INTRODUCTION

The need for shelter is as old as the origin of the *Homo sapiens*. From a primitive cave in Africa to a condominium in Florida, the house has indeed come a long way. Apart from its gradual evolution in form and structure, the perspective in which the house is viewed and the functions it performs have also changed over time. Security from nature’s vagaries and wild animals during the stone age; a place of residence in the bronze age; an index to the resident’s social status in the first cities; a place of work during the medieval age; a haven of privacy in modern times - the house has performed a variety of functions, many of these simultaneously, over the ages. All through, its relevance in human life and its status as one of the three basic necessities, has continued undiluted. This is especially true of the urban scenario, where residential types and forms constitute a distinct component of urban morphology. In addition, housing is the most visible manifestation of urban affluence and quality of life as also of urban poverty and squalor. Little wonder then that the issue strikes a chord with politicians and social activists, urban planners and social scientists, architects and environmentalists alike.

Research Perspectives on Housing

Owing to such a multi-dimensional nature, housing has attracted research interest from a number of disciplines. International funding organisations, such as the World Bank, highlight the poor living conditions of people, especially in the developing world. They seek the solution to this problem through promotion of the private sector. They are concerned more with the questions relating to finance and its efficient utilisation for housing. By comparison, proponents of the political economy perspective are concerned with issues like social justice. They seek equity in housing in favour of the poor. Imbalances in the distribution of urban
land and finance for housing, is their main focus of investigation. They also highlight distortions in the policy framework in this regard.

Among the social scientists and professionals, economists study the working of the housing market in the context of demand and supply. They would like to distinguish between need and effective demand. Sociologists view the house primarily as a medium of social integration. Societal implications of housing like poverty, disease, delinquency, segregation and integration are of interest to them. Planners are more concerned with the practical aspects of the provision of housing. They give practical shape to the social science research output.

How should housing be examined from a geographer’s angle? The answer boils down to the matters of perspective and scale. Specific to geography is the spatial approach by which phenomena are seen as differing from one place to another. Thereby, a geographer seeks answers to three basic questions: How does housing differ over places? How is the nature of housing related to the prevailing physical, economic and social conditions of the place? How does housing of a given nature impact upon the geographic personality of a place?

The matters of scale involve analysis at different levels: micro or individual, local or community, regional, national and global. At the individual level, besides its primary functions of providing shelter from the elements of nature, a house fulfills certain physiological, psychological, social and economic needs. A place to rest and sleep, it is a source of physical and mental security. An index to the individual’s nature and quality of life, it helps establish his or her social identity. The house is thereby a medium of social integration and interaction. It may be looked upon as a productive investment or a base from which to exploit opportunities for self-employment.

At the community level, a number of dwellings taken collectively may be termed as housing. Enjoying a broader scope, housing includes, apart from the physical
dwelling units, basic services like potable water, sanitation, drainage and electricity. Community based organisations are now rightly seen as a solution to urban problems at large.

At the regional level the prevalent state of housing is indicative of the level of socio-economic development. A healthy living environment would reflect a higher level of social development. A higher percentage of resident owned houses and the availability of adequate space represent economic development. The physico-climatic conditions of a place also impact upon the style and state of housing.

At the national level, housing forms an important part of the strategy of the government for the alleviation of poverty and employment generation. The creation of an enabling environment for people to build houses is necessary. In addition, housing is also regarded as essential to the nation’s economic growth. At the global level, the improvement of the living and working environment of people is considered of prime importance. The principles of civic engagement, sustainability and equity are considered essential to this task (UNCHS, 1995, p. 5). Governments all over the world regard housing as an obligation, especially towards the poorer sections of the society. Slums have thus received great attention.

The Housing Problem: An Overview

Irrespective of geographic location and development level, the most talked about thing in respect of housing today is its scarcity and lack of desired quality. Housing, as a problem, emerged in the western world, coterminous with the industrial revolution that induced large scale migration to urban centres. Deterioration in the quality of housing of city dwellers set in. This owed partially to congestion and partially to pollution. It acquired the dimensions of a crisis, however, in the aftermath of the two World Wars, when migrations, on a large scale, took place and millions were left homeless. United Kingdom, France and Germany, among others, then invested a sizeable amount in social rental housing.
Socialist governments in Eastern Europe, for reasons of political ideology, also invested heavily for augmenting the housing stock. Here housing provision was considered a form of wage compensation. The weakening of the welfare government in Western Europe and the fall of the communist regime in East Europe led successive governments to opt for sale of social housing units. Simultaneously households were encouraged towards home ownership. Inherent differences in quality within social housing units led to an unequal demand for the same. This resulted in the dilapidation of certain neighbourhoods for want of private investment and the further marginalisation of residents residing therein. This has emerged as a major policy concern in these countries.

Apart from being a welfare measure, investment in housing was seen as a means of creating employment, increasing expenditure on home furnishings and providing a much needed fillip to flagging national economies. The last was particularly true of the United States that was fighting hard to come out of the great economic depression of the thirties’ decade (Doling, 1997). The country promoted suburbanisation in a bid to increase consumption levels and perpetuate the capitalist system (Harvey, 1978, pp. 100-31). In addition, the country also invested in some amount of welfare housing. However, such housing estates have now taken the form of residual housing, that accommodate the economically and socially marginalised, including women headed households, ethnic minorities and the geriatric population. Integrating these within the mainstream housing system is a major problem in the country. The high rate of housing production has also led to the dereliction of certain inner city neighbourhoods. The conservation and regeneration of these is another area requiring attention.

The developing world that is even now experiencing the ramifications of industrialisation and urban ward migration is still grappling with housing problems of the most elemental nature. Not only is the problem greater in magnitude and sharper in intensity, the resources available at the disposal of these countries are meagre and the political will in most cases is lacking. Even by early nineties, some
600 million urban dwellers lived in life threatening or health threatening homes and neighbourhoods because of poor quality shelters, dangerous sites and inadequate provision for safe water supply, sanitation, drainage or health care (Cairncross et. al., 1990). The primary challenges facing third world governments, in respect of housing, today are: ensuring all citizens find adequate accommodation and access to basic services; protecting citizens from exploitation by landlords; protecting the urban environment from contamination by health threatening pathogens and pollutants; integrating the informal housing sector with the mainstream; and ensuring an equitable access to housing across all economic and social strata.

Countries of the developing world have dealt with this problem in a variety of ways, although one observes points of convergence among strategies adopted by various countries. Beginning with the provision of social rental housing and slum removal, state policy shifted to provision of sites and services and subsequently in situ upgradation of slum localities. Alongside, efforts have also been made to use land as a tool for ameliorating the housing problem. Land policies adopted with this view, however, have mostly proved counter productive. Singapore, proved an exception in this case. Here socialisation of land was used as an instrument for alleviating housing poverty, by razing of slums and replacing these with high rise apartments, where slum dwellers were resettled. Doubtless, state ownership of almost 50% of the total land in the city helped make the endeavour a success. Countries such as Israel opted for programmes of urban renewal in order to conserve and improve existing housing stock. With the onset of liberalisation, in most developing countries the State is delegating the task of provision of housing to the private sector. The ramifications of this act are likely to result in a multitude of new problems, not least among these, being the polarisation of housing standards between households emanating from various income groups. The difference in the nature of housing problems existing in the developed and developing world finds response in the nature of research themes popular in these parts of the world.
Review of Literature

Traditionally, housing research within urban studies appears as a defining component of urban morphology. The distribution of household types within the city has been of particular concern to urban geographers. The “sector theory” of Hoyt (1939) dealing with the structure and growth of residential neighbourhoods in American cities is a prime example of this. Gideon Sjoberg (1965), in his account of the pre-industrial city, links the segregation of population groups with their social status within the city. Vance (1977) in his volume *This Scene of Man*, traces the historic evolution of the form and type of house in response to changing socio-economic scenarios in urban places, from the Roman *palazzo* and the *villa* to the boarding houses of an industrialising Europe and the tenements and ghettos of American cities. Clearly, housing could be analysed/viewed in terms of characteristics of residential localities or in terms of structure of houses. Thus it is that one comes across terms such as ‘inter war semi-detached housing’ and ‘working class areas’ (Carter, 1995, p.221), the one alluding to the structure of house and the other to the nature of locality.

A seminal treatise on housing was produced by Abrams in 1964. This identified the issues relevant to housing, including land management, housing finance, building materials and housing policy. All of the above were analysed with reference to both the developed and developing worlds. The only full-fledged book produced on the theme within the subject of geography is perhaps Bourne’s *The Geography of Housing* (1980).

Of recent, research on urban housing has experienced a spurt with most volumes on urban geography including a component of urban housing. This trend has gained momentum with the importance being attached, in recent times, to the analysis of the urban environment, of which housing is a manifestation. Housing research also finds mention in volumes on urban poverty. This is more typical of the developing world, where poor quality housing and a lack of amenities, are very visible manifestations of urban poverty and squalor. In this respect, housing
research in the developed and developing countries of the world differs vastly in content and focus. Whereas the developing world is still struggling to provide the most basic requisites of shelter to a vast majority of its urban dwellers, the developed world is more concerned with the qualitative aspects of housing, the parameters along which the latter are measured also being far superior to those employed in the developing world. Accordingly, studies included in the present review have been organised on the basis of region of focus. However, at one point the ‘twain does meet’. A research theme common to both the developed and developing world deals with housing policy issues. It goes without saying, though, that policy concerns in both areas differ.

In the developed world, debate on housing has moved beyond meeting housing targets or discussing the impact of particular kinds of housing tenure or even the employment generating effects of building activity. Instead, it centres on the environmental impacts of various kinds of residential development. Both the physical and the social environment have been analysed. Studies on the physical environment deal with issues, such as planning sustainability and urban capacity (Murdoch, 2004), changing urban landscapes through residential development (Whitehand, 2001), and location of community facilities (Flahant, et al., 2002). Those on the changing social environment include studies dealing with residential segregation and of ways of mitigating the process. Studies on this theme deal with cities in Netherlands (Bolt, et al., 2002), erstwhile Soviet Union (Gentile, 2003) and Britain (Valins, 2003). Not far removed from these are studies that analyse housing choice behaviour. Residential mobility (Rossi, 1955; Atkinson, 2000), and perceptions regarding residential space (Purcell, 2001; Basten, 2004; Oort, 2003), have been favoured themes. Gentrification, particularly of the inner city areas has received considerable research emphasis as well. The process has been analysed by Hackworth and Neil (2001), Bridge (2001) and Phillips (2004). In addition, the interaction between the housing sector and the wider environment has also been of interest to researchers in the developed world. Levels of house ownership, for instance have been related to family wealth (Forrest and Murie, 1995) and taxation
policies and housing subsidies (Freeman, 1997; Flood and Yates, 1989; Lyons and John, 2000). Further, housing consumption behaviour as impacting upon and impacted by the macro economic situation and consumer preferences has also been studied (Forrest and Williams, 2001).

The post socialist regime in the countries of East Europe witnessed large scale sale of social housing earlier owned by the State. The dynamics of this process and the changes it wrought in the housing markets of these countries has been the focus of a number of studies carried out during the nineties’ decade (Bodnar, 1996; Danielli and Struyk, 1994; Harloe, 1995).

Housing policies and their genesis have been analysed by scholars in the developed world. The promotion of house ownership has been related to an effort at strengthening family ties and checking the State expense on social services (Winter, 1994). Harvey (1978) on the other hand attributes the promotion of the process of suburbanisation to an effort to maintain consumption levels especially those of fuel, cars and consumer durables in support of capitalism. Housing research in the developed world thus emanates as a response to the housing challenges thrown up in a particular context. In this case it focuses on the housing environment, housing choice behaviour, the resultant patterns at the intra city level, housing policy research and the interaction of the housing system with the larger socio-economic environment.

In a similar vein, housing research in the developing world is influenced by the prevailing housing situation in this part of the world. The dismal housing conditions, the yawning gap between the need and availability of housing, the predominance of the informal sector in housing, the significance of urban land in the context of housing, the largely unsuccessful efforts made by the State for the amelioration of housing conditions, are all distinctive characteristics of housing in the developing or the third world as it is often called. Each of these find representation in housing research focused on this part of the world.
Succinctly put, all housing research in the developing world may be organised into two broad sub-themes: one, defining the housing problem and two, seeking solutions to these problems. Defining the housing problem involves taking stock of the housing situation, identifying parameters along which housing standards may be measured and delineating issues critical to the state of housing. Research in this genre was conducted by Gilbert (1978, 1982, 1991, 1992, 1993 and 2000), probably one of the most prolific contributors on this theme, over a period of a quarter of a century. Concentrating on the cities of the third world in general and those of Latin America in particular, Gilbert has reflected on the nature of housing inadequacy, peculiar to the third world cities. Further, he placed these shortages in the right perspective by delinking housing standards in the developing world from those of the developed world. Issues critical to the housing situation, have also been identified, chief among these being: the provision of land, housing finance, setting realistic goals and paying special attention to the needs of women.

Indeed others, apart from Gilbert, have linked housing shortages to urban poverty and have further studied the impact of the former on the health and environment of urban dwellers and urban dwellings (Gilbert and Gugler, 1982; Cairncross, 1990; Satterthwaite, 1993; Ekblad, 1993; Pernia, 1994; Degelin, 1994; Nizamuddin and Khuda, 1995). The alleviation of urban poverty and the empowerment of the poor are seen as the solution to housing problems. Owing to the severity of the problem, perhaps, it is felt that the situation cannot be left to the machinations of the market forces. State intervention in housing in this part of the world, so, is omnipresent. A plethora of work on this theme within housing, thus comes as no surprise.

Research on State intervention in housing is found under the umbrella of ‘housing policy’ studies. It deals with housing policy analyses / description, innovative means for mitigating the problem of housing scarcity and documentation of success stories in housing management. Turner’s (1976) work has proved seminal in this regard. The publication of his ideas in Housing by the People, led to the formulation of the famous ‘Sites and Services’ scheme adopted in almost all
countries of the developing world. Herein, the practice of providing built houses to the urban poor, was replaced with the provision of serviced land on which they were free to construct, using whatever means they could. The programme met with varying degrees of success at different places and has been the focus of study in third world cities of Africa (Tipple, 1976), Latin America (Gilbert and Ward, 1985), and Asia (Degelin, 1994). The strategy has been critically analysed and has also drawn considerable flak for giving governments an excuse to free themselves of the responsibility of housing the poor. Burgess (1977), Linden (1986), Schuman (1986) and Kosta (1992) have been particularly vociferous in their criticism.

Not far removed from this topic is that of the role of access to land in urban housing. Gilbert (1991) has identified land as one of the critical elements in housing provision. Blacken and Linden (1992) explored land access options for the urban poor in third world countries. In a similar vein, Siddique and Khan (1990) conducted an inquiry into the provision of land to the urban poor in Hyderabad, Pakistan. Angel and Pornochokchoi (1990) explored the functioning of the informal land market of Bangkok and Wadhwa (1983) carried out a similar exercise for urban fringe land markets in India. It emerges that access to affordable and serviced urban land is crucial to resolving the housing problem.

Documentation of success stories and best practices in housing provision include the example of ‘micro-brigades’ of Cuba (Kosta, 1989), ‘danwei’ of China (Li and Siu, 2001), ‘socialisation of urban land’ in Singapore (Salaff, 1997) and the involvement of NGOs (SPARC, 1990) in India. In addition, housing policy reviews have been conducted for Latin America (Gilbert and Ward, 1985; Kusentzoff, 1997), South-east Asia (Aldrich, 1993) and India (Singh, 1992; Rakesh, 1996; Pugh, 1990) among other countries / regions.

Research on housing in the developing world thus focuses primarily on the distortions within the housing system. Accordingly, it centres on the marginalised sections and areas within the system such as the urban poor, women headed
households and the informal component of housing including slums and slum dwellers. Issues of major concern include increasing home ownership, access to land and finance for the marginalised, and improving the housing environment.

A perusal of the existing literature on housing in the developing world sensitises one to some pertinent facts, with regard to housing. Firstly, it becomes obvious that housing extends beyond the mere structure to include amenities and a conducive housing environment. Secondly, access to housing is distorted due to dysfunctional housing markets. Thirdly, a number of elements are critical to housing supply, the chief among these being: land, finance and policy. Fourthly, access to housing is also influenced by factors existing beyond the housing system like the state of the economy, the political regime and other socio-demographic variables.

As intended, literature survey also reveals some gaps in housing research. Firstly, there are hardly any studies on the theme of housing at the macro level. Secondly housing studies are concerned more with particular sections of people (chiefly the marginalised) or certain forms of housing (particularly the informal sector). There is hardly any study that transcends boundaries between population groups and housing sectors. The present research exercise, in this light, seeks to conduct a macro level inquiry into the state of housing in India. Recognising the fact that the housing process operates in a system where a piecemeal analysis does not yield comprehensive results, the study seeks to delineate patterns of the state of housing and establish its determinants as well as its implications. An analysis of the last is particularly important so as to avoid creating additional problems through the process of adopting ‘half-baked’ solutions.

Cities have been retained as the focus of interest in deference to the fact that the housing problem is most acute in cities. Moreover, the unabated influx of population into cities from the rural hinterland does not bode well for the future housing scenario in cities. Already the world is an urban majority. Within India,
cities (towns having a population of at least 100,000) accommodate almost two-thirds of the urban population. Cities in the third world are under acute stress and the stress manifests itself in poor housing conditions, epitomised by flimsy housing structures, constrained access to amenities and a polarisation in housing standards. Housing conditions are also known to have a bearing on the health and consequently the productivity of urban workers. An analysis of housing conditions in cities thus is replete with social, economic, administrative and demographic inflections.

**Objectives, Research Questions and Hypotheses**

Taking cognizance of the gaps in literature surveyed and the geographic perspective, the avowed objective of this research exercise may be spelt as an understanding of the state of housing in Indian cities, in terms of the patterns created, determinants involved and implications thereof. The main questions generative of the present research exercise include:

- What are the adequacy, quality and equity patterns of housing in Indian cities?
- Which are the factors that influence these patterns?
- What housing strategies are adopted by households at the intra-city level?
- How do these impact upon the housing patterns and situation at the intra-city level?
- In what manner has the state intervened to remove distortions in the housing system?
- How does housing respond to various socio-economic, politico-administrative and demographic developments in the wider system?

In response to research questions raised, the following hypotheses were framed for testing:

- Owing to the rapid pace of urbanisation, unaccompanied by a parallel enlargement of the housing stock, an acute shortage of housing is expected in Indian cities.
- The quality of housing differs by location, size and function of city.
Since housing is a capital intensive activity, its quantity and quality will be inequitable by region and locality.

India being a welfare state, the government intervened for removing distortions in the housing system.

In addition to testing these hypotheses, the research exercise also undertakes to investigate the housing strategies of households and the manner in which the housing system influences and is in turn influenced by the larger city system. Further, it seems axiomatic to state that land and finance play an important part in determining the state of housing. In that context, the role of the two will be looked into, in particular.

Methodology

A comprehensive inquiry into the state of housing in Indian cities calls for an analysis at the macro as well as micro level. For one, the findings at the macro level could be verified at the micro level. More important however is the fact that in the context of the third world, the households play a particularly significant role not just in the construction of the house but also in taking decisions regarding the location, the tenure (owned or rented), the time of house acquisition, the mode of house acquisition (through self construction, purchase, inheritance or renting) and the source of housing finance to be accessed (formal or informal). All of the above decisions have ramifications for the state of housing at the national level and are in turn influenced by prevailing socio-economic and political environment. The role of the household can be best judged at the micro level. Hence it seems prudent to conduct the study on two scales: macro as well as micro.

This calls for the adoption of ‘twin methodologies’. At the macro level, housing patterns for all 300 cities of the country will be studied. Patterns will be analysed along the parameters of adequacy, quality and equity. Data available with the Census of India, 1991 would be used (the Census of India 2001, has made available more recent data on housing but it could not be put into service at this
late stage of preparation of the thesis). The adoption of indicators for the above
parameters is of prime significance. The choice was governed by conceptual
underpinnings and data availability. An adequate house is defined as one that is
strong enough to withstand the onslaught of natural vagaries, one that is solely in
the possession of the household, one that provides adequate space for the
fulfillment of the household’s physical and psychological needs and one that was
owned by the household. Hence the indicators of housing adequacy are taken as:
houseless households, household: house ratio, households residing in kutcha
houses, households residing in one room houses and households residing in rented
accommodation. All these together are expected to represent the housing pressure
that exists in Indian cities. The ‘Housing Pressure Index’ will be calculated by
aggregating the weighted scores along all the indicators for a single city and
standardising the score against an average of 100.

Housing quality is represented by level of access to basic amenities including safe
drinking water, electricity and toilet facility. The presence of pucca/ semi-pucca
houses, it is felt, will ease the access to these facilities. This has accordingly, been
adopted as the fourth indicator of housing quality. The index for housing quality
will also be calculated using the same methodology as that for the adequacy index.

Housing equity has been measured in terms of the difference in levels of access to
basic amenities between non-scheduled caste and scheduled caste households. The
greater the difference, the higher the disparity. This has been taken, as an indicator
of housing equity since data for slum and non-slum localities is not uniformly
available. Moreover, it is felt that a considerable proportion of the households
residing in slum localities is scheduled castes. Data on scheduled caste households
thus may be taken to represent the slum conditions. Another problem faced in this
regard is that data is not available by cities. Instead, it is found by rural and urban
components of districts. To circumvent this problem, the data of such districts
where the city population comprises more than 75 per cent of the urban component
will be used as a surrogate for the city. Such cities number 70 in all.
Population of Cities

- 5,000,000 and above
- 1,000,000 - 4,999,999
- 500,000 and 999,999
- 100,000 and 499,999
In addition to analysing patterns at the macro level, the situation regarding provision modes of housing, housing finance system of the country and the housing policy was also analysed at the macro level. Data / information for the same was accessed from governmental and quasi-governmental agencies like Planning Commission of India, National Sample Survey Organisation, National Housing Bank, Ministry of Housing and Urban Development / Poverty Alleviation and various housing finance institutions will be sought. The information was supplemented with data available at the micro level.

For the micro level analysis, the city of Ludhiana has been selected. The youngest among the Indian metropolises in 1991, it is an attractive destination for migrants and is beginning to feel the housing problem. At the micro level the role of the individual household, in housing, is of paramount importance. With this in view, data has been collected through a household survey covering 500 households in all. This number comprises 0.25 per cent of the total population of the city. Information has been sought regarding the housing situation, housing strategies pertaining to acquisition of house and finance arrangements and housing perceptions and preferences. Selecting the sample for such a survey was a complex affair. Care had to be taken that all kinds of housing modes as well as household categories found representation. The mode of evolution of the locality was taken as the basis of sample selection. The elements of the housing system, namely land, infrastructure, amenities, finance, state policy and households interact in a variety of ways in these localities to impart a distinct housing character to each of these. In the course of the survey, the socio-economic profile of the households staying in a particular type of locality was found to be homogeneous. This ensures accuracy in sample selection. An assortment of localities exist within the city. These include: ‘organically evolved’, which witnessed secular evolution over generations, such as the old part of the city; localities built by public undertakings, such as Punjab Housing Development Board and Improvement Trust for sale to the public; localities raised by government, parastatal or organised private sector for housing their employees; cooperative housing localities; and unauthorised localities.
constructed without a plan on land not meeting the legal requirements. The last type of localities could in time, depending upon their location (whether in proximity to the planned segment of the city or the physiographically vulnerable part) and nature of households, either acquire official recognition and partake of the amenities available to the planned section of the city, or degenerate into slums.

All care was taken to include within the sample, all housing types and groups, ranging from bungalows to tenements and households that were squatting to those that had constructed their own houses. In addition to the data collected through primary survey, information was also sought from secondary sources such as Municipal Corporation, Ludhiana Improvement Trust and Punjab Urban Planning and Development Authority. Finally observed ground realities were also woven into the analysis.

Data collected was treated with appropriate statistical techniques that were relatively simple to understand. These included calculation of mean values and correlation between various indicators of the state of housing. Indices of housing adequacy, quality and disparity were also worked out as has already been detailed. Data and findings have been represented on maps. The maps were prepared in the GIS environment. The software used was Arc view,3.1.

**Ludhiana City**

A brief note on Ludhiana City will be in order here. This lone metropolis north of Delhi, in 1991, it emerged as a rural service centre in 1481, when the Lodhi brothers decided to construct a fort on the bank of river Satluj, to check the advance of invaders emanating from the west and en route to Delhi. Vulnerability to invading armies and the Satluj floods restricted the growth of the settlement to a scattering of houses around the fort. The decline of the Lodhi dynasty proved detrimental to the fortunes of the settlement. It was during the regime of Maharaja Ranjit Singh (1799-1839) that Ludhiana acquired relevance in the regional context. Through the acceptance of Satluj as the boundary between the state and the
empire, by the Maharaja and the British, Ludhiana became the seat of the British resident and the derelict fort was again converted into a garrison to house soldiers. The annexation of Punjab in 1849, saw the establishment of civil administration in the city and thus began Ludhiana’s journey to being the hosiery capital of the country.

The credit for the introduction of hosiery manufacture in the city goes to Sir C. Wade who in the 1832, invited Kashmiri weavers to settle down in the city and vend their handicraft in the region. The exigency created by the World War I led to a rise in the demand for hosiery products, and Ludhiana stepped in to fulfil this demand. The British rewarded the city by introducing power looms and providing electricity to the town in 1933.

On partition of the Indian subcontinent in 1947, multitudes of human beings came over from West Pakistan to the city. Model Town as well as numerous informal settlements sprung up to house the refugees. Among the refugees those belonging to the Ramgarhia community, laid the foundation of the cycle and other small scale manufacturing units in the city. These continue to be the forte of this industrial city to date.

The Green Revolution beginning mid-sixties in Punjab gave a further fillip to the industrial growth of the city. A number of agro-processing units got established. The demand for labour grew and migrants in hordes came to the city from Uttar Pradesh and Bihar. The city saw a phase of physical expansion too with its municipal limits extended on being upgraded to the status of a municipal corporation in 1976. A large number of unauthorised localities, a number of slums among these came within municipal limits. This was the second phase of the city’s housing problems.

Ever since, migration to the city has continued unabated. Even during the dark decade of terrorism, Ludhiana remained a destination for inmigrants. Considered
safer than the rest of the state by Hindus and a safe haven by Sikhs hounded out from other states, it saw a deluge of migrants even during the eighties’.

The housing problem in the city is manifest in a plethora of unauthorised localities that have sprung up in spontaneous response to a demand that could not be met by the formal sector. In most of these localities the residential and industrial land uses co-exist. Ludhiana City stands at the crossroads as far as the housing situation is concerned. Timely action may check the downward slide into ignominious living for the large majority of its population. In essence, it appears a case ripe for investigation.

**Organisation of Material**

In consonance with the objective of the dissertation, the entire thesis was arranged into three major sections, in addition to the ‘Introduction’ and ‘Summary and Conclusions’. The first section dealt with the patterns of housing in Indian cities, the second section spelt out and examined the role of various determinants of housing and the third section draws the implications of the state of housing for the city and implications of various developmental processes taking place within the city for housing.

Patterns of housing in Indian cities have been analysed in terms of the adequacy of housing, the quality of housing and the equity in access to housing. Each of these constitute a distinct sub-section or a chapter within the dissertation. The first chapter measures the level of housing adequacy in terms of the proportion of houseless households, the household: house ratio, the proportion of households residing in *kutcha* houses, single room houses and rented houses. Based on these indicators, the housing pressure index has been calculated for different cities of the country. The most critical amongst the indicators of housing pressure have been identified and explanations have been offered for the existing patterns. Along similar lines, the housing quality index for various cities has been calculated in the next chapter dealing with housing quality. Here the access to amenities of various households has been taken into account. Levels of housing quality have been
related to the population size, function and location of the city. Housing equity, in
the third chapter is assessed in terms of the difference between non-scheduled
caste and scheduled caste households in access to housing amenities. The ‘Housing
Disparity Index’ has been related to levels of economic development and social
stratification.

The second section dealing with the determinants of the state of housing, is the
most exhaustive part of the dissertation. It throws light on the situation at both the
macro and micro levels. The chief determinants identified include, provision
modes, housing finance and housing policy. Each of these has been discussed in
separate chapters. The chapter on ‘Provision Modes’ delineates the institutional
arrangements made for the provision of housing, the major actors involved in the
production of housing and the housing strategies adopted by the households to
procure a house. The first two parts are based on secondary information while the
third part draws heavily on primary data collected through a household survey.
The last part details the various modes of house acquisition adopted by the
households, the rationale behind the adoption of each of these modes, and the
implications of the same for the housing landscape of the city. The chapter on
‘Housing Finance’ dwells on the sources of housing finance available to
households: both formal and informal, the preferences regarding the source of
finance exercised by the households, factors governing the access of formal
sources of finance and finally, suggests measures for increasing the access of
formal sources of finance and integrating the informal sources of finance with the
formal. Here too conclusions have been reached through an analysis of the micro
level picture. The chapter on housing policy, conceptualises on policy components
and formulation, draws a comparison of housing policies adopted by various
countries across the globe, looks at the housing policy of India as it evolved over
the successive five year plans studies the implementation of the same within
Ludhiana City, and draws lessons for Indian housing policy.
The last section dealing with the implications for and of housing, is based entirely on the micro-level picture. It includes developmental and ecological implications. The first part relates the housing story and the spatial patterns of housing at the intra city level with various economic, socio-demographic and politico-administrative, developmental impulses. The section has been dealt with in an evolutionary perspective. The second part relates the environmental health of the city as ascertained by the quality of ambient air, ground water and the occurrence of disease, with the nature of residential locality viz., planned / unplanned.

Finally, a chapter on the summary of the conclusions, derived from the study binds together the findings and their implications and sees them in the light of the objectives of the study and the research hypotheses framed. It also enunciates some new research questions that emerge from this exercise.