the term fairness and equity has moral overtones. In terms of spatial dimension or geography the equity means a just distribution or distributive justice very much analogous to retributive justice. Whatever attribute or a thing having relevance for people’s well-being (or ill-being) should go proportionally to all’ (Smith, 1994).

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4 Ibid.
Distributive justice "refers to the way economic and social goods and services are distributed in a society" (Longers and Scanlon, 2001, p. 448). The idea of a just distribution is, however, embodied in three criteria: need, contribution to the common good and merit. Need is considered a relative concept but still measurable at a certain level. Contribution to the common good is taken to mean development of a spatial organization and pattern of territorial resource allocation which provides extra benefits in the form of need fulfillment and aggregate output in other territories through spillover effects, multiplier effect and the like. The consideration of merit involves extra allocation to compensate for a difficult social or natural environment (Jones & Eyle, 1966, p. 223).

The observance of value neutrality in the realm of welfare geography is a shaking claim. A society entrenched in the dynamics of polity, economy, technology etc., creating inequalities and gaps on each and every front of human survival and sustainability, has its best reflection in its spatial organization. In a positive approach, the inequality is a value neutral concept, a fact to be studied with utmost academic objectivity. Thus, no intellectual pursuit for 'what should be' is given a chance of serious academic inquiry. This pseudo attempt of social scientist to pose as morally neutral is challenged by many (Smith, 1994). In the social sciences, cult of objectivity seems often to be associated with 'no taking sides'. When carried to its extreme this type of objectivity could be equated with ignorance. It may be that where essential human psychology and moral issues are at stake, non-involvement and non-commitment and the exclusion of feeling are neither sophisticated nor objective, but naïve and violative of the scientific spirit at its best (Clark, 1965, p. 79).

'Thus the position taken by the geographer is very obvious. A just geography would explicitly commit itself to socio-spatial justice. One could define 'socio-spatial justice' as a fair distribution of the benefits and burdens which arise from the human transformation of nature. Justice must extend to the nature of distributive

8 Clark, K.B. (1965), Dark Ghetto : Dilemmas of Social Power, Harper and Row, Publisher.
processes (i.e. ownership of means of production, socio-political mechanism for allocation of social surplus) themselves to ensure the material, psychic and cultural well-being of all people. A just geography must commit itself to the realization of social spaces which guarantees both material well-being and social participation for all' (Gleeson, 1996). 9

"Thus the concept of socio-spatial justice based on the principle of equality, i.e. ‘all persons are to be treated alike, except where circumstances require different treatment’ is simply an application to the treatment of persons of the formal principle of fairness, that is, the principles, that there be no distinction without differences. Distinctions are to be made only where there are relevant differences” (Nielson, 1995, p. 195). 10

7.3 Social Structure and Socio-Spatial Justice in Aligarh

Spatial arrangement of phenomena may be just or unjust depending upon the extent of their utility that every relevant social group enjoys. Although itself value loaded, the term utility is being equated with social well-being in the present study. Thus talking in terms of social well-being, it is of much importance for a spatial entity, say an urban socio-spatial system, to have such a spatial arrangement of goods and bads that the least gap is to be found between different social groups regarding their utility. The various spatial units within the system should be least discriminated on the grounds of social characteristic of their population.

Whatever judgement we make about the just distribution of well-being in a city system a utilitarian approach of well-being is closely bound with the structure of urban spatial system. And it is a fruitful way of analyzing distributive justice. Basically, the structure of the society determines whose welfare we want and on what basis. The question to be asked and be addressed is, if the sustainability of the system is based on institutional alienation of a social group or equity based sharing of the resources by the society as a whole. The prevailing capitalist system has its function based on the iniquitous privilege-deprivation formulation. The whole

system functions to the advantage and for the well-being of privileged and affluent class. The situation becomes worsened when this mechanism starts working on religious or communal lines. It compels a major section of the discriminated religio-cultural minority group to the marginalized existence.

The forthcoming discussion is an attempt to prove this point with empirical evidences that what we consider as 'socio-spatial justice' is not found to exist between the two major religio-cultural groups of Hindus and Muslims in Aligarh city, as evident on the basis of preceding findings. Muslims, keeping aside a small section of them, in general are a symbol of physical, economic, intellectual and cultural deprivation and stagnation. They are found at lower levels on every front of decent living, involving sustainability and progress. To highlight the socio-spatial injustice in Aligarh, nine major aspects of human well-being have been selected. Finally, an overall situation of gaps and inequalities has been identified.

7.3.1 Method of Analysis

The technique of analysis applied for calculating point of social justice for each of the nine dimensions of social well-being is as follows. For each dimension of well-being the average value of rank score is obtained by dividing total rank score value by 60. Thus the obtained value becomes the general point of social justice for all the sixty wards for particular dimension of well-being. In this way point of social justice is being obtained for all the nine dimensions and for overall social well-being as well. As second step average rank score value is calculated for majority dominated, minority dominated and mixed population wards separately, for each of the nine dimensions of well-being and overall well-being. The next step is to identify the privileged and deprived wards belonging to these three categories of majority, minority and mixed population wards. Those wards of these three groups, having rank score value more than that of general point of social justice are grouped as privileged wards and wards with score value less than general point of justice are kept in deprived wards category.

Majority populous wards are those which report more than 80 per cent of its population as Hindu. Minority populous wards are those which report more than 80 per cent population as Muslim. There are twenty seven majority dominated and
nineteen minority dominated wards in Aligarh city. The rest fourteen wards are of mixed population.

### 7.3.2 Socio-familial Structural Inequalities

This aspect of well-being is quite intimately related with the family structure of the concerned social groups. It has been observed that in the modern global competitive socio-economic system certain traits of family structure like large household size, big family size, prevalence of joint family system become obstacles in the progress of the social group as a whole. Thus discussing the differences in the family structure of the Hindu, the Muslim and mixed population wards is highly relevant to assess the pace of their socio-economic progress. As the positive change in this aspect of a community indicates how much it is responding and is being integrated with the competitive mainstream forces in getting profited by the system.

#### Table 7.2

**Socio-familial Structural Gaps in Aligarh**

<table>
<thead>
<tr>
<th>Category</th>
<th>Privileged wards</th>
<th>Deprived wards</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hindu</td>
<td>Muslim</td>
<td>Total</td>
</tr>
<tr>
<td>Average score</td>
<td>-3.34</td>
<td>-3.95</td>
<td>-3.64</td>
</tr>
<tr>
<td>No. of wards</td>
<td>17</td>
<td>9</td>
<td>26</td>
</tr>
<tr>
<td>%age of total area affected</td>
<td>23.86</td>
<td>20.56</td>
<td>48.92</td>
</tr>
<tr>
<td>%age departure (+/-v) from the point of justice (-5.21)</td>
<td>55.98</td>
<td>24.18</td>
<td>30.13</td>
</tr>
<tr>
<td>%age of wards in the same group</td>
<td>62.62</td>
<td>47.37</td>
<td>100</td>
</tr>
<tr>
<td>%age population affected</td>
<td>27.41</td>
<td>15.47</td>
<td>42.88</td>
</tr>
</tbody>
</table>

Based on data generated through household Survey by the researcher in 2003.

The total calculated rank score for the socio-familial indicators is $-312.6$. It has been divided by the total number of sixty wards of Aligarh. The average score comes to $-5.21$ which has been considered as a point of justice. Then all the gaps have been calculated considering this average score as a point of reference. The minus sign signifies that the indicators selected to assess familial well-being are
Socio-Familial Structural Gaps

Fig: 7.12

Educational Inequalities in Aligarh

Based on data generated through household survey in 2003

Fig: 7.13
mostly negative. Thus the aggregate also comes in negative value. Wards with the average score more than the point of justice have been acknowledged as privileged wards and the wards with the average score less than the point of justice are considered deprived wards. The minus sign with lesser value of the scores shows the higher level of well-being.

Table 7.2 reveals that seventeen Hindu i.e. majority dominated wards constituting 27.41 per cent population and occupying 28.36 per cent area are above the point of justice. Their average score is \(-3.34\), being placed 55.98 per cent above the point of social justice. As against this only nine Muslim wards constituting 15.47 per cent population and 20.56 per cent area report \(-3.95\) score, i.e. being 24.18 per cent above the point of social justice. In the category of deprived wards ten Hindu wards having \(-6.75\) score lie at 29.55 per cent below the point of social justice. They occupy 15.63 per cent area and 17.36 per cent population. As against this ten Muslim wards with \(-6.62\) score lie 27.06 per cent below the point of justice. They represent 18.27 per cent population and 19.13 per cent area. The overall gap between Hindu populous wards and the Muslim populous wards is 14.38 per cent. An average Hindu ward is being 11.70 per cent above the equity score and an average Muslim ward being 2.68 per cent below it. The average mixed population ward is 18.16 per cent below the point of justice. The gap between total thirty two privileged wards (including six mixed population wards) and twenty eight deprived wards (including eight mixed population wards) is 72.18 per cent. Specifically, the privileged wards are 33.20 per cent above and deprived wards being 39.53 per cent below the point of justice (Fig. 7.12).

### 7.3.3 Educational Inequalities in Aligarh City

The total score for the city has been obtained as 1314.7 which is divided by the total sixty wards. The average score for each ward is 21.91. This value is the general point of justice. Wards above this value are privileged and below it are deprived in educational amenities.
Table 7.3
Educational Inequalities in Aligarh City

<table>
<thead>
<tr>
<th>Category</th>
<th>Privileged wards</th>
<th>Deprived wards</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hindu</td>
<td>Muslim</td>
<td>Total</td>
</tr>
<tr>
<td>Average score</td>
<td>26.86</td>
<td>29.45</td>
<td>27.65</td>
</tr>
<tr>
<td>No. of wards</td>
<td>19</td>
<td>8</td>
<td>27</td>
</tr>
<tr>
<td>%age of total area affected</td>
<td>31.56</td>
<td>22.28</td>
<td>53.54</td>
</tr>
<tr>
<td>%age departure (+/-V) from the point of justice (21.91)</td>
<td>22.59</td>
<td>34.77</td>
<td>26.20</td>
</tr>
<tr>
<td>%age of wards in the same group</td>
<td>70.37</td>
<td>36.36</td>
<td>100</td>
</tr>
<tr>
<td>%age population affected</td>
<td>34.46</td>
<td>14.58</td>
<td>49.18</td>
</tr>
</tbody>
</table>

Based on data generated through household Survey by the researcher in 2003.

Table 7.3 shows that nineteen Hindu dominated wards constituting 31.46 percent of the population and occupying 31.56 percent area are privileged. They have a 26.86 score being 22.59 percent above the point of equity. Only eight Muslim wards constituting 14.58 percent population and 22.28 percent area with a 29.53 score value are found in the privileged group. They are 34.77 percent above the point of justice. In the analysis of the deprived wards eight Hindu wards occupy 12.43 percent area and constitute 10.51 percent population. With a 14.53 score they are being 33.68 percent below the point of equity. The gap between Hindu and Muslim wards is 15.87 percent. An average Hindu ward is 5.93 percent above the point of justice and the average Muslim ward being 9.94 percent below the point of equity. An average mixed population ward is 7.02 percent above the point of justice. There are thirty (including three mixed population wards) privileged and thirty deprived wards (including eleven mixed population wards) on the educational front in Aligarh. The gap between all privileged and deprived wards is 78.54 percent. The privileged wards are 26.88 percent above and the deprived wards are 51.66 percent below the point of justice (Fig. 7.13).
7.3.4 Inequality in Employment Status

For this aspect of well-being the total score for Aligarh city is 125.1. This is divided by sixty wards to obtain the average score of 2.08 as the point of equity. In the Table 7.4 it is clear that eighteen Hindu wards with score 4.56 are 119.2 per cent above the point of justice. They occupy 33.68 per cent area and constitute 28.76 per cent population. As against this only nine Muslim wards are privileged being 131.18 per cent above the point of justice. Their average score is 4.82. They occupy 24.16 per cent area and 14.22 per cent of the population. In the comparison of employment deprivation only nine Hindu wards and ten Muslim wards are found in the deprived category. They score -0.23 and -1.7 and are 111.05 per cent and 181.73 per cent below the point of justice respectively. They occupy 10.31 per cent and 15.53 per cent area and constitute 16.23 per cent and 19.52 per cent population respectively. The overall scores of Hindu wards and Muslim wards are 2.82 and 1.12 respectively. The gap between them is 72.39 per cent. An average Hindu ward is being 26.24 per cent above and an average Muslim ward being 46.15 per cent below the point of justice. The average mixed population ward is 5.28 below the point of justice. The gap between overall privileged wards and the deprived wards is 272.84 per cent. The privileged wards being 123.79 per cent above and deprived wards being 149.05 per cent below the point of justice (Fig. 7.14).

Table 7.4

<table>
<thead>
<tr>
<th>Category</th>
<th>Privileged wards</th>
<th>Deprived wards</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hindu</td>
<td>Muslim</td>
<td>Total</td>
</tr>
<tr>
<td>Average score</td>
<td>4.56</td>
<td>4.82</td>
<td>4.67</td>
</tr>
<tr>
<td>No. of wards</td>
<td>18</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>% of total area affected</td>
<td>35.68</td>
<td>24.16</td>
<td>59.81</td>
</tr>
<tr>
<td>% of Departure (+/-) from the point of justice (2.08)</td>
<td>119.2</td>
<td>131.18</td>
<td>124.68</td>
</tr>
<tr>
<td>% of wards in the same group</td>
<td>66.66</td>
<td>47.37</td>
<td>100</td>
</tr>
<tr>
<td>% of population affected</td>
<td>28.76</td>
<td>14.22</td>
<td>44.62</td>
</tr>
</tbody>
</table>

Based on data generated through household survey by the researcher in 2003.
EMPLOYMENT INEQUALITIES IN ALIGARH

![Bar chart showing employment inequalities in Aligarh.](chart1.png)

**Socio-Spatial Units**
- Privileged Ward
- Deprived Ward

ECONOMIC INEQUALITIES IN ALIGARH

![Bar chart showing economic inequalities in Aligarh.](chart2.png)

**Socio-Spatial Groups**
- Privileged Ward
- Deprived Ward

*Based on data generated through household survey in 2003.*
7.3.5 Economic Inequalities and Discrimination

The overall score of the city for economic well-being is 159.3. This has been divided by sixty wards. The average score of each ward is 2.65 which is the point of equity or justice on the economic front in the city.

Table 7.5

<table>
<thead>
<tr>
<th>Category</th>
<th>Privileged wards</th>
<th>Deprived wards</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hindu</td>
<td>Muslim</td>
<td>Total</td>
</tr>
<tr>
<td>Average score</td>
<td>13.13</td>
<td>13.19</td>
<td>13.14</td>
</tr>
<tr>
<td>No. of wards</td>
<td>19</td>
<td>8</td>
<td>27</td>
</tr>
<tr>
<td>% of total area affected</td>
<td>16.51</td>
<td>22</td>
<td>38.51</td>
</tr>
<tr>
<td>% departure (+/-v) from the point of justice (2.65)</td>
<td>395.6</td>
<td>397.4</td>
<td>396.2</td>
</tr>
<tr>
<td>% of wards in the same group</td>
<td>70.04</td>
<td>42.10</td>
<td>100</td>
</tr>
<tr>
<td>% population affected</td>
<td>28.84</td>
<td>12.82</td>
<td>41.60</td>
</tr>
</tbody>
</table>

Based on data generated through household Survey by the researcher in 2003.

The above Table 7.5 highlights that the nineteen privileged Hindu wards have a score of 13.13 which is 395.6 per cent above the point of equity. They constitute 28.84 per cent population and occupy 16.15 per cent of the city area. As against this only eight Muslim wards are privileged. They constitute 12.82 per cent population and occupy 22 per cent of the city area. Their score is 13.19 representing 397.4 per cent above the point of equity. On the other hand there are only eight deprived Hindus wards which have a score of -6.52 being placed at 346.2 per cent below the point of equity. Whereas eleven Muslim wards are deprived of economic opportunities with a score of -8.18 at 408.67 per cent below the point of justice (Fig. 7.15). An average Hindu ward is 175.84 per cent above the point of justice whereas an average Muslim ward is 69.43 per cent below the point of justice. For an average mixed population ward this value is 137.77 per cent below the point of justice.
7.3.6 Differential of Housing Status in Aligarh

The overall score of housing status in Aligarh city is calculated to be 231.2. The average score after being divided by sixty wards is 3.85. This is the point of demarcation between the privileged and deprived wards.

**Table 7.6**

**Inequalities in Housing Status in Aligarh**

<table>
<thead>
<tr>
<th>Category</th>
<th>Privileged wards</th>
<th>Deprived wards</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hindu</td>
<td>Muslim</td>
<td>Total</td>
</tr>
<tr>
<td>Average score</td>
<td>6.27</td>
<td>6.88</td>
<td>6.51</td>
</tr>
<tr>
<td>No. of wards</td>
<td>14</td>
<td>9</td>
<td>23</td>
</tr>
<tr>
<td>%age of total area affected</td>
<td>28.33</td>
<td>24.46</td>
<td>52.79</td>
</tr>
<tr>
<td>%age departure (+/-V) from the point of justice (3.85)</td>
<td>62.89</td>
<td>78.70</td>
<td>69.14</td>
</tr>
<tr>
<td>%age of wards in the same group</td>
<td>51.85</td>
<td>47.36</td>
<td>100</td>
</tr>
<tr>
<td>%age population affected</td>
<td>24.08</td>
<td>16.38</td>
<td>40.46</td>
</tr>
</tbody>
</table>

Based on data generated through household Survey by the researcher in 2003.

Table 7.6 shows that fourteen privileged Hindu wards scoring 6.27 are 62.89 per cent above the point of justice. As against this there are only ten privileged Muslim wards which have a score of 6.27 with 62.89 per cent above the point of justice. In the comparison of the deprived wards, thirteen Hindu wards score 1.23 at 68.05 per cent below the point of justice. A number of twelve deprived Muslim wards have a score at 68.83 per cent below the point of justice. The gap between overall Hindu and Muslim wards is 10.37 per cent. An average Hindu ward is being 0.95 per cent above and the average Muslim ward being 10.12 per cent below the point of justice. The gap between all thirty two privileged wards and the twenty eight deprived wards is 142.74 per cent. The privileged wards being 74.87 per cent above and deprived wards being 67.87 per cent below the point of equity (Fig. 7.16).
INEQUALITIES IN HOUSING STATUS

Fig: 7.16

DIFFERENTIAL HEALTH CONDITION

Based on data generated through household survey in 2003

Fig: 7.17
7.3.7 Health Differential and Inequalities in Aligarh

The total score of the city is \( \text{809.2} \). It is divided by sixty wards to obtain an average score of \( \text{13.48} \), which is the point of equity.

Table 7.7

Differential of Health Condition in Aligarh

<table>
<thead>
<tr>
<th>Category</th>
<th>Privileged wards</th>
<th>Deprived wards</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hindu</td>
<td>Muslim</td>
<td>Total</td>
</tr>
<tr>
<td>Average score</td>
<td>18.02</td>
<td>0</td>
<td>18.02</td>
</tr>
<tr>
<td>No. of wards</td>
<td>7</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Percentage of total area</td>
<td>10.09</td>
<td>0</td>
<td>10.09</td>
</tr>
<tr>
<td>affected</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage departure (+/-)</td>
<td>33.67</td>
<td>0</td>
<td>33.67</td>
</tr>
<tr>
<td>from the point of justice (13.43)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of wards in the same group</td>
<td>25.92</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Percentage population affected</td>
<td>12.09</td>
<td>0</td>
<td>12.04</td>
</tr>
</tbody>
</table>

Based on data generated through household Survey by the researcher in 2003.

In the Table 7.7 above seven privileged Hindu wards score \( \text{18.02} \) with \( \text{33.67} \) percentage departure above the point of justice. As against this there is not a single Muslim ward in the privileged health status group. On the other hand in the deprived health category are twenty Hindu wards reporting \( \text{13.15} \) score \( \text{2.44} \) per cent below the point of justice. In comparison to this, all nineteen Muslim wards are found in the deprived health category with a score of \( \text{14.16} \) per cent below the point of justice. The gap between over all Hindu and Muslim wards is \( \text{29.73} \) per cent. An average Hindu ward is being \( \text{15.57} \) per cent above and an average Muslim ward is being \( \text{14.16} \) per cent below the point of justice. The average mixed population ward is \( \text{10.23} \) per cent below. The gap between all privileged eleven wards (including three mixed population wards) and forty nine deprived wards is \( \text{68.25} \) per cent. The privileged wards are \( \text{35.64} \) per cent above the deprived wards being \( \text{33.21} \) below the point of justice (Fig. 7.17).
7.3.8 Leisure and Recreational Differential

The score for leisure availability computed for the overall city is 786.7. The average score of equity and the point of reference is 13.11 obtained by dividing 786.7 by sixty wards.

Table 7.8

Inequalities in Recreation and Leisure Availability in Aligarh

<table>
<thead>
<tr>
<th>Category</th>
<th>Privileged wards</th>
<th>Deprived wards</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hindu</td>
<td>Muslim</td>
<td>Total</td>
</tr>
<tr>
<td>Average score</td>
<td>16.27</td>
<td>16.54</td>
<td>16.34</td>
</tr>
<tr>
<td>No. of wards</td>
<td>20</td>
<td>7</td>
<td>27</td>
</tr>
<tr>
<td>%age of total area affected</td>
<td>28.96</td>
<td>6.09</td>
<td>35.05</td>
</tr>
<tr>
<td>%age departure (+/-v) from the point of justice (13.11)</td>
<td>24.1</td>
<td>26.18</td>
<td>24.66</td>
</tr>
<tr>
<td>%age of wards in the same group</td>
<td>74.07</td>
<td>40.9</td>
<td>100</td>
</tr>
<tr>
<td>%age population affected</td>
<td>34.43</td>
<td>12.74</td>
<td>47.14</td>
</tr>
</tbody>
</table>

*Based on data generated through household Survey by the researcher in 2003.*

Table 7.8 reveals that there are twenty privileged Hindu wards scoring an average of 16.27, being 24.10 per cent above the point of justice. As against this there are only seven Muslim wards scoring 16.54, being 26.48 per cent above the point of equity. On the other hand seven deprived Hindu wards scoring 9.77 are 25.47 per cent below the point of justice, whereas twelve deprived Muslim wards scoring 9.84 are 22.45 per cent below the point of justice. The gap between all the Hindu and Muslim wards is 15.16 per cent. An average Hindu ward scores 10.26 per cent above and an average Muslim ward scores 4.19 per cent below the point of justice. The mixed population wards score 13.8 per cent below the point of justice. The gap between all the thirty five privileged and twenty five deprived wards is 48.42 per cent. The former being 23.56 per cent above and the latter being 24.86 per cent below the point of justice (Fig. 7.18).
INEQUALITIES IN LEISURE AVAILABILITY

Fig: 7.18

DIFFERENTIAL OF POLITICAL EMPOWERMENT

Fig: 7.19

Based on data generated through household survey in 2003
7.3.9 Differential of Political Empowerment

The total score for Aligarh is 148.9. The average score for each ward is 2.47. This is the point of justice or the point of reference. The wards above this average score are politically more empowered and privileged and the rest of them are deprived and relatively less empowered.

### Table 7.9

**Differential of Political Empowerment in Aligarh**

<table>
<thead>
<tr>
<th>Category</th>
<th>Privileged wards</th>
<th>Deprived wards</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hindu</td>
<td>Muslim</td>
<td>Total</td>
</tr>
<tr>
<td>Average score</td>
<td>5.17</td>
<td>4.72</td>
<td>5.05</td>
</tr>
<tr>
<td>No. of wards</td>
<td>21</td>
<td>7</td>
<td>28</td>
</tr>
<tr>
<td>% of total area affected</td>
<td>33.3</td>
<td>16.9</td>
<td>49.9</td>
</tr>
<tr>
<td>% departure (+/-v) from the point of justice (2.47)</td>
<td>109.31</td>
<td>91.09</td>
<td>104.4</td>
</tr>
<tr>
<td>% of wards in the same group</td>
<td>77.77</td>
<td>36.84</td>
<td>100</td>
</tr>
<tr>
<td>% population affected</td>
<td>36.12</td>
<td>12.74</td>
<td>48.86</td>
</tr>
</tbody>
</table>

Based on data generated through household Survey by the researcher in 2003.

Table 7.9 shows that there are twenty one privileged Hindu wards with a score of 5.17 and 109.31 per cent above the point of justice. As compared to this only seven Muslim wards are privileged with political empowerment. They have a score of 4.72 at 91.09 per cent above the point of equity. In the deprived category, six Hindu dominated wards have a score of 0.13. They are 94.7 per cent below the point of justice. As against this, twelve Muslim wards are politically deprived and relatively unempowered. They have a score of -0.63 being 125.64 per cent below the point of justice. The gap between overall Hindu and Muslim wards is 136.83 per cent. The average Hindu ward enjoys being 62.75 per cent above the position from the point of justice and average Muslim ward endures 74.08 per cent below position from the point of justice. The gap between all the thirty seven privileged and twenty three deprived wards is 232.56 per cent. The privileged wards are being 88.03 per cent above and the deprived wards are being 144.53 per cent below the point of justice (Fig. 7.19).
7.3.10 Difference in Quality of Built-up Environment

The average score for this aspect of well-being for each ward is 17.21. On the basis of seven indicators the aggregate score is calculated for each ward. The wards lying above the point of justice are grouped as privileged and below it as deprived wards.

Table 7.10
Difference in Quality of Built-up Environment in Aligarh

<table>
<thead>
<tr>
<th>Category</th>
<th>Privileged wards</th>
<th>Deprived wards</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hindu</td>
<td>Muslim</td>
<td>Total</td>
</tr>
<tr>
<td>No. of wards</td>
<td>18</td>
<td>7</td>
<td>25</td>
</tr>
<tr>
<td>%age of total area affected</td>
<td>36.03</td>
<td>15.68</td>
<td>43.33</td>
</tr>
<tr>
<td>%age departure (+/-v) from the point of justice (17.21)</td>
<td>14.27</td>
<td>17.65</td>
<td>14.99</td>
</tr>
<tr>
<td>%age of wards in the same group</td>
<td>66.66</td>
<td>36.84</td>
<td>100</td>
</tr>
<tr>
<td>%age population affected</td>
<td>30.96</td>
<td>12.74</td>
<td>43.7</td>
</tr>
</tbody>
</table>

Based on data generated through household Survey by the researcher in 2003.

Table 7.10 shows that eighteen Hindu wards have privilege of good quality of built-up environment. They have a score of 19.66 with 14.27 per cent above the point of justice. As against this only seven Muslim wards are privileged scoring 20.14 and being 17.65 per cent above the point of equity. On the other hand in deprived section there are only nine Hindu wards scoring 13.33 at 22.54 below and twelve Muslim wards scoring 16.27 below the point of justice. The gap between all the Hindu and Muslim wards is 6.41 per cent. An average Hindu ward is 2 per cent above and the average Muslim ward is 6.27 per cent below the point of justice. An average mixed population ward is 2.38 per cent above the point of justice. The gap between all the privileged and deprived wards is 33.02 per cent. The privileged thirty five wards score 13.31 per cent more than the point of equity and deprived twenty five wards record 18.72 per cent less than the point of justice (Fig. 7.20).
The page discusses the difference in quality of built-up environment and inequality in social well-being in Aligarh City. The data is based on a household survey conducted in 2003. Two bar charts are shown:

1. **Differences in Quality of Built-Up Environment**
   - The chart compares the percentage differences between socio-spatial groups such as Hindu, Muslim, Total, Overall Hindu, and Overall Muslim.
   - Privileged and deprived wards are distinguished.

2. **Inequality in Social Well-Being**
   - The chart shows the percentage difference in social well-being.
   - Privileged and deprived wards are indicated.

Both charts are labeled with respective figures and captions.
7.3.11 Inequality and Gap in Overall Well-being

The scores of all the nine major aspects of well-being which have been dealt with so far are aggregated together to develop a composite score for each ward for the overall social well-being. The total score for the city is 4156.35. This is divided by sixty wards to get the average score, which is 69.27. This is the score which is considered as the point of social justice. To attain the status of an equitous city system, at the present level of development, it is expected that all the wards of Aligarh city should score 69.27. If there is departure either way from this point of justice then it is imperative to tender an explanation for inequity rooted in the social reality of the city. The previous discussion reveals that for each and every aspect i.e. nine dimensions of well-being, Muslim populous wards as a group belong to the deprived section. In no case/they appear to have scored above the point of justice. Contrary to this, Hindu dominated wards have invariably scored above the point of justice in all the dimensions of well-being. The consistency of Hindus wards as being privileged and Muslim wards as being deprived is naturally well reflected even in the overall well-being of these two communities.

Table 7.11

Inequalities in the Social Well-being in Aligarh

<table>
<thead>
<tr>
<th>Category</th>
<th>Privileged wards</th>
<th>Deprived wards</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hindu</td>
<td>Muslim</td>
<td></td>
</tr>
<tr>
<td>Average score</td>
<td>96.66</td>
<td>106.03</td>
<td>99.00</td>
</tr>
<tr>
<td>No. of wards</td>
<td>18</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>%age of total area affected</td>
<td>30.92</td>
<td>20.04</td>
<td>50.96</td>
</tr>
<tr>
<td>%age departure (+/-v) from the point of justice (69.27)</td>
<td>39.54</td>
<td>53.07</td>
<td>42.91</td>
</tr>
<tr>
<td>%age departure (+/-v) from the point of justice (69.27)</td>
<td>-38.24</td>
<td>-40.0</td>
<td>-40.52</td>
</tr>
<tr>
<td>%age of wards in the same group</td>
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<td>31.57</td>
<td>100</td>
</tr>
<tr>
<td>%age population affected</td>
<td>30.89</td>
<td>31.57</td>
<td>40.46</td>
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<td></td>
<td>14.08</td>
<td>24.17</td>
<td>38.25</td>
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<td></td>
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</table>

Based on data generated through household Survey by the researcher in 2003.
Table 7.11 shows that there are eighteen privileged Hindu wards with a score of 46.66 being 39.54 percent above the point of justice. They occupy 30.92 percent area of the city and represent 30.89 percent population. Only eight Muslim wards are in the privileged category with a score of 106.03 at 53.07 percent above the point of justice. They occupy 20.04 percent of the city area and represent only 9.57 percent population. On the other hand, in the deprived category nine Hindu wards have a score of 42.98 at 38.24 percent below the point of justice. They occupy 13.07 percent area and affect only 14.08 percent population. Contrary to this, there are thirteen deprived Muslim wards representing 24.17 percent population and 16.35 percent area. Muslim deprived wards have a score of 41.56 at 40 percent below the point of justice. The gap between all Hindu and Muslim wards is 30.96 percent. The average Hindu ward is being 13.61 percent above and the average Muslim ward being 17.35 percent below the point of justice. The average mixed population ward is 7.07 percent below the point of justice. The gap between all the privileged twenty eight wards (including four mixed population wards) and all thirty two (including eight mixed population wards) deprived wards is 70.42. The privileged wards are being 45.77 percent above and the deprived wards are being 24.65 percent below the point of justice (Fig. 7.21).

7.4 An Assessment of the Socio-spatial Justice in Aligarh City

A detailed description of the empirical evidence regarding the state of overall well-being as well as the components of well-being clearly substantiates the argument that the discrimination and the bias of the city's socio-economic processes are geared against the minority community. The deep-rooted causes of this historically systematic deprivation of the minorities in the post-independence period has political and socio-cultural factors at work in association with the economic factors. These factors have an international and national manifestation as well as specific local appearances all working against Muslim wards. The study shows that the factors are working to create the palpable inequalities and inequities between the Hindu and the Muslim community wards. Thus, the most generalized hypothesis which is the heart and core of the present research problem appears to be proved. It can be said with a certain degree of confidence that the Muslims as a religio-spatial group as well as the socio-spatial entity endure a relatively lower level of socio-economic existence.
Findings of this chapter reveal that the Civil Lines area of Aligarh city, in general, has a better level of social well-being in comparison to the old city area and the fringe area. The demographic structure, educational attainment, employment status, economic well-being, health status, housing condition and recreational availability are very good among 6-14 per cent population of the city and affecting 8-23 per cent of city area. One fifth of the city population is found to have a high level of political empowerment. Overall, one sixth of the total sixty wards involving one fourth of the city area and affecting one sixth of the city population is found to have a very high level of social well-being.

One sixth of the city population is found to have a very low demographic and educational well-being. One fifth of the population living in one fourth of the city area is found to have a very low economic status. One fourth of the city population is having low housing as well as health status. Around one sixth of the total population has low political status. 37 per cent of the city area and 46 per cent of the city population report worst quality of the built-up environment. The low level of well-being is found in one fifth of the city area which affects one fifth of the city population. Nine wards involving 15.56 per cent of the city area and 11 per cent of city population have lowest level of well-being.

Overall gaps in well-being are found to be very obvious between Hindu and Muslim social groups. It is found that the intra-community differences of privileged and deprived groups of wards is more pronounced among Muslim community than Hindu community except for demographic well-being and recreational availability. Thus, Muslim wards are found to have extremes of well-being in comparison to Hindu wards which have lesser extremities among them. This substantiates the hypothesis that the Hindu wards have in general, better well-being level than Muslim wards. Further, the intra-community gaps and inequalities in various dimensions of well-being are more pronounced among Muslim wards than Hindu wards. It opens up a new area of enquiry and further research.
SUMMARY CONCLUSION
AND
SUGGESTIONS
SUMMARY CONCLUSION AND SUGGESTIONS

The present study with two percent sampling of the total households of Aligarh is an analytical enquiry of the situation regarding the well-being in Aligarh city. An urban spatial system is a reflection of collective decisions in the construction of built-up environment and the socio-economic conditions. As a social group, human beings have diverse belief systems, prejudices, cultural and moral precepts. Further, the desire to have instrumental and institutional authority over resources including geographical space leads to the clash of interests in the social groups particularly in the scarcity economies. This tends to crystallize in the spatial distribution patterns of various phenomena. The struggle between different social groups for space within the city in term of location, network or area to pursue their interest, is mediated through various political, economic and social processes. Thus the space of city is not a passive matrix of phenomena. It is rather a dynamic crucible where continuously changing social realities get imprinted. Although 2 percent sampling appears inadequate for a research work. Still, however, for a large city with over 100,000 households a sample survey of nearly 2000 households with an exhaustive questionnaire can be considered of some consequence keeping in view the time limitations of a research scholar in the Ph.D. work. The study is based on the field survey of the sixty wards in the city.

Under the broad dimension of outdoor built-up environment it has been found that fourteen out of total sixty municipal wards reported good quality of roads. These wards benefit nearly 21 per cent population of the city. Two-thirds of these wards are majority populous Hindu dominated wards, whereas, eighteen wards affecting 36 per cent of the population have poor quality of roads. There are two zones of worst quality of road in Aligarh. Northern part and the south-western part of the city. The municipal amenities and the distributive justice is evidently in favour of majority population wards who have a stronger politico-administrative gravity.

The overall condition of city's sewerage was found to be in pitiable condition. Not a single ward is found in the very good category of sewerage condition. Out of twenty three wards affecting 40 per cent of the population, only
four have good condition of drains. Thirteen of these wards are Hindu dominated and seven wards are Muslim dominated. The remaining have mixed population. In the poor category drains are twenty three wards affecting 38 per cent of the city’s population. In the very poor category are nine wards affecting 15 per cent per cent. The old city Upper Kot area which is a highland, has better drainage than the Civil Lines due to gravity induced natural drainage. Peripheral north-western part has the worst sewerage condition. A core-periphery differential is evident.

So far as garbage collection and disposal situation is concerned only eight wards comprising 14 per cent of the city’s population were found with adequate availability of dustbins. Six wards are Hindu dominated and the remaining two are Muslim populous wards. In the worst category were twenty wards affecting 33 per cent population. Of these eight wards are Muslim populous and seven wards are Hindu populous. The remaining have mixed population. There is three times more probability of adequate dustbin availability in Hindu wards as compared to Muslim populous wards. The western and eastern peripheral parts of the city lack dustbin facilities. Almost 90 per cent population of fifty four wards lack a proper garbage disposal system.

Thirteen wards reported very high density of street light. Five wards are Hindu and seven wards are Muslim dominated. The better endowed Muslim wards lie in the University area. Out of eight wards of very low density of street light five of them are Muslim dominated. There is better served core area than the ill served peripheral wards. The peripheral wards have larger size. Large operational area has diluted density of street lights.

Not a single ward is found with very good municipal upkeep and maintenance. In the fair category are found four wards. Three of them are Hindu populous. In the poor category are twenty eight wards affecting 56 per cent of the population. Nine wards involving one sixth of the city’s population report worst municipal up keep. Western peripheral wards are worst maintained.

The New expanding periphery as well as high income/educational wards report more open space. Nearly one-fourth wards of the congested old city report very high
and high level of noise pollution. Generally high economic and social status wards, mostly in the Civil Lines, have lowest perception of neighbourhood security against crime.

As far as the sub-micro indoor environment is concerned, out of sixty wards, thirtysix of them reported more than 60 per cent of their households having very high and high quality of housing condition, in terms of upkeep and cleanliness. Of these twenty one wards are majority community and only five wards are minority community dominated. In the poor and very poor housing quality categories are found thirteen wards. Six of them are majority dominated and seven of them are minority dominated wards. Best part of the city is the Civil Lines and worst part is the south-western zone.

In terms of socio-economic environment of the city, ten out of sixty wards involving one sixth of the total population reported large and very large size of family with more than 6 members per family. Two-thirds of these wards are minority populous. Twenty two wards representing 32 per cent of the city population report an average family size of 4.5 members. There is a clear relationship between the average size of the family and the proportion of joint family found in an individual ward. Further, the wards with more than 60 per cent adult female graduates have reported smaller family size. Hence there is a closer relationship between the female literacy and the average family size. Such a relationship is evidently inverse. The old city and north-western part of the city reported large average family size. 4-6 members per family is most representative of the city, found in fifty wards. It has been found that seven out of ten wards with very large and large family size 40-80 per cent of their households are in the fragile informal labour economy. Most of them are Muslims, who are employed on daily or weekly wages. Hence their living and socio-economic condition is marginal.

On income front nine wards involving one sixth of the city population reported more than Rs. 11,500 average monthly income, engrossing one third of the city's resource. It is pertinent to note that one US dollar is equivalent to nearly 45 Indian rupees. Forty wards involving two-thirds of the city population report less than Rs. 8,500 average monthly income sharing 47.01 per cent of the total approximated income of the city. There is probability of six persons with very low
income of less than Rs. 5,500 per month in Aligarh city against every one person with very high income of more than Rs. 14,500 per month.

All wards of very low, low and medium level of literacy belong to very low income groups. Further, all very high and high income wards have essentially very high literacy rate. Higher education (both male and female) is positively associated with average monthly income in the ward.

In terms of per capita income and the consequent per capita resource availability only nine wards out of sixty wards were found with high per capita monthly income of more than Rs. 1,850 affecting one sixth of the city’s population. Of these, five wards are Hindu populous and three wards are Muslim populous wards. One ward in this category has a mixed Hindu and Muslim population. Of twenty eight wards with less than Rs. 850 per capita monthly income thirteen wards are Muslim dominated and eight wards are Hindu dominated. The remaining are mixed populated.

There is progressive increase in the per capita monthly income of the wards of city with decreasing size of family. As family size decreases from an average 7.5 members to 4.5 members the per capita monthly income availability increases from Rs. 610 to Rs. 1,600.

The most representative categories of joint family in Aligarh city are 30-45 per cent and 15-18 per cent of the total households respectively found in forty wards. More Hindu wards reported joint family system than the Muslim wards. However, there is a ground truth differential in joint family system amongst the Hindus and the Muslims. The joint family system amongst the Hindus appears a matter of choice in the wake of joint business undertakings with higher sustainability. Amongst the Muslims, the joint family system is all the more out of compulsions. There is higher dependency ratio amongst the Muslims. Their lower incomes and unemployment render them towards the joint family. Higher education among women has strongly negative correlation with the incidence of joint family in the wards. There is positive association between proportion of the joint family and the proportion of household business occupation in the wards of the city.
Fifty three wards, including 90 per cent of the city population, reported an average membership of 5-9 householders. On the other hand, seven out of nine wards having more than Rs. 11,500 average monthly income have less than 7 members in their household. There is an inverse relationship between average size of the household and its income level.

Aligarh city as a whole reports a high level of literacy. Only six wards are found with a very low level of literacy with less than 30 percent of their households being literate. Very high and high level adult literacy wards are Hindu dominated but low adult literacy wards are roughly equally shared by the Hindus and the Muslims. Female adult literacy is sectoral. It is found in the north-east, south-central and mid-western part of the city. Adult male literacy is more ubiquitous.

Out of total sixty wards nineteen wards reported very high and high level of male higher education. However, only ten wards reported equivalent level of female higher education. Eight out of twelve wards with a very high level of male higher education are Hindu populous wards.

Data reveals that forty two wards affecting 76.6 per cent of area and 71 per cent of population report less than 24 percent of the employment rate. Out of twelve very low employment wards five wards reported less than Rs. 3000 average monthly income. High income wards show mostly moderate employment. There is a relative absence of child labour in the higher income wards.

Nearly 25 per cent of city’s working population is involved in daily wages activity in the informal sector. Majority of them concentrates in old city getting Rs. 60-100 per day. One third of the daily wage labour is found in seven wards of the old city. As large as 61.58 per cent of these wage earners are located in seventeen wards in the south-western part of the city. Out of seventeen wards with more than 40 percent population in daily wages, sixteen wards are in the very low per capita monthly income, i.e. less than Rs. 600. Nearly 23 per cent of the total employment of the city belongs to specialized business and industrial category. Out of seventeen business and industrial wards, fourteen of them are Hindu dominated.

Of the total gazetted employment 37 per cent concentrates in the four wards mostly in the north-eastern part of the city. 50 per cent of the employment is found in
seven wards only. High gazetted employment wards correspond with higher income and higher educational qualification wards. Higher order non-gazetted employment wards lie adjacent to University wards. Northern expansion of the city is to a certain extent associated with it.

Twelve wards of Aligarh involving 19.81 per cent of the city’s population and affecting 16.35 per cent of area report more than 40 per cent of their households with less than Rs. 3000 per month income. Twenty wards with 40-65 percent of households report low income between Rs. 3,000-5,000 per month mainly found in the south-western part and western periphery of the city. They are mostly Muslim dominated.

Twenty eight wards reported 40-70 percent of their households with medium income, i.e. between Rs. 5,000-10,000 mostly Hindu dominated. Only eight wards have reported 70-85 per cent of their household with high income i.e. Rs. 10,000-20,000. These are mostly Hindu dominated and found in north and western part of the city. Of four wards with very high income three are Hindu dominated wards.

Ten wards out of total sixty wards are found with more than Rs. 4000 per month average saving. These are mostly Hindu dominated very high and high income wards with around 25 percent of their income being saved. A positive association between high income and high real savings and high percentage share of the savings was observed.

Twenty three wards with more than 60 percent of households were found with less than 100 sq.yards housing size. This is generally found in the old city and the western peripheral part of the city. This mostly represents very low and low income level Muslim wards. Nineteen wards with 30-50 sq.yards houses are most typical of the daily wage labourers. Nature of employment affects the income and the house size. Nineteen wards with more than 60 percent houses of 100-300 sq.yards were mostly found with very high and high level of business activities and non-gazetted employment. Only five wards are found with 35-60 percent housing of more than 300 sq.yards. This mostly concentrates in the north-eastern part of the city.

Twenty wards affecting 35 percent of population and 30 percent of the city area were found with more than 40 percent of their households reporting infant
sickness. Muslim dominated wards reported more than 80 percent households with infant sickness. Eight wards reported more than 60 percent of households with general and chronic sickness among non-infant family members. On the whole disease, sickness and infirmity is found among all the weaker socio-economic Muslim groups.

Twenty two out of total sixty wards affecting 38 percent of population report very low and low leisure availability for females. Even in case of male leisure availability two wards reported only 15-55 minutes leisure per day. Twenty wards were found with very high and high leisure availability of 95-145 minutes per day for female heads and twenty eight wards with very high and high leisure availability of 75-115 minutes for male heads.

Eighteen wards, mostly peripheral and newly developed residential areas reported more than 60 percent of households with complaints against municipal apathy. The old city inhabitants have less complaints against municipality. This is because of their general ignorance and mental acceptation of poor built-up environment. Wards mostly Muslim dominated and situated in south west reported maximum complaints against the communal bias in municipal resource allocation.

Forty wards with more than 60 percent households reported freedom for female to work outdoor. Of these 50 percent are Hindu populous and 30 per cent are Muslim dominated wards. Eight wards reporting least freedom for female to work outdoor are mostly Muslim populous wards. Nine wards mostly Hindu populous, reported 60-100 households allowing freedom for women to travel alone. As many as fifteen wards have very high educational status and except two, all of them belong to the Civil Lines and the southern part of the city affecting 12 percent of the population. In the high category are eighteen wards lying adjacent to the wards of very high category. Seven wards are found of low and three wards are found of very low educational status involving one-fifth of the city area and one sixth of the city’s population.

Five wards occupying 13 per cent of area and 8 per cent of the population have best employment status. To the high category belong eighteen wards mostly in
the Civil Lines and southern part. Sixteen wards are in the low employment category and ten wards are in the very low employment category. Both categories concentrate in the south-western part of the city.

Six wards covering 13 per cent of the city area and 12 per cent of population reported best health conditions. This is mostly in the southern part of the city. High category sixteen wards mostly belong to the Civil Lines. In the low and very low categories are eighteen wards belonging to the old city. Eight wards occupying 23.73 per cent area and affecting 13.22 percent of the population reported very good overall residential well-being. In high category are found 10 wards, mostly found in the Civil Lines and southern part of the city.

Only four wards reported very high availability of recreation and leisure representing 8.9 percent area and 6.58 percent of population. In the high category are thirteen wards mostly located in the Civil Lines. In the low and very low categories area were found fourteen and five wards respectively. These are mostly located in the south-central part of Aligarh city.

Twelve wards constituting one fourth of the city area and affecting one fifth of the city population are found with very high level of political empowerment. In the high category of political empowerment lie twenty two wards. Mostly these wards are found in the Civil Lines and southern part of the city. In the low and very low category are found six and four wards located in south-west and the old city area.

So far as an overall cumulative social well-being of Aligarh city is concerned ten wards affecting 27.24 per cent of area and 17.91 per cent of population lie in the very high category of social well-being. In the high category are found twelve wards affecting one fourth of the city area and one fifth of the city population. These wards are generally lying in the Civil Lines and the southern part of the city. Of these twenty two wards thirteen wards are Hindu populous and five wards are Muslim dominated and remaining four wards are mixed population wards. In the low well-being category are found wards affecting one fifth of population and one fifth of the city area. In the last very low category are found nine wards affecting 15.56 per cent of the city population and 10.86 per cent of city area.
Out of twenty seven Hindu dominated wards in Aligarh, seventeen Hindu wards constituting 27.4 percent population and 28.36 percent area are above an average level of justice in socio-familial well-being. Nine out of nineteen Muslim dominated wards are above an average level of distributive justice engaging 15.47 percent population and 20.56 percent of area. On the whole an average Hindu ward is 11.7 per cent above the average justice level and the Muslim ward is 2.68 percent below the point of justice. The total overall gap between thirty two privileged and twenty eight deprived wards of Aligarh city is found to be 78 per cent.

On educational front the gap between Hindu and Muslim wards is 15.07 percent. Hindu wards being 5.13 percent above and Muslim wards being 9.94 percent below the point of justice. The gap between thirty privileged and thirty deprived wards is 38.32 percent. The gap between Hindu and Muslim dominated wards on employment front is 78.34 per cent. The gap between thirty seven privileged and twenty three deprived wards is 272.54 per cent.

The economic gap between Hindu and Muslim wards is 190.53 percent. Hindu wards are 121.10 per cent above and Muslim wards being 69.43 percent below the point of justice. The gap between all privileged thirty one wards and deprived twenty nine wards is 770.33 per cent, almost equidistant from the point of justice.

The gap of housing status between Hindu and Muslim populous wards is 29.73 per cent. Hindu wards are 15.57 per cent above and Muslim wards are 14.16 per cent below the point of justice.

The overall recreational gap between Hindu and Muslim wards is 15.16 per cent. Hindu wards are 10.26 per cent above and Muslim wards are 4.19 per cent below the point of justice. The gap between all the thirty five privileged and twenty five deprived wards is 48.42 per cent.

The gap of political empowerment between average Hindu and Muslim wards is 136.83 per cent. Hindu wards are 69.25 per cent above and Muslim wards are 74.08 per cent below the point of justice. The gap between all thirty seven privileged and twenty three deprived wards is 232.56 per cent.
The overall gap of quality of built-up environment of an average Hindu and Muslim ward is 6.41 per cent. Hindu wards are two percent above and Muslim wards are 4.41 per cent below the point of justice. The gap between all thirty five privileged wards and twenty five deprived wards is 33.03 percent.

In each aspect of well-being the Muslim populous wards as a group belong to the deprived section. But all Hindu populous wards as a group are invariably above the point of justice. There are eighteen privileged wards. So far as overall social well being is concerned there are only eight corresponding privileged Muslim wards. The gap between an average Hindu and Muslim wards in overall well-being is 30.96 percent. Hindu wards are 13.61 percent above and Muslim wards are 17.35 percent below the point of equity. The gap between all privileged twenty eight wards and the thirty two deprived wards in terms of overall social well-being is 70.42 percent. Privileged wards are 45.77 percent above and deprived wards are 24.65 point\textsuperscript{b} below the point of justice.

The conclusive findings of the study substantiate all the major hypotheses. There is a general association between the quality of municipal environment and the socio-economic and political status of the wards. Still, however, there is an overall low quality of municipal environment in Aligarh city. There is a general, definite and deliberate neglect coupled with infrastructural inadequacy on the maintenance of the municipal environment.

Challenges and Suggestions for Improvement

The present study, which explores the levels of social well-being of different social groups of Aligarh city, highlights the elements of distributive justice. There are glaring inequalities arising out of multiplicity of factors leading to clash of interest of stakeholders. The problems were identified at two levels.

- The factors which diminish an overall well-being of the social groups as a whole.
- Factors which create inequality and inequity between different social groups which leads to systematic/institutionalized deprivation of a particular social group.

In the first category major problem areas are as follows:
a. Problems of municipal governance.
b. Problems of imbalanced economic structure

Major municipal problems are as follows:

1. There is a massive problem of sewerage and garbage disposal and quality of roads. The problem of quality of roads has recently been addressed through road construction initiatives in the city through the World Bank aid. Not a single ward has been reported with good condition of sewerage whereas more than 50 per cent of the city population has been found to have poor and very poor sewerage condition. Only 15 per cent of the over 700,000 population is found to have garbage disposal facility.

2. Haphazard/illegal construction and real estate business is the second challenge of the city.

3. Severe traffic problem is another problem which is faced by the city dwellers. Regarding economic structure, lopsided occupational structure is most problematic. 25 per cent of the city’s population are daily wages labour earning Rs. 1500-3000 per month. Except one third of the city employment, others are not favourable employment. It is found that 40 per cent of the city population living in twenty three wards has only 20 per cent share of the total income of the city, whereas 7 per cent population living in four wards have command over 14.22 per cent income of the city.

The second category of the problems is related with the existing inequality and inequity i.e. problems of social justice. It is found that the majority Hindu community and the minority Muslim community wards have iniquitous share of the resources. Hindu wards as a whole have higher level of well-being than Muslim wards as a whole.

The another appalling problem is that the overall deprived Muslim community is found to have wider intra-community (within community) gaps in well-being. It is found that for all the major nine dimensions of well-being as well as overall social well-being one half of the total sixty city wards is privileged and the other half of it is deprived.
The municipal authorities do not consider themselves to be directly accountable before local community for their lapses. There is lack of civic consciousness and awareness of their rights on the part of citizens. Resultantly, there is non-existence of middle-class pressure. In the due process sanitation services of neighbourhoods have become a private affair to be enjoyed by only those who can afford.

On the basis of observations, informations as well as experiences of other cities within and outside of India, some suggestions are put here to bring things into perspective and to solve this problem. First step is to identify the stakeholders i.e. the municipal government, and the local civil community. There is need of recognition of representation of local communities to have dialogues with the local government.

To safeguard their own interest the deprived groups like daily wagers need to have their own organization in form of trade unions. Micro-crediting should be facilitated. Vocational training should be imparted on the part of government to enhance skill of the population. The indigenous products of cottage industry especially locks etc. should be marked aggressively and labour's interest must be secured through unions. The improvement on this front needs involvement of NGOs to take-up the problems of economically suppressed people.

The problem related to the social justice needs another approach for its solution. On the face, it is the job of government to equalize the differences between majority and minority communities through quota system for proportional representation. But real responsibility lies with the Muslim community in its socio-economic and political organization to have their rights secured.

On the basis of observations, informations and analysis of the problems, a few suggestions have been submitted to bring the things into perspective and to solve the problems.

1. Just as there is legislation for the abolition of child labour in India so should be legislation for the abolition of daily and weekly wages to the almost regular labour employed in the factories, business undertakings, commerce and trade. Such a wage structure is highly disadvantageous to the weekly and daily
wagers. It compels them to make daily purchases of their bare minimum kitchen provisions from the neighbouring street shops. Such daily, retail purchases from the immediate locality shops are 15 to 20 per cent more expensive than the monthly purchases from the main and wholesale markets. The weekly, daily wages render them vulnerable to debt purchases. Hence, they are forced to buy poor quality and out-dated food items. This further renders them to health hazards.

2. Monthly wages would psychologically organize the labour behaviour. It would help remove the element of uncertainty in life and groom a sense of social security and responsibility. This might enhance the per capita productivity.

3. Factories employing more than 50 labours should have a provision of highly subsidized canteen with a facility of working meals.

4. Female employment in the service sector should be given a priority. Increased female employment would be a direct measure of population control and smaller family size. Educated and employed women have the smallest family size. The moderately educated but working women family size is smaller than the non-working but highly educated women. Female employment would enhance the family incomes and would improve the quality of life and the social well being.

5. Municipal resource allocation should be in compensatory proportions in view of retrospective deprivations. Distributive justice does not mean a blanket equal distribution of amenities.

6. The distribution and number of public water supply taps should be proportionate to the poverty index of the ward rather than in accordance with the population size of the ward.
APPENDICES

Appendix-I  Salient Features of Wards in Aligarh City
Appendix-II List of the Indicators Selected for the Study
Appendix-III Questionnaire on Socio-economic Structure and Quality of Life
## Appendix-I

### Salient Features of Wards in Aligarh City

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<th>Ward No.</th>
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<td>100.0</td>
<td>0.765</td>
<td>18,996</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>9</td>
<td>Mushtaq Nagar</td>
<td>100.0</td>
<td>1.026</td>
<td>13,135</td>
<td>Mixed Pop.</td>
</tr>
<tr>
<td>10</td>
<td>Shah Jamal</td>
<td>100.0</td>
<td>0.488</td>
<td>30,637</td>
<td>Mixed Pop.</td>
</tr>
<tr>
<td>11</td>
<td>Gopalpuri</td>
<td>85.75</td>
<td>0.265</td>
<td>27,036</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>12</td>
<td>Sarai Lavaria</td>
<td>85.75</td>
<td>0.265</td>
<td>19,356</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>13</td>
<td>Patel Nagar</td>
<td>88.75</td>
<td>0.180</td>
<td>454,889</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>14</td>
<td>Banna Devi</td>
<td>75.0</td>
<td>1.667</td>
<td>9,936</td>
<td>Mixed Pop.</td>
</tr>
<tr>
<td>15</td>
<td>Madar Gate</td>
<td>79.16</td>
<td>0.608</td>
<td>18,342</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>16</td>
<td>Nagla Masani</td>
<td>42.3</td>
<td>0.375</td>
<td>202,027</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>17</td>
<td>Gambhirpura</td>
<td>100.0</td>
<td>0.368</td>
<td>41,321</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>18</td>
<td>Chooharpura</td>
<td>92.3</td>
<td>2.716</td>
<td>11,018</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>19</td>
<td>Sarai Mian</td>
<td>86.8</td>
<td>0.412</td>
<td>30,510</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>20</td>
<td>Mahavir Ganj</td>
<td>92.3</td>
<td>0.034</td>
<td>22,276</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>21</td>
<td>Nai Basti</td>
<td>92.3</td>
<td>0.296</td>
<td>28,507</td>
<td>Mixed Pop.</td>
</tr>
<tr>
<td>22</td>
<td>Begumbagh</td>
<td>100.0</td>
<td>1.372</td>
<td>14,672</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>23</td>
<td>Bhujpura</td>
<td>93.33</td>
<td>1.187</td>
<td>18,379</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>24</td>
<td>Qasim Nagar</td>
<td>100.0</td>
<td>0.241</td>
<td>36,732</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>25</td>
<td>Sarai Qutub</td>
<td>100.0</td>
<td>0.087</td>
<td>103,172</td>
<td>Mixed Pop.</td>
</tr>
<tr>
<td>26</td>
<td>Turkman Gate</td>
<td>94.11</td>
<td>0.179</td>
<td>44,240</td>
<td>Mixed Pop.</td>
</tr>
<tr>
<td>27</td>
<td>Sarai Hakim</td>
<td>100.0</td>
<td>0.271</td>
<td>21,531</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>28</td>
<td>Shastri Nagar</td>
<td>80.00</td>
<td>0.532</td>
<td>20,008</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>29</td>
<td>Pala Sahibabad</td>
<td>85.75</td>
<td>0.773</td>
<td>15,594</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>No.</td>
<td>Location</td>
<td>Population</td>
<td>Muslim Pop.</td>
<td>Hindu Pop.</td>
<td>Mixed Pop.</td>
</tr>
<tr>
<td>-----</td>
<td>---------------------</td>
<td>------------</td>
<td>-------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>30.</td>
<td>Jamalpur</td>
<td>80.43</td>
<td>0.299</td>
<td>57,421</td>
<td></td>
</tr>
<tr>
<td>31.</td>
<td>Firdaus Nagar</td>
<td>100.0</td>
<td>0.796</td>
<td>18,984</td>
<td></td>
</tr>
<tr>
<td>32.</td>
<td>Vishnupuri</td>
<td>92.3</td>
<td>0.299</td>
<td>2,411,705</td>
<td></td>
</tr>
<tr>
<td>33.</td>
<td>Jwalapuri</td>
<td>85.71</td>
<td>0.862</td>
<td>15,765</td>
<td></td>
</tr>
<tr>
<td>34.</td>
<td>Niranjanpuri</td>
<td>85.71</td>
<td>1.425</td>
<td>12,411</td>
<td></td>
</tr>
<tr>
<td>35.</td>
<td>Sarai Pakki</td>
<td>92.3</td>
<td>0.088</td>
<td>70,284</td>
<td>Mixed Pop.</td>
</tr>
<tr>
<td>36.</td>
<td>Hamdard Nagar</td>
<td>100.0</td>
<td>0.473</td>
<td>21,546</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>37.</td>
<td>Sarai Rahman</td>
<td>100.0</td>
<td>0.107</td>
<td>90,841</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>38.</td>
<td>Asik Ali</td>
<td>93.3</td>
<td>2.544</td>
<td>6,363</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>39.</td>
<td>Phaphala</td>
<td>100.0</td>
<td>0.366</td>
<td>7,087</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>40.</td>
<td>Vikram Colony</td>
<td>73.91</td>
<td>0.507</td>
<td>15,834</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>41.</td>
<td>Badam nagar</td>
<td>100.0</td>
<td>0.271</td>
<td>39,572</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>42.</td>
<td>Sudamapuri</td>
<td>93.3</td>
<td>0.740</td>
<td>19,063</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>43.</td>
<td>Johrabagh</td>
<td>75.0</td>
<td>0.568</td>
<td>28,928</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>44.</td>
<td>Lekraj Nagar</td>
<td>92.3</td>
<td>1.960</td>
<td>8,797</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>45.</td>
<td>Phool chok</td>
<td>95.0</td>
<td>0.428</td>
<td>24,220</td>
<td>Mixed Pop.</td>
</tr>
<tr>
<td>46.</td>
<td>Mitra Nagar</td>
<td>80.0</td>
<td>0.137</td>
<td>28,641</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>47.</td>
<td>Jiwan garh</td>
<td>86.0</td>
<td>0.702</td>
<td>23,974</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>48.</td>
<td>Dori nagar</td>
<td>85.71</td>
<td>0.461</td>
<td>26,549</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>49.</td>
<td>Dodhpur</td>
<td>51.5</td>
<td>2.566</td>
<td>5,915</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>50.</td>
<td>Rasalganj</td>
<td>100.0</td>
<td>0.149</td>
<td>72,779</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>51.</td>
<td>Janakpuri</td>
<td>72.72</td>
<td>0.794</td>
<td>11,495</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>52.</td>
<td>Badarbagh</td>
<td>100.0</td>
<td>1.002</td>
<td>9,780</td>
<td>Mixed Pop.</td>
</tr>
<tr>
<td>53.</td>
<td>Bhamola</td>
<td>92.3</td>
<td>0.493</td>
<td>22,671</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>54.</td>
<td>Baniapara</td>
<td>100.0</td>
<td>0.107</td>
<td>7,857</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>55.</td>
<td>Khaidora</td>
<td>88.57</td>
<td>0.151</td>
<td>70,523</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>56.</td>
<td>Tantanpara</td>
<td>92.3</td>
<td>0.136</td>
<td>68,772</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>57.</td>
<td>University Area</td>
<td>75.0</td>
<td>1.487</td>
<td>6,604</td>
<td>Muslim Pop.</td>
</tr>
<tr>
<td>58.</td>
<td>Manik Chowk</td>
<td>92.3</td>
<td>0.100</td>
<td>52,090</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>59.</td>
<td>Mamu Bhanja</td>
<td>83.3</td>
<td>0.100</td>
<td>47,970</td>
<td>Hindu Pop.</td>
</tr>
<tr>
<td>60.</td>
<td>Avas Vikas Colony</td>
<td>80.0</td>
<td>1.383</td>
<td>11,734</td>
<td>Hindu Pop.</td>
</tr>
</tbody>
</table>
## Appendix – II

**List of the Indicators Selected for the Study**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Description</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Population density (persons/sq.km)</td>
<td>(-ve)</td>
</tr>
<tr>
<td>2.</td>
<td>Average family size (no. of persons)</td>
<td>(-ve)</td>
</tr>
<tr>
<td>3.</td>
<td>Average household size (no. of persons)</td>
<td>(-ve)</td>
</tr>
<tr>
<td>4.</td>
<td>Percentage distribution of joint family</td>
<td>(-ve)</td>
</tr>
<tr>
<td>5.</td>
<td>Wardwise percentage employment</td>
<td>(+ve)</td>
</tr>
<tr>
<td>6.</td>
<td>Wardwise percentage literacy</td>
<td>(+ve)</td>
</tr>
<tr>
<td>7.</td>
<td>Percentage adult male literacy</td>
<td>(+ve)</td>
</tr>
<tr>
<td>8.</td>
<td>Percentage adult female literacy</td>
<td>(+ve)</td>
</tr>
<tr>
<td>9.</td>
<td>Percentage male graduates</td>
<td>(+ve)</td>
</tr>
<tr>
<td>10.</td>
<td>Percentage female graduates</td>
<td>(+ve)</td>
</tr>
<tr>
<td>11.</td>
<td>Percentage government school going children</td>
<td>(+ve)</td>
</tr>
<tr>
<td>12.</td>
<td>Percentage private school going children</td>
<td>(+ve)</td>
</tr>
<tr>
<td>13.</td>
<td>Percentage of household subscribing newspaper</td>
<td>(+ve)</td>
</tr>
<tr>
<td>14.</td>
<td>Percentage gazetted sector employment</td>
<td>(+ve)</td>
</tr>
<tr>
<td>15.</td>
<td>Percentage non-gazetted sector employment</td>
<td>(+ve)</td>
</tr>
<tr>
<td>16.</td>
<td>Percentage daily wager employment</td>
<td>(-ve)</td>
</tr>
<tr>
<td>17.</td>
<td>Percentage business and industrial employment</td>
<td>(+ve)</td>
</tr>
<tr>
<td>18.</td>
<td>Percentage housing of less than 100 square yard area</td>
<td>(-ve)</td>
</tr>
<tr>
<td>19.</td>
<td>Percentage housing of 200-300 square yard area</td>
<td>(+ve)</td>
</tr>
<tr>
<td>20.</td>
<td>Percentage housing of more than 300 square yard area</td>
<td>(+ve)</td>
</tr>
<tr>
<td>21.</td>
<td>Percentage housing having open space facility</td>
<td>(+ve)</td>
</tr>
<tr>
<td>22.</td>
<td>Percentage households with sick children</td>
<td>(-ve)</td>
</tr>
<tr>
<td>23.</td>
<td>Percentage of household with sick adults</td>
<td>(-ve)</td>
</tr>
<tr>
<td>24.</td>
<td>Percentage households reporting mental health problem</td>
<td>(-ve)</td>
</tr>
<tr>
<td>25.</td>
<td>Percentage households with healthy/actives senior citizens</td>
<td>(+ve)</td>
</tr>
<tr>
<td>26.</td>
<td>Wardwise average monthly income (in Rs.)</td>
<td>(+ve)</td>
</tr>
<tr>
<td>27.</td>
<td>Wardwise per capita monthly income (in Rs.)</td>
<td>(+ve)</td>
</tr>
<tr>
<td>28.</td>
<td>Percentage very low income households</td>
<td>(-ve)</td>
</tr>
<tr>
<td>29.</td>
<td>Percentage low income households</td>
<td>(-ve)</td>
</tr>
</tbody>
</table>
30. Percentage high income households (+ve)
31. Percentage very high income households (+ve)
32. Percentage nutritional expenditure to income (-ve)
33. Percentage educational expenditure to household income (+ve)
34. Percentage medicinal expenditure to household income (-ve)
35. Wardwise average monthly saving (in Rs.) (+ve)
36. Percentage households affording saving (+ve)
37. Female day time sleep availability (in hrs) (+ve)
38. Male day time sleep availability (in hrs) (+ve)
39. Percentage households with electronic recreation (+ve)
40. Daily recreational hrs. available to female household (+ve)
41. Daily recreational hrs. available to male household head (+ve)
42. Percentage households reporting municipal apathy (-ve)
43. Percentage households reporting communal bias in resource allocation (-ve)
44. Percentage households reporting freedom for female employment (+ve)
45. Percentage households reporting freedom of women to travel alone (+ve)
46. Wardwise quality of roads (+ve)
47. Wardwise nature of drains (+ve)
48. Nature dustbin availability (+ve)
49. Wardwise distribution of street light (+ve)
50. Wardwise cleanliness and maintenance (+ve)
51. Wardwise open space availability (+ve)
52. Wardwise level of noise pollution (-ve)
53. Wardwise security perception of neighbourhood (+ve)
54. Wardwise overall housing quality (+ve)
Appendix - III

QUESTIONNAIRE ON SOCIO-ECONOMIC STRUCTURE AND QUALITY OF LIFE IN ALIGARH CITY

Ward No. ( ) Name of Mohalla ( ) Date ( )
Respondent’s Gender ( ) Age ( )

I. DEMOGRAPHIC AND FAMILY STRUCTURE

(1) Which religion do you profess? (Hinduism) (Islam) (Sikhism) (Christianity) (Buddhism)
(2) What is your migration status? (Migrant) (Native)
(3) What is the nature of your family? (Joint) (Nuclear)
(4) Please provide the following information about your households

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult</td>
<td>Minor</td>
<td>Adult</td>
</tr>
</tbody>
</table>

(i) No. of household
(ii) No. of literate
(iii) No. of employed

(5) What is the marital/parental status of your family? (Both spouses/parents present) (Only husband/father) (Only wife/mother) (Eldest son/daughter) (Husband’s relatives)

(6) Who is the breadwinner of your family? (Husband) (Wife) (Non-gazetted) (Gazetted) (Private sector) (Independent practices)

II. EDUCATIONAL AND EMPLOYMENT

(7) What is the educational qualification of the spouses?

<table>
<thead>
<tr>
<th></th>
<th>Non-matric</th>
<th>Matric</th>
<th>Graduate</th>
<th>Postgraduate</th>
<th>Professional/Technical</th>
<th>Doctorate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Husband</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wife</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(8) Do you subscribe newspaper/magazine regularly?
(i) Newspaper (Yes) (No) (ii) Magazine (Yes) (No)

(9) In which kind of school do your children go for studies?
(Private) (Missionary) (University) (Municipal) (No schooling)

(10) Has education brought employment to your family? (Yes) (No)

(11) What is the nature of the bread winner’s occupation? (Fixed salary service) (Non-fixed salary service) (Daily wages) (Weekly wages) (Business)

(12) If he/she belongs to service categories what is the specification of job?
(Non-gazetted) (Gazetted) (Private sector) (Independent practices)

(13) If in the business what is the scale of business?
(Vendor) (Shopkeeper) (Industrial) (Specialised business)

(14) How many of your generations are in the same occupation?
III. INCOME AND WEALTH STATUS

(15) What is the monthly income (in Rs.) of your family member/s?
- (3000 and below)
- (3001-5000)
- (5001-10000)
- (10001-20000)
- (2001-30000)
- (................)

H., W., E.S./D., H.R., O.

(16) What is the monthly saving (in Rs.) correspondingly?
- (a) 1000 & below
- (b) 1001-2000
- (c) 2001-3000
- (d) 4001-6000
- (e) 6001-8000
- (................)

(17) Mention monthly expenditure (in Rs.) on following needs:
- (a) Medicine
- (b) Education
- (c) Food
- (d) Clothing
- (e) Housing
- (f) Miscellaneous

(18) Does your family have a bank account? (Yes) (No)

(19) How much bank balance does your family have at present? (Rs. ............)

(20) Value of property under your direct ownership (Rs. ............)

IV. HOUSING AND HEALTH CONDITIONS

(21) What is the ownership status of this house?
- (Owning the house)
- (Rented)
- (Govt. quarters)
- (................)

(22) Information about the total area (in sq.yard) of your house.
- (<100)
- (100-200)
- (200-300)
- (300-400)
- (400-500)
- (>500)

(23) What is the nature of open space?
- (a) Balcony
- (b) Backyard
- (c) Courtyard
- (d) Garden
- (e) No open space

(24) How do you rate the security condition of your neighbourhood?
- (Extremely safe)
- (Reasonably safe)
- (Moderately safe)
- (Generally unsafe)
- (Very unsafe)

(25) Qualitative aspect of housing condition (Observation)

<table>
<thead>
<tr>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
<th>Very poor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(i) Apparent condition
(ii) Cleanliness
(iii) Aesthetic condition
(iv) Indoor sanitation
(v) Outdoor sanitation

(26) Does your family have a telephone connection? (Yes) (No)

(27) What is the age structure of the senior family members (in years):

<table>
<thead>
<tr>
<th>Male</th>
<th>60-65</th>
<th>65-70</th>
<th>70-75</th>
<th>75-80</th>
<th>Above 80</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(28) The health condition of the senior households:
Occurrence of disease among children below 5 years:
- Cough
- Measles
- Polio
- Smallpox
- Other
- No sickness

Occurrence of disease among the adult households:
- Cough and Cold
- Headache
- Diarrhoea and Dysentery
- Malaria
- Tuberculosis
- Blood pressure
- Diabetes
- Heart problem
- Others
- Body pain, breathing problem, eye problem etc.

Occurrence of tension induced ailments?
- Hypertension
- Heart problem
- Chronic headaches
- Other
- No problem

LEISURE AND RECREATIONAL AMENITIES

How many hours do the spouses have a sleep at night and during day time (in summer especially)?

<table>
<thead>
<tr>
<th></th>
<th>During day time</th>
<th>At night</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wife</td>
<td>0 1 2 3 4</td>
<td>6 7 8 9 10</td>
</tr>
<tr>
<td>Husband</td>
<td>(...(...(...</td>
<td>(...(...(...</td>
</tr>
</tbody>
</table>

What does the wife generally do during day time leisure hours?
- Sleeps
- Socializes
- Recreates
- Household related works

What does the husband generally do during day time leisure hrs.?
- Sleeps
- Socializes
- Recreates

How many hours do the spouses spend daily on recreation?

<table>
<thead>
<tr>
<th></th>
<th>1 2 3 4 (......)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wife</td>
<td></td>
</tr>
<tr>
<td>Husband</td>
<td></td>
</tr>
</tbody>
</table>

What is the nature of your indoor recreation?
- Electronic recreation
- Reading/writing
- Other creative activities

How many times in a month does family go for outdoor recreation?
- Once
- Twice
- Thrice
- Four time

POLITICAL LEVERAGE

Do your eligible family members vote regularly?
- Yes
- No

Who do you think is responsible for the sorry state of your neighbourhood?
- Lack of neighbourhood concern
- Municipal apathy
- No problem

Do you think that municipal resource allocation in your locality is on caste, creed, and community line?
- Yes
- No
- Don't know

Has your family an easy accessibility/connectivity with the power holder mentioned below?
- Elected leaders
- Ministers
- Bureaucrats
- Local leaders
- No connection

Languages you can read or write:
- English
- Hindi
- Urdu
- Arabic
VII. WOMEN EMPOWERMENT

(43) Have you obtained the eligible education for making a career for yourself?
   (Yes) (No) (Can't say)

(44) Given the chance would you have the right to go for job?
   (Yes) (No) (Not sure)

(45) Can you travel to another city all by yourself?
   (Yes) (No) (Sometimes) (Never)

VIII. POST INTERVIEW OBSERVATIONS

(46) Respondent’s cooperation with the enquiry
   (Very cooperative) (Statisfactorily cooperative) (Not cooperative)

(47) Respondent’s understanding of the questions.
   (Good understanding) (Fair understanding) (Poor understanding)

ENQUIRY OF THE BUILT-UP ENVIRONMENT IN ALIGARH CITY

<table>
<thead>
<tr>
<th>Ward No. ( )</th>
<th>Mohallah ( )</th>
<th>Date ( )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Nature of roads : (Concrete)</td>
<td>(Coal Tar)</td>
<td>(Kharanja)</td>
</tr>
<tr>
<td>(i) Width of the roads : (Good)</td>
<td>(Reasonable)</td>
<td>(Narrow)</td>
</tr>
<tr>
<td>(ii) Surface smoothness of the roads : (Good)</td>
<td>(Reasonable)</td>
<td>(Poor)</td>
</tr>
<tr>
<td>2. Nature of drains : (Unattended)</td>
<td>(Stagnant)</td>
<td>(Spill over)</td>
</tr>
<tr>
<td>(Attended)</td>
<td>(Flowing)</td>
<td>(Contained)</td>
</tr>
<tr>
<td>3. Dustbins (Adequate)</td>
<td>(Inadequate)</td>
<td>(Non-existence)</td>
</tr>
<tr>
<td>(open)</td>
<td>(covered)</td>
<td></td>
</tr>
<tr>
<td>4. Public water taps : (i) No. of functional taps</td>
<td>(…………………..)</td>
<td></td>
</tr>
<tr>
<td>(ii) No. of dysfunctional taps</td>
<td>(…………………..)</td>
<td></td>
</tr>
<tr>
<td>5. Street lights: No. of blind poles/50 poles</td>
<td>(…………………..)</td>
<td></td>
</tr>
<tr>
<td>6. Overall greenry : (Excellent)</td>
<td>(Adequate)</td>
<td>(Moderate)</td>
</tr>
<tr>
<td>(Inadequate)</td>
<td>(Almost absent)</td>
<td></td>
</tr>
<tr>
<td>7. Cleanliness : (Good)</td>
<td>(Fair)</td>
<td>(Moderate)</td>
</tr>
<tr>
<td>(Poor)</td>
<td>(Very poor)</td>
<td></td>
</tr>
<tr>
<td>8. Noise : (Extremely noisy)</td>
<td>(Fairly noisy)</td>
<td>(Moderately noisy)</td>
</tr>
<tr>
<td>(Reasonably quiet)</td>
<td>(Very quiet)</td>
<td></td>
</tr>
<tr>
<td>9. Overall maintenance : (Very good)</td>
<td>(Good)</td>
<td>(Fair)</td>
</tr>
<tr>
<td>(Poor)</td>
<td>(Very poor)</td>
<td></td>
</tr>
<tr>
<td>10. Open space availability : (Good)</td>
<td>(Fair)</td>
<td>(Poor)</td>
</tr>
<tr>
<td>(Almost non-existing)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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