Chapter 1

Introductory Framework, Review of Literature and Methodology
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Introduction:

The growth and development is a continuous process of every dynamic society. The population grows, the standard of living increases and so rises the expectations. The rural masses often tend to be influenced by the economic ‘demonstration effect’ and shift to urban areas while the lower middle class or the middle class expands usually on the outer peripheral of the city /town areas. This is a continuous process leading to creation /expansion of newer urban areas. This expansion should be ideally planned, equipped with basic civic/economic amenities namely drainage, sewage/road/market/parks etc. A major failure of city governance has been our inability to address the needs of the poor. Basic services such as drinking water supply, sanitation, housing and social services are not available to an increasing share of urban population. Growing number of motorized vehicles has made the roads of cities highly congested and of poor quality. Indian cities have not been able to cope with the pressure of
industrial development and the growth of the services economy and the consequent expansion of urban peripherals.

Table-1.1

Number of Cities in India

<table>
<thead>
<tr>
<th>Census Year</th>
<th>Number of Urban Areas</th>
<th>Number of Millions plus cities(population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>3065</td>
<td>4</td>
</tr>
<tr>
<td>1961*</td>
<td>2700</td>
<td>6</td>
</tr>
<tr>
<td>1971</td>
<td>3126</td>
<td>9</td>
</tr>
<tr>
<td>1981</td>
<td>4029</td>
<td>11</td>
</tr>
<tr>
<td>1991</td>
<td>4629</td>
<td>23</td>
</tr>
<tr>
<td>2001</td>
<td>5161</td>
<td>35</td>
</tr>
</tbody>
</table>

Source: Yojna, July 2006 issue

As a resultant to the changes made in 1961 census relating to the definition of city, the number of municipalities have declined. (Village or town is recognized as the basic area of habitation. In all censuses throughout the world this dichotomy of rural and urban areas is recognized and the data generally presented for the rural and urban areas separately. In the rural areas the smallest area of habitation, viz., the village generally follows the limits of a revenue village need not necessarily be a single agglomeration of the habitations. But the revenue village has a definite surveyed boundary and each village accounts. It may have one or more hamlets. The entire revenue village is one unit. There may be unsurveyed villages within forests etc., where the locally recognized boundary of each habitation area is followed within the
larger unit of say the forest range officers' jurisdiction. It is in defining the urban areas that problems generally arise.

Standard Urban Areas: A new concept that had been developed for the 1971 census for the tabulation of certain urban data was the standard urban area. The essentials of standard urban area are:

i) It should have a core town of a minimum population size of 50,000,

ii) The contiguous areas made up of other urban as well as rural administrative units should have close mutual socio-economic links with the core town and

iii) The probabilities are that this entire area will get fully urbanized in a period of two to three decades.

However for the 1971 census the definition for an urban area which follows the pattern of 1961 was as follows:

a) All places with a municipality, corporation or cantonment or notified town area.

b) All other places which satisfied the following criteria:

i) A minimum population of 5,000.

ii) At least 75% of the male working population was non-agricultural.
iii) A density of population of at least 400 sq. km.
(i.e. 1000 per sq. mile)

The Director of census of each state/union Territory was, however given some discretion in respect of some marginal cases, in consultations with the state government, to include some places that had other distinct urban characteristics and exclude undeserving cases.

The idea is that it should be possible to provide comparable data for a definite area of urbanization continuously which would give a meaningful picture. This replaced the concepts of town group that was in vague at the 1961 census. The town group was made up of independent urban units not necessarily contiguous to one another but was to some extent it is interdependent. The data for such town groups became incomparable from census as the boundaries of the towns themselves changed and the intermediate areas were left out of account; this concept came for criticism at one of the symposium of the international geographic union in Nov.-Dec. 1968 and the concepts of standard urban area came to be developed for adoption at the 1971 census.

In many cities such as Bangalore, Hyderabad and Noida, the phenomenal growth of the service sector in the past has exerted unexpected pressure on urban infrastructure and services. As a result of
an increase in population of cities, particularly urban agglomerations (urban agglomerations is a continuous urban spread constituting a town and its adjoining urban outgrowths (OGs) or two or more physically contiguous towns together and any adjoining urban outgrowths of such towns. Example of OGs are railway colonies, university campuses, port areas, etc., that may come up near city or statutory limits but within the revenue limits of a village or villages contiguous to the town or city¹), Indian cities are growing at a rate much faster than the rest of the world, including China. For instance, Mumbai has a population of 28 lakh in 1951 and was the 17ᵗʰ largest city. Today, it is the world’s 6ᵗʰ largest city with 1.22 crore people and in the next 10 years it is expected to become the second largest next only to Tokyo. Also by 2015, three more Indian cities Kolkata, Delhi and Hyderabad will be among the 30 most populated cities in the world, with Mumbai, Kolkata and Delhi making it to the top 12².

Further, the problems get compounded with fast expanding unplanned urban development on the outer skirts of the city. This trend is more prominent in the smaller cities/towns due to lack of eco-political reasons.
**Statement of Problems:**

The planned urban development will be a huge drain on the municipal resources. On the other hand, if ignored on the consideration of lack of resources may have a multiple effect in terms of enhanced cost.

Cost of upgrading the facilities in already settled areas is much higher when compared to cost of planned development. The unplanned development leads to faster spread of diseases, like polio, dihorrea, jaundice and malaria etc. The eradication programme of these has already consumed billions and billions of dollars all over the world. There are clear evidences of spread of these diseases into unplanned outer skirts of many districts of India. It is reported that 12 districts in Uttar Pradesh have reported 47 new cases of polio. If this is not checked in time may wash-out earlier investment in the polio eradication program.

Shortage of potable water, its erratic supply, low quality of water, drainage, Sewerage etc. are some of the basic problems of these areas. Even today majority of houses dispose night soil through manually cleaned service toilet while 15 to 20 percent defecate in open. This indicates high risk to children from oral transmission of viruses and
disease. Since most of urban expansion areas are bypassed by the urban civic services and thus the degree of risk is tremendous.

**Review of the Literature:**

The literature review done during the research period reveals that there is substantial work done by researchers/authors on urban planning in India as well as in many other countries of the world. Various books, journals, magazines have attempted to discuss the issue threadbare. Some of the glimpses are presented are as below:

a. **Books:**

1. Montgomery, Mark R, Stren, Richard, Cohen, Barmey and Reed, Holly E (2004) in their book “Cities Transformed, Demographic change and it’s implications in the developing world” described that the nature of urban management and governance is undergoing fundamental transformation, with programmes in poverty alleviation, health education and public services increasingly being deposited in the hands of interested municipal and regional governments. This book identified a new class of policy maker emerging to take up the growing responsibilities and people’s participation in urban planning and administration.

Regional Development in India addresses a wide range of issues concerning urban and regional patterns and processes of urbanization. It examines the problems that the cities are facing due to their rapid growth. The authors also address the issues pertaining urban structure and change in land use, sustainable agricultural development, forces inherent in natural hazards as well as in their mitigation and management and population resource relationship. The impact of reform policies on regional development has been assessed as well.

3. Thakur, Vijay Kumar (1981) in his book “Urbanization in Ancient India” searches in spite of the developments in the field of urban studies, early historic urban centers in India have failed to attract the due attention of scholars. The present work, which substantially covers a large span of time, can be roughly termed as the age of rise and decline of towns in ancient India.

4. Shaw, Annapurna (2004) in her book “The Making of Navi Mumbai” discoursed the concept of new town or satellite town. The difficulties associated with the creation of such towns has been well documented and rigorously studied. For this very reason, the content of The Making of Navi Mumbai is of particular importance to professionals, practitioners and students of urban development, as it explores the complexities of creating a city in modern India. Although
many new towns have been built in India (e.g. Delhi, Chandigarh), the scale of Navi Mumbai sets it apart from previous urban projects. Envisioned to accommodate a staggering 2 million people, Navi Mumbai is the manifestation of an alternative urban strategy that emanated from a modernist perspective on development.

5. B. Gallion, Arthur, Eisner Simon,6 (2004) in their book “The Urban Pattern City Planning and Design” reveals that contrary to popular belief urbanism did not begin when people left the cave; it probably started in the caves themselves, where the people gathered for protection against the elements or for defense against rival tribes.

6. Bertuglia, C.S., Leonardi G., Occelli S., Rabino, G.A., Tadei R. & Wilson A.G.7 (1987) in their book “Urban Systems: contemporary approaches to modeling” evolved the use of computer models to simulate urban and regional systems has developed rapidly in recent decades. Many of the new developments have been presented in relatively obscure journal articles and are accessible only to those with advanced knowledge. This book presents a state-of-the-art review of the major areas of urban and regional modeling. It surveys recent developments and approaches and presents them in accessible form. It thereby provides an introduction to the field and to its research
literature, an overview of current trends and a pointer to future research directions.

7. Hiraskar, G.K. (2000) in his book "Fundamentals of Town Planning" basically gives the very principles of Town Planning, the true concept of town planning and its fundamentals in bold relief and at the same time it enlarges its scope so as to make it useful to the councilors, local bodies, legislators, civic officials and community development authorities.

8. Nehru, Jawaharlal, 8 (1937) in his book "Vishwa Itihas Ki Jhalak (Limited Edition)" gives an account of his life time experience specially for the Asian region. The development of Harappa and Mohanjodaro as the masterpiece of Planned Urban Development has been discussed at length.

9. Sharma, R.K. and Gupta, Shashi K. 9 (2003) in their book "Management Accounting" has set that Profit Maximization is no more the only aim of business. It is being felt that besides owners, the business should evolve a balance in the interests of employees, customers, suppliers and government and the general public. The business should help in overcoming social problems. It should try to help society even at the cost of reducing its private gains. After all, it is the society, consisting of workers and consumers, which enable
business to earn profits. Thus, no business could be allowed to exist if it is detrimental to the interests of the society. It also discussed that every developing country allocates its scarce resources among different sectors within the economy and among different projects within each sector of the economy. For determining the rationality of investment in any project, within commercial or a project undertaken for social uplift as a whole, cost benefit analysis is necessary.

This book has also presented different approaches of cost to benefit analysis. Several accountants, economists and social scientists have formulated different approaches and formats for the purpose of measuring and reporting social information. However, there is no single approach which has been generally accepted. Some of the important approaches are as follows:

**Social Indicator (Brummet) Approach:** This approach involves different areas of social contribution to be undertaken by business corporations. Lee Brummet in 1973 in his article ‘Total Performance Management’ defines accounting and communication of economic and social information and purposes the following measurement taxonomy:

\[
\text{Total Performance} = \text{Net Income} \pm \text{Human Resource Contribution} \\
\quad \pm \text{Public Contribution} \\
\quad \pm \text{Environmental Contribution} \\
\quad \pm \text{Producer Service Contribution}
\]
Brummet further details the contents which should be included in each of these performance elements, called social indicators. For example, the product or service contribution includes product safety, durability utility, maintainability, customer satisfaction, truthfulness in advertising, etc.

Other approaches like classical, descriptive, integral welfare theoretical approach, Linowes operating statement, social Income statement and Balance Sheet (Abt’s model), Multidimensional Statements (Colantoni, Copper and Dietzer Model) and Net contribution/Estes Model) have also been discussed.

10. Sharma, TC and Coutinho, O., (1980) in their book give an account of main objectives and outlines of economic and commercial geography of India. It discusses India’s physical environments, economic resources and economic activities with an emphasis on spatial and temporal variations of the country’s natural resources and economic activities associated with their exploitations. It also studies in detail the natural vegetation, soils, irrigation, India’s major power projects, problems of agriculture relating to food problem with remedial measures.

Century" has done a critical analysis of planning in theory and practice in the 20th century, as well as of the social and economic problems and opportunities that give rise to it. It reviews the development of the modern planning movement over the entire span of the 20th century.

12. Roo, Gert De and Miller Donald11 (2004) in their book "Integrating City Planning and Environmental Improvement" presents their findings critically and seeks to encourage further innovations in this field. Eleven countries have implemented pilot schemes that integrate urban physical planning and environmental quality management.

13. Fainstein, Susan S. and Campbell, Scott12 (2003) in their book "Readings in Planning Theory"- have examined the current state of planning theory and the new directions it has taken in recent years. The editors have selected a set of classic and contemporary writing to address a central question: what role can planning theory play in making the good city and region within the constraints of a capitalist economy and a democratic political system? The volume draws on a wide range of authors who address planning history, arguments for and against planning, competing planning styles, planning ethics, the public interest and considerations of race and gender. Theoretical perspectives include political economy; post modernism, communicative rationality;
and feminism. This edition examine themes emerging in planning theory including a critique of the modernist roots of centralized planning, a reemphasis on space in planning and a discussion of the difficulty of sustainable development. The second edition also features new cases studies of planning success and failure in both the United States and the United Kingdom. In this second edition of readings in planning theory, Editors retain 10 out of the 28 original readings from the first edition.

14. Hall, Peter Geoffrey (2002) in his book “Urban and Regional Planning” has done a historical overview of the developments and change in the theory and practice of planning, throughout the entire 20th century. This extensively revised edition follows the successful format of the previous editions. Specific reference is made to the most important British developments in recent times, including the devolution of Scotland, Wales and Northern Ireland, the establishment of the mayor of the London and the dominant urban suitability paradigm.

16. Ward, Stephen Victor\textsuperscript{15} (1992) in his book “The Garden City: Past, Present and Future” has examination of a phenomenon of 19\textsuperscript{th} century planning traces the origins, the implementation, international transference and adoption of the Garden City idea. It also considers its continuing relevance in the late 20\textsuperscript{th} century and into the 21\textsuperscript{st} century.

17. Sivaramakrishnan, K.C., Kundu, Amitabh and Singh B. N.\textsuperscript{16} (2005) in their book “Handbook of Urbanization in India” developed a better understanding of India’s Urbanization. While the 2001 Census and the previous Census Reports have provided the principal source of data, these have been supplemented significantly by information available in the economic Census, NSS, and other sources.

b. Reports and Case Studies:

1. Report of Jawaharlal Nehru National Urban Renewal Mission (JNNURM) Report\textsuperscript{17} (2006) highlights that cities and towns have a vital role in India’s socio economic transformation and change. Host to about 30 percent of the country’s population, they contribute 50-55 percent of the gross domestic product: at the same time, most cities and towns are severely stressed in terms of infrastructure and service availability, and their growth and development is constrained by indifferent implementation of the constitution of status, systems and procedures that impede the operation of land and housing markets. The JNNURM
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aims to encourage cities to initiate steps to bring about improvement in the existing service levels in a financially sustainable manner. The JNNURM report consists of two sub-missions: the urban infrastructure and governance and the basic services to the urban poor.

2. The Pre Feasibility Report of water supply, drainage, sewerage for Aligarh of U.P. JAL NIGAM, Construction Division,\(^{18}\) (2004 -2005) has thoroughly covered all the important aspects of the urban infrastructure of Aligarh town and made a comprehensive report of the cost requirement of all the aspects.

3. Sankhiyiki Patrika of Zila Arth Evam Sankhyaadhikari Aligarh,\(^{19}\) (2005) has given a complete account of all the statistical information about Aligarh Distt.

4. Report of the SMART on seven high risk areas of Bulandshehar (U.P.) on Sanitation and Hygiene\(^{20}\) 2004) has been very useful to understand and solve the urban problems of Aligarh.

5. Master Plan of Aligrh Development Authority has been very important in view of the understanding the future needs of Aligarh city. The Master Plan covers the period from 2001-2021\(^{21}\).
c. Articles from Journals/Periodicals/News Papers:

1. Hasan, Arif, Patel, Sheela and Satterthwaite, David (2005)\textsuperscript{22}, in his article draw that why has 50 years of development cooperation failed to address the needs of much of the population in low-and-middle income nations? Among the many competing explanations, one of the most plausible for urban areas is the failure of most development initiatives to consult and work with "the urban poor" in devising locally appropriate solutions - even though these people's "needs" are the justification for the development initiatives and for all the agencies that found them, and even though most international agencies claim to support "participation" and to be "pro poor".

2. Gupta, S. L and Sharma, Meenakshi (2007)\textsuperscript{23}, in his paper, established that the nations that have enjoyed great social and economic progress are those with strong retail sectors.

3. Burra, Sundar (2005), in his paper examines the institutional framework and financial mechanisms for "Slum" upgrading in Mumbai, including the use of Transferable Development Rights (TOR), and assesses their strengths and limitations.\textsuperscript{24}

4. Stober, W. J. and Falk, L. H. (1967), in their paper revealed that public investment, particularly in the area of water-resource development, has received increased attention in recent years. This
paper deals with water-resource development by local government. Specifically, we examine the problem of a community faced with a shortage of water for industrial and municipal use.\(^{25}\)

**Research Gap and Scope of the Study:**

Based on the pilot research conducted by the researcher, it is noted that so far no Cost Benefit Analysis of India's Urban Planning has been done for any of the urban areas in the country. In absence of specific findings regarding the potential benefits of Planned Urban Development, the bodies concerned often ignore such a major issue. Most of the urban problems have a genesis from highly skewed and unorganized expansion/concentration of urban spread. Individuals mostly buy and sell properties in these areas leaving little scope for creation of basic amenities at a later stage; therefore these issues need to be studied. Proper Urbanization is one of the most pressing challenges being faced by India today. It is inevitable that over the next 20-30 years, India will double in Urbanization from 30 percent to 60 percent. This will be at a time when we also have the largest pool of young people in the world. The combination of Urbanization, the demographic surge, globalization and the economic growth that consequently will be unleashed, present the most significant opportunity for India to reach a developed status. But for this, we have to get our cities right. Classical
concepts on urban matters are based on implicit assumptions of slow steady growth, not the explosive torrent of people rushing into each of our cities areas. To make our cities world-class, we will have to think of a new paradigm.

**Objectives of the Study:**

1. To highlight the problems of unplanned urban development and benefits of planned urban development.

2. To ascertain the cost of planned urban development and cost of unplanned urban development.

3. To develop a cost Benefit model for planned urban development.

**Hypothesis of the Study:**

The study seeks to test the following hypothesis.

Ho1-The study assumes that the development on the urban outer skirts is planned. On the other hand the alternative hypothesis suggests that the development on the urban outer skirts is unplanned.

Ho2-The study assumes that there is no gap in the basic civic amenities in the urban outer skirts be it planned or unplanned. Nevertheless the alternative hypothesis suggests that there is a huge
gap in demand and supply of basic civic amenities in the urban outer skirts of unplanned areas.

Ho3-The study assumes that the opportunity cost of planned urban development (cost of unplanned urban development) is unbearably high indicating an urgent need for planned urban development. On the contrary the alternative hypothesis suggests that there is no urgency of planned urban development.

Ho4-The study assumes that planned urban development is hindered because of lack of resources alternatively the hypothesis that it suffers because of lack of attitudes on the part of local bodies.

Research Methodology:

The study will be scientifically based on the basic cannons of social science research. An endeavour has been made in the present study to cull up relevant statistics from primary as well as secondary source of information. In the presence of objectives set to analyze the Aligarh city's some most important urban areas i.e. Swaran Jayanti Nagar and Maulana Azad Nagar. The study has approached to make analytical study through the use of significant statistical tools.
Sources of Information:

In the first place data have been collected from the office of Uttar Pradesh Jal Nigam, Aligarh Development Authority (Sewa Sadan), Zila Arth Evam Sankhyadhikari, Department of Community Medicine, A.M.U., Department of Geography, A.M.U., Ministry of Urban Development's report on Jawaharhal Nehru Urban Renewal Mission (JNURM), Articles published in journals and periodicals, like Environment and Urbanization.

The Pre-Feasibility report of UP Jal Nigam, Aligarh Statistical Magazine of Zila Arth Evam Sankhyadhikari, Aligarh, Report on Community Mapping of Five Polio High Risk Areas of Bulandshahr (UP) by J. N. Medical College, A.M.U., Aligarh and SMART Aligarh Office, Aligarh have been made good use to study and analyze the problems, issues and challenges.

Consolidated figures have been collected through journals and periodicals such as Business Today, Yojana, Frontline, etc.

The articles and write ups on urban development appearing in the news dailies like The Hindu, The Times of India and Hindustan Times have been thoroughly scanned to examine the urban planning related problems and issues critically and extensively.
Secondly, the data have also been collected from the localities under consideration with the help of questionnaires and observation schedule. The focus of primary data was mainly to reflect on prevailing economic status, educational status, health and hygiene and environmental conditions of the locality and their health status having a toll on the income as well as expenditure component of the family budget. Photographic sessions have also been held to depict a clear picture of the existing infrastructure.

Data Computation and Tabulation:

Data related to urban planning, Cost benefit analysis, facts, figures and Aligarh city have been collected from primary and secondary sources. Some of the data have been compiled and collected to ensure the reliability of the measurement at maximum possible event. After collection and collation of the data, they have been processed through computer software for application of relevant statistical tools, analysis and interpretation for arriving at the findings.

Statistical Tools and Techniques Used:

In order to present a cost benefit analysis and community mapping of Aligarh city's some localities various statistical tools and techniques have been used according to the requirement and suitability.
The statistical tools used are the Frequency mean, Standard Deviation, percentage and T-Test.

Mean:

For a data set, the mean is the sum of observations divided by the number of observations it is denoted by \( \bar{x} \) i.e.

\[
\bar{x} = \frac{1}{n} \sum_{i=1}^{n} x_i = \frac{1}{n} (x_1 + x_2 + \cdots + x_n)
\]

Now if an observation \( x_i \) has corresponding frequency \( f_i \), then we have

\[
\text{Mean } \bar{x} = \frac{1}{N} \sum_{i=1}^{n} f_i x_i, \text{ where } N = \sum_{i=1}^{n} f_i
\]

Standard Deviation:

Standard deviation is the positive square root of the mean of the squares of the deviations of the given values from their mean. It is denoted by \( \sigma \) i.e.

\[
\sigma = \sqrt{\frac{1}{N} \sum_{i=1}^{n} f_i (x_i - \bar{x})^2}
\]

Where \( \bar{x} \) is the mean of the distribution and \( N = \sum_{i=1}^{n} f_i \).

t-Test:

Under the null hypothesis, \( H_o \)

(i) The sample has been drawn from the population with mean \( \mu_o \) or
(ii) There is no significant difference between the sample mean \( \bar{x} \) and the population mean \( \mu_o \)

the statistic \( t = \frac{\bar{x} - \mu_o}{S / \sqrt{n}} \),

where \( S = \sqrt{\frac{1}{n-1} \sum_{i=1}^{n} (x_i - \bar{x})^2} \), with \( (n-1) \) degree of freedom.

When \( (n-1) \) degree of freedom we now compare the calculated value of \( t \) with tabulated value at certain level of significant. If calculated value is greater than tabulated value.

**Significance and Utility of the Study:**

In this backdrop the importance of Planned Development of cities and positioning of India in the overall international scenario study of Aligarh city are significant. Aligarh city is fast growing in terms of population though a mediocre city of Uttar Pradesh. Uttar Pradesh is the most populated and one of the most important states of India. If the population of UP is taken alone it is like the 6th largest country of the world. Findings for Aligarh city can be replicable in other third world countries and mainly in India, Pakistan and Bangladesh (due to geographic, demographic and sociological similarities).
References:


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19. Sankhiyiki Patrika of Zila Arth Evam Sankhyaadhikari Aligarh, 2005


