

**URBANISATION AND POVERTY: A STUDY ON SOCIAL
CAPITAL FORMATION AMONG SQUATTER SETTLEMENTS IN
SILIGURI MUNICIPAL AREA**

**THESIS SUBMITTED FOR THE DEGREE OF DOCTOR OF
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Submitted by

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DARJEELING, WEST BENGAL

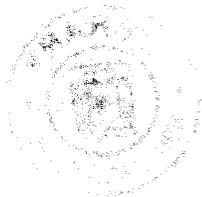
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ABBREVIATIONS

AAV	Antyoday Anna Yojana
AMC	Asansol Municipal Corporation
CBOs	Community based Organisations
CDS	Community Development Society
CMC	Chandannagar Municipal Corporation
DFID	Department of International Development
DMC	Durgapur Municipal Corporation
DWCUA	Development of Women and Children in Urban Areas
EIUS	Environmental Improvement of Urban Slums
GNI	Gross National Product
HDI	Human Development Index
HMC	Howrah Municipal Corporation
HMC	IGNOAPS Indira Gandhi National Old Age Pension Scheme
IGNWPS	Indira Gandhi National Widow Pension Scheme
IHSDP	Integrated Housing & Slum Development Programme
ILCS	Integrated Low Cost Sanitation
JSY	Janani Suraksha Yojana
KMC	Kolkata Municipal Corporation
LOU	Level of Urbanisation
MDG	Millennium Development Goal
MoHUPA	Ministry of Housing and Urban Poverty Alleviation
NDDP	Net District Domestic Product
NFHS	National Family Health Survey
NGOs	Non-Government Organizations
NIUA	National Institute of Urban Affairs
NSDP	National Slum Development Programme
NSSO	National Sample Survey Organisation
OBC	Other Backward Class
PM-IUPEP	Prime minister's Integrated Urban Poverty Eradication Programme
PMRY	Prime Minister Rozgar Yojana
PPP	Purchasing Power Parity
RAY	Rajiv Awas Yojana
RCV	Resident Community Volunteer
SD	Standard Deviation
SHASU	Scheme of Housing and Shelter Upgradation
SHG	Self Help Group
SJDA	Siliguri Jalpaiguri Development Authority
SJSRY	Swarna Jyanti Shahari Rozgar Yojana
SLTUP	Secure for Land Tenure for the Urban Poor
SMCA	Siliguri Municipal Corporation Area
SUME	Scheme of Urban Micro Enterprises
SWEA	Self Employed Women Association
UBMSP	Urban Basic Minimum Services for the Poor
ULBs	Urban Local Bodies
UPA	Urban Poverty Alleviation
USEP	Urban Self Employment Programme
UWES	Urban Wage Employment Scheme

CHAPTER: I

INTRODUCTION

1. Introduction:

Industrialisation, urbanization and marketisation are three important criteria that are closely related to development process in both developed and developing countries, although, on the contrary, urbanization in certain regions may not have occurred through industrialization which was the case in the West and in Japan; rather it has probably taken place mainly through the growth of the tertiary sector and the informal manufacturing sector. The other distinguishing feature of urbanization in the western and non-western (developing) societies is the rapidity at which urban population growth and urbanization have taken place in the developing countries.

Developing economies characterized by adverse land-man ratio, poverty, unemployment and employment opportunity differentials, wage and income differentials, unequal distribution of resources, rural-urban differentials in all the above, provide the basis for migration to urban areas in search of alternate livelihood opportunities. Urban areas thus come under pressure to provide access to shelter and livelihoods to the vast and ever-growing population. The migrants who arrive in the cities face several issues that compound as their number increases, including high unemployment, low incomes, incapacity of the poor in general to access education, health and medical services, urban amenities like electricity, and water; and securing legal housing.

In the recent past, rapid growth of cities and rural-urban migration due to urbanization has thus led to the emergence of informal settlements, both within the inner-cities and in the outskirts. These settlements are mushrooming in both big and small cities/town of developing countries located in poor and highly vulnerable locations and comprise a neglected segment of the urban populations. The poor in these settlements does not possess high skill or education to enable them to find well paid and secured employment in the formal sector. Lack of opportunities in the formal sector cause them to concentrate in the informal sector. They are conflict affected

people, who migrated to urban centers for safe living and secure subsistence livelihoods.

Living in an urban environment is clearly a distinct experience from life in a rural setting. Yet despite the contrasts in terms of context, there is one factor that remains unchanged: people themselves. Wherever people live, they retain essentially the same human needs, and the desire for the same entitlements or rights. They require access to productive resources such as land, knowledge and capital, and from these an income to support their consumption needs. They require food, shelter, clothing, access to medical facilities, the ability to educate children, and the ability to participate socially, politically, intellectually in the society of which they are a part. Thus these requirements amount to the entitlement for each person has to lead a life that is fundamentally secure in respect of basic needs and broader social and psychological needs.

1.1: Statement of the Problem

Livelihoods are determined by the range of assets that are available to the households. Natural capital refers to the natural stocks like soil, water, air, genetic resources, etc. and environmental services like hydrological cycle, pollution sinks, etc., from which resource services useful for livelihoods are derived. Economic or financial needs are the capital, cash/credit/debt, savings and other economic assets which are essential for the pursuit of any livelihood strategy. Human capital includes the skills, knowledge, ability to labour and good health and physical capability, important for the successful pursuit of different livelihood strategies. Social capital are those networks that create social claims, social relations, affiliations and associations which people draw upon when pursuing different livelihood strategies requiring coordinated actions. High levels of poverty brought about by structural adjustment and poor governance make social capital an important means for economic survival. Social capital can be defined as the working product of interpersonal networks, contacts, knowledge and related human resources. Taken together, these are valuable assets that individuals and groups can use to address a wide range of needs and interests. There are two main reasons why social capital is important to urban settings, first; to build on poor people's social capital as an explicit poverty elimination strategy; second, to increase the participation of the most

vulnerable groups – which not only is a way of making pro-poor programmes more effective, but also for enhancing poor people's right to participation (DFID, 2002). On the other hand, various studies have shown that social capital clearly declines with urbanization and there is an inverse relationship between crime and social capital, although the urban-poor shows higher community participation. Physical capital are those basic infrastructure and produced goods such as buildings, roads, water supply, communication, sanitation, etc., needed to support livelihoods. But the urban poor who are living in slums or informal settlements are vulnerable with respect to the determinants of livelihoods. Hence, the question arises as to how do urban poor cope with the up-market urban centres with their limited livelihood resources?

A significant consequence of industrialization, modernisation and marketisation process is the creation of urban centres as pools of livelihood opportunities and thereby pulling migrants to these centres in search of jobs. Rural-urban wage differentials, unlimited supplies of labour, etc., as amply explained by Harris-Todaro and Lewis, all point to the migration process and the outcomes. The migrants, either from rural areas or from other smaller towns, usually settle in informal settlements in the periphery of the urban centers. The poor in these settlements do not possess the skill or education to enable them to find well paid and secured employment in the formal sector and due to lack of opportunities in the formal sector they tend to be absorbed in informal employment. Thus their integration into the market economy is through the informal sector, in most cases. But greater integration into the market economy also implies greater vulnerability to fluctuations in the economy. This in turn implies that household coping mechanisms are of particular importance. For the urban poor, the transmission of a macroeconomic shock is usually through the labor market, and the loss of work is typically one of the most devastating shocks they can face. Finally, the greater integration in the market economy implies a higher monetization of food consumption. Food consumption is thus more sensitive to income and price fluctuations. Integration of such settlements into the urban socio-economic fabric occurs through livelihood opportunities available to them and the survival strategies that have to be adopted by the settlers. Various studies have shown that in most cases the integration takes place primarily through the informal sector activities. Therefore the basic objective of the study is to

investigate the formation of social capital of urban squatters for sustaining livelihoods through the process of integration into the mainstream. .

The majority of the urban poor labor force work in the informal sector, generally as vendors or street peddlers. Other activities included service and repair work, construction, transport services, or small livelihood production. Women and children under fifteen years of age are also employed to augment their level of income. The measurement of poverty of such people should not focus only on income alone. Poverty is a deprivation of vital structures that go beyond income. Therefore, besides income, how do other socio-economic factors and governmental policies impact on poverty reduction is also a focus of the study.

The informal sector provides employment to the poor and plays a supplementary role in employment and income generation. It also plays a complementary role in the provision of goods and services. This informal sector is an entry point to the city for migrants who leave their villages with the hope of availing themselves of an urban income higher than their agricultural income. Further, it plays a significant role in employment creation and poverty alleviation by providing incomes to unskilled and semiskilled workers who otherwise would be unemployed. The informal sector continues to play an important role within the third world. At root, it creates numerous jobs and absorbs a rising proportion of the unemployed workers. On account of self-employment with low paid wage labour or family labour, and small businesses in the informal sector, there is every possibility of huge economic activity in this sector.

The present study will look into the formation of social capital among squatter settlements in Siliguri Municipal Corporation area (SMCA), Darjeeling district, in response to livelihood opportunities of the mainstream economy. To achieve this, the study will examine the livelihood opportunities and socio-economic outcomes of the urban poor in response to livelihood opportunities within the informal market economy in Siliguri Municipal Corporation (SMC) by the process of socio-economic development.

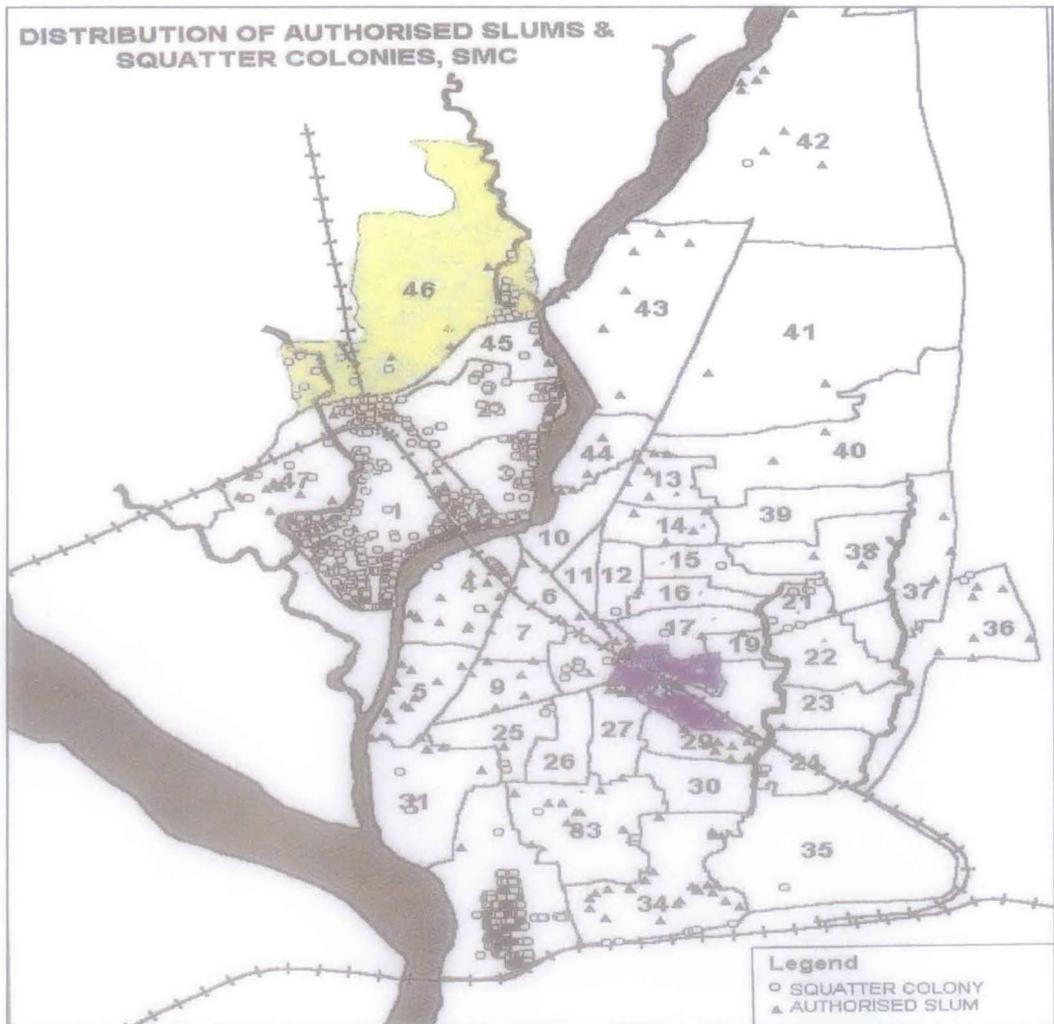
1.2.: Historical Perspective of the Study Area

The evolution of the SMCA and its development has its roots in the historical context of this part of the subcontinent. It was an outcome of the exigencies of the situation

arising out of (1) partition of India in 1947 (2) the rural push in neighboring states (3) the consolidation of military forces and building of roads, bridges, railways etc. for the protection of international boundaries. Unpredicted growth of population however was super passed by the transfer of population from the erstwhile East Pakistan (now Bangladesh) as a fall out of the partition of India (1971). The migrants squatted on the river banks, railway land and in many other pockets in the town, which grew into unhygienic and insanitary slums having deplorable and degrading environmental condition. Expansion of urban infrastructure facilities failed to keep pace with rapid population growth leading to proliferation of slums or informal settlements and mushrooming of poverty pockets. There are presently 154 notified slums/colonies in the corporation area besides 40-50 urban poor pocket which are situated in 47 Municipal Wards with the population of 1, 75,012 (Census 2001).

1.2.1: Population of the Study Area

Siliguri by its typical geographical location, potentiality, process of urban growth and development received its recognition in 1931 and found a place of urban map in west Bengal as non-municipal urban centre. It was declared as a Municipal town in 1950 taking an area of 15.54 sq. km with the population of 32480, which was substantially increased to 40.91 sq. km with the population of 472374, when it was upgraded to Siliguri Municipal Corporation in 1994. The corporation is partly covered by Darjeeling district with an area of 20.10 sq. km, inhabited by 284602 persons and partly covered by Jalpaiguri district with an area of 20.81 sq. km, inhabited by 187772 persons. The Siliguri Municipal corporation area is covered with 47 Municipal wards, having 154 notified slum and squatter settlements with a population of 175012, spread over 33 Municipal wards.



Source: Perspective Plan 2025, Siliguri Jalpaiguri Planning Area, Siliguri Jalpaiguri Development Authority (SJDA), Vol.1, 2004

1.3: Objectives of the Study:

Most of the cities like SMCA are changing typically in terms of demographic, economic and social relationship due to rapid pace of urbanization. The general objective of the study is to understand the nature of proliferation of squatter settlements, the informal sector activities, social capital formation and how these impact on poor people's livelihoods in the city. The study will focus on the following objectives:

1. To analyse the major contributing factors of migration and rapid growth of urban informal settlements.
2. To investigate the role of social capital for sustaining livelihoods of the urban squatters.

3. To investigate the livelihood opportunities of urban poor in the mainstream economy.
4. To analyze the socio-economic profile and livelihood opportunities of urban poor in the informal economic activities as compared to their previous occupation.
5. To study the struggle for existence in an increasingly competitive situation of urban informal activities.
6. To investigate the existing livelihood base of the poor living in informal settlements including employment opportunities, income and consumption.
7. To analyse public response and government policies with respect to provision of basic amenities to the urban poor.
8. To analyze the shocks, risks and threats that the urban poor face in their settlements and informal sector activities.
9. To draw broad strategies to improve the livelihoods of the urban poor.

1.4: Importance and Relevance of the Study

Urbanization process and its relation with the rural-urban migration, growth of informal settlements and livelihood opportunities of the urban poor in the informal sector, are emerging issues for researchers, scholars, economists and social scientists in the recent times. Numerous studies have been done both at the national and international level on these issues but not many studies have been done on the formation of social capital and livelihood opportunities of urban poor in informal settlements of Siliguri Municipal Corporation in particular, who greatly rely on the informal market economy. Therefore, it is important to account for the informal sector as employment provider to the poor people and its role as a means of survival strategies for the urban poor cannot be ignored. The study will also be regarded as having an applied dimension in the sense that it will guide in outlining policies concerning informal settlement, social capital formation, informal sector and its direct and indirect contributions to the economy through creating employment opportunities and providing a way of living for the urban poor.

Large scale migration of poor unskilled job seekers from rural areas of the neighboring districts and states took place resulting in unprecedented growth of population in Siliguri town. The inspiration of this study came from a desire to understand the rapid growth in urbanization, migration and squatter settlements (interchangeably slums), and livelihood opportunities, with the integration of informal

economic activities of urban poor in Siliguri Municipal Corporation (SMC) area. The study will thus focus on the importance of social capital formation and informal sector activities and how they provide livelihoods opportunities to the urban poor living alongside the mainstream market economy.

1.5: Justification of the Study

In the context of SMCA, the socio-economic researches specifically with regard to the old and new migrants living in the inner city and peripheral city squatter settlements and slums are very limited. So, the study can be helpful to the academic learners, professionals and researchers to enrich their knowledge. Policy makers of the local urban bodies can also get help from this study in case of making and implementing various slum oriented plans and programmes. It can also be said that from all directions, the study hopefully can be open a new avenue for further researches regarding poverty and socio-economic adaption of the slum dwellers in the city life and of course able to help to solve the multidimensional socio-economic problems of the slum dwellers.

1.6. A Brief Overview of Selected Literature:

1.6.1: Urbanisation and Migration

Amin (1974), Becker et al (1986) and Cain (2004) stated that the causes of rapid growth of urbanisation and cities in the third world countries are the limited farm size and increased pressure on land due to high growth of population which pushes the landless labourers into urban areas. In contrast, the study of Papola (1981) and Fay (2005) revealed that high employment opportunities, high income opportunities, urban amenities and charms of the city life are the main pull factors of migration. Lewis (1954) in labour surplus model and Todaro (1969) in probabilistic model also favoured the hypothesis of pull factors of migration. Regarding rural-urban migration some theoretical models by Lewis (*op.cit*) and Fei et al (1964) explained that work force is transferred from rural areas due to high demand or absorption in the urban industrial sector.

Urbanization in recent times is treated as an index of modernization and consistently associated with economic growth, modernisation and economic development of the country (Prakash, 2005). Urbanization is an inevitable process

that is experienced by all nations during the period of transition from agrarian to industrial societies. It is defined as massive shifts of labour and capital from predominantly rural to urban areas (Rao et al 2004). But in view of Mitra (1994), urbanisation is not necessarily the outcome of a large inflow of population from the rural areas but the natural growth of population is another reason of urbanisation. According to western experience, urbanization is a cyclic process through which nations experienced their transition from agrarian to industrial society (Mills and Becker, 1986). On the other hand, urbanisation is one of the crucial factors that has important contribution to the alleviation of rural poverty (Ravilion, 2000)

According to Goldscheider (1971), migration includes all types of residential shifts from one place to another. The earlier Western concept, particularly in relation to the experience of the United States, the term 'migration' is the changes of residence that involve readjustment of the community affiliations of the individual (Bogue, 1959). On the other hand, decision making of migration is interpreted more as a household livelihood strategy than as a completely individual choice (McDowell & de Haan, 1997; Stark, 1991). According to Islam (1999), migration to Dhaka city is partly due to pull factors such as formal sector employment for women and informal sector employment for men. He also pointed out that migration benefit migrants and their families, but all migrants do not necessarily experience upward economic mobility. Supporting the above view Mortaza (1992) stated that in spite of adverse situation with the city life, migrants are able to secure their survival themselves. In this respect, the friends and relatives of migrants in the Dhaka city play an important role and most of the migrants believe that migration to the city is a process of solution to move out from poverty cycle.

Mears (1997) highlighted that in South Africa, migration is different. The rate and pattern of urbanization are not always synonymous with development. Migration is inevitable for survival and there is little evidence of gradual migration. According to Classical and Keynesian views, imbalances in income increases economic inequality between regions and the resulting migration is an inter-regional process. Keynes viewed migration as a process of divergence when regional imbalances increase. Contesting this theory, the neo-classical economist believed that migration is subject to push and pull factors due to the rural-urban differentials in employment and

wages and the resulting process is regional convergence (Lewis, *op.cit*, Todaro, 1976). Akrofi (2006) is of a similar view that increased urban population is a cause of rural-urban migration due to pull and push factors. Economists and sociologists have tried to focus their attention on the socio-economic factors of migration. They have tried to emphasise that migrants act individually for economic self interest and the aspects of demand and supply in the labour market through the push and pull factors at origin and destination, demographic and socio-economic factors, disparities in economic opportunities, standard of living and income levels (Bilsborrow et al., 1984; Todaro, *op cit*).

Ghaffari and Singh (2002) have attempted to identify the economic determinants of rural-urban migration with special reference to Iran. They found that the major reasons for voluntary migration were economic and the most prominent economic determinants of rural urban migration were land scarcity and population pressure on land. A number of studies by Walsh and Trlin (1973) and Shaw (1974) have shown that there was a positive relationship between high man/land ratios and propensity to migrate. A study by Stiglitz (1973), Connel (1974) supported the fact that landless population of villages and the poorest peasants have higher propensity to migrate. Wage and income differentials between regions also increase the propensity to migrate. Beals et al (1967) in Ghana and Carvajal et al (1974) in Costa Rica found that inter-regional migration was positively related to the regional per capita income differentials. In contrast, Aziz (*op.cit*), Tewari and Goel (2002) found that high opportunities in urban unorganized sector are the major reasons for migration. Nawagamuwa and Viking (2003) also highlighted the poor governance and internal income differentials as the main reason of rural-urban migration. Johnstone (1983) found in Malaysia that rural-urban disparities, the social and demographic dislocation, sometimes cause voluntary migration to towns and cities. Regarding unemployment and employment opportunity differentials, an ILO (1966) emphasized that the main factor determining the rate of outward movement from agriculture is the expansion of employment in other occupations in urban areas. This factor is also seen in the advanced countries like Sweden, USA and Canada and in rapidly developing countries in Latin America, the Middle East and Africa. Sundari (2003) claimed that rural-urban migration takes place due to economic concentration and employment opportunities in the urban manufacturing sector. A study of several countries in Asia

(ILO, 1977) revealed that increasing unemployment and underemployment in rural areas are the major push factors. But in contrast Nikiforov (1947) noticed that migration from smaller to larger cities in Soviet Union was due to the dissatisfaction with living conditions rather than due to the problems of unemployment. According to Yeswant (1962), Sharma (1987), Ghaffari (2000), technological improvements and mechanisation of agriculture has often been factor responsible for migration.

Cherunilam (1987) emphasized that during periods of prosperity, the expansion of urban economic activities is likely to pull the rural population towards the city and vice versa. Besides, monsoon crop failure sometimes pushes large number of rural people to the nearby towns/cities. On the other hand, according to social capital theory, migrant networks play an important role for permanent labor migration in both developed and developing world. In most of the cases the economic factors act as major forces in initiating migratory movement, but the social capitals in the form of networking provides the information regarding demand and supply of the labour market and push the poor rural mass into the city. Migrant networks are simply the ties between the people that connect migrants, former migrants, and non migrants in origin and destination areas through kinship, friendship, recruiting agents etc. (Massey et al, 1998). Empirical evidence around the world has shown that migrant networks have significant impact on chain migration (Ainsworth, 2002). Some other studies reported that the migrants are relatively more successful to their desired level, when moved through personal networks like friends/relatives (Massey et al 1987).

Almost all studies are in conformity with the fact that most of the migrants excluding forced migration move to cities for better economic opportunities. So, migration is normally viewed as an economic phenomenon (Mitchell, 1959). Though there are some non-economic factors involved in migration, but most of the studies opine that migrants leave their origin primarily because of lack of opportunities and in the hope of finding better opportunities elsewhere in urban areas (Safa, 1975).

1.6.2: Urbanization and Informal Settlements

The housing reform movement in England during 1880s defined slum as 'a house materially unfit for human habitation'. In 20th century, the Challenge of Slums, Global Report on Human Settlements 2003, made the word obsolete in the context of more

precise and rigorous terms such as 'tenement house', 'tenement district' and 'deteriorated neighborhood'

By catching all the term UNSTAT (2005) defined slum and informal settlements as (1) areas where a number of housing units have been constructed illegally and the occupants do not have any legal claim on that land (2) Unplanned settlements and areas where housing construction is not in compliance with the current planning and building regulations (unauthorized housing).

State of the World Cities, (2010/11) defined slum household as a group of individuals living under the same roof that lack one or more of the following conditions: 1. Durable housing (a permanent structure providing protection from extreme climatic conditions), 2. Sufficient living area (no more than three people sharing a room), 3. Access to improved water (water that is sufficient, affordable and can be obtained without extreme effort), 4. Access to improved sanitation facilities (a private toilet or a public one shared with a reasonable number of people) and 5. Secure tenure (protection against forced eviction).

The concept and definition of slums varies across country to country and state to state depending upon their socio-economic conditions, but the physical characteristics of slums are almost same throughout the world. These informal settlements are known by various names like Informal settlements, Low-income settlements, Shanty towns, unauthorised settlements, unplanned settlements. Some of the local popular names for these type of settlements are 'Ranchos' in Venezuela, 'Callampas' in Chile, 'Favelas' in Brazil, 'Barriadas' in Peru, 'Villas' in Argentina, 'Colonias Letarias' in Mexico, 'Barong-Barong' in Philippines, 'Gecekondu' in Turkey, 'Bastee', 'Juggi-johmpri' in India. These informal settlements are called slums in UN literature.

In India, the Slum Area (Improvement & Clearance) Act, 1956 (under section 3) provides the legal basis for defining or declaring any area as 'slum'. The Act uses the following criteria for defining slums: 1. An area in any respect unfit for human habitation, 2. An area by reason of dilapidation, overcrowding, faulty arrangement and design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation, light, sanitation facilities or any combination of these factors which are detrimental to safety, health and morals.

The slums defined by state governments based on Slum Acts of the respective states i.e., based on legal stipulations unlike the definition adopted by Register General of India (RGI) and NSSO. The concepts and definition of slums vary across the states depending on their socio-economic conditions but their physical characteristics are almost same. There are differences between the parameters adopted by state governments, RGI, and NSSO. In general, the laws to notify or recognize the slums by the state governments is a part of Census and NSSO definitions, but there is no stipulation regarding the limit in the number of households in the definitions to recognize or notify the slums by the states (Report of the Committee on Slum Statistics/Census, MoHUPA). RGI adopted the following definition for the purpose of Census of Slums in India, 2001: (1) All specified areas in a town or city notified as 'slum' by State/UT or local government under any Act including "Slum Act", (2) All areas recognized as 'slum' by State/ Local government or UT, Housing and Slum Boards, which may have not been formally notified as slum under any Act, (3) "A compact area of at least 300 populations or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities".

NSSO (2002) for the purpose of survey defined slum as "a compact settlement with a collection of poorly built tenements, mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions. Such an area, has been considered as "non-notified slum" if at least 20 households lived in that area. Areas notified as slums by the respective municipalities, corporations, local bodies or development authorities are treated as "notified slums".

Besides the above definitions, Srinivas (1991) defined squatter settlements which were built with or without the consent of the landowner. Payne (1977) expressed squatter settlement as "a residential area which has developed without legal claims to the land and/or permission from the concerned authorities and as a result of their illegal status of land, infrastructure and services are usually inadequate".

Bergel (1955) tried to pointed out the mechanism behind the growth of slums and found that the slums are the complex product of many factors, where poverty is the foremost cause. He traced three types of slums: the original slum which consists of unhygienic and poorly constructed buildings, the second emerges from the

departure of middle and upper class families and the third is the most unpleasant form which seems to have developed even with the transition character of the area. Seely (1959): explained that the economic disparity between the rich and the poor immigrants is the main reason for the growth of slums, particularly in industrial towns. Regarding the growth of slums, Mumford (1961) traced the origin of slums in the western countries and came to the conclusion that the factory located in the nucleus of the new urban center pull the rural poor to settle around the factory sites. Harrington (1962) distinguishes between the old and new slums and concludes that the old slums are necessarily compact and tend to develop in the centre of the cities, while degeneration is caused for geographical shift in the location of the new slums, where some basic amenities are available for them. Dwyer (1975) explained that in Caracas, Hongkong, India, Malaysia and the Philipines, the urban growth is spatially linked with the growth of squatter settlements. Thus the urban growths in those countries were haphazard and unplanned. Sing (1966) estimated that the slum population varies 10 to 16 percent of the total population in the major urban centers of India. He has also pointed out the spatial structure of the old dilapidated houses of slum dwellers located around the central business district and the industrial centers. Ghosh et al. (1972) found in their survey on Kolkata that the major concentration of squatter settlement located near the railway crossing, local bus depots and in the low-land areas in the heart of the city. The growth of the city is linked with the degeneration of old slum areas and the growth of new slums in the fringe sector. Anderson (1960) outlined the characteristics of slums of Birmingham by mass poverty and overcrowding. The slums are the refugee area for the aged person, the chronically sick, the homeless and the socially maladjusted. Some of the other characteristics are poor sanitary conditions, continuous health hazards, high rate of criminal activities and social isolation. Supporting this opinion Geertz (1965) has analysed the Kampong type of settlements that have developed in Java. The Kampong was marked by social disorganization, while, theft, prostitution, gambling and drinking liquor were most common practice. On the other hand, regarding the formation, growth, economic activities and social development of Latin American squatter settlements, Mangin (1967) pointed out that the squatter settlements were formed by rural people who comes directly from their rural farms and settled in slums accompanying with crime, prostitution, family breakdown etc. The author also found

that unemployment was high and they are economically the lowest class and most poorly housed with a very low education level.

Wiebe (1975) in Madras (India) highlighted the economic factors for the growth of slums as (a) lack of demand for labour in rural areas and the high demand for labour in the city (b) continuous failure of monsoons and drought in the villages (c) lack of civic consciousness and apathy to law and (d) desire to live near to the place of work. Similarly, in view of Agbola and Agunbiade (2007) there were two reasons for squatting of Lagos in Nigeria, internal and external; internal reason includes lack of collateral assets, lack of savings and other financial assets like daily wage/low-income jobs which are semi-permanent or temporary in nature and the external reason includes high cost of land and other housing services.

According to Saha (1985), the caste and social structure is another important factor for the growth of slums, where the socially backward people tend to settle in the most unhygienic and congested areas. The kinship bond normally leads to the formation of compact slums where rural neighborhood patterns exist. He also observed that a section of slum dwellers with their physical and human capital gain the economic superiority compared to others and they try to move out from congestion and overcrowding. As a result, new slums emerge in the peripheral city areas without any planning. Turner (1969) is of the opinion that squatter settlements provide highly successful solutions to the housing problems in the urban areas of the developing countries.

Nawagamuwa and Viking (2003) in their study documented that the reasons behind rural-urban migration is due to prevalence of inequalities particularly in income results in the proliferation of informal settlements in the cities of the developing world. In this context, Srinivas (www document-1) noted that there are two reasons for squatting (i) lack of financial assets and savings, low paid jobs which are mostly semi permanent or temporary (ii) high cost of urban land and other services and apathy of the local government to assist squatters. In contrary, better access to paid jobs, better education and better health care in the city makes a 'destination of choice' for them (Srinivas, www document-3). In gathering different views regarding the concept of informal settlements, two main points has been identified; 'optimistic' and 'pessimistic'. From the 'pessimistic' points of view, rural-

urban migration, urbanization and formation of informal settlements were viewed negatively before early 1960s. According to UN-Habitat (1987) rural migrants in the slums termed as a 'parasitic population' due their little contribution to the cities. They are burden to the economic growth and the development. They are the "breeding grounds for social and political unrest". From the optimistic point of view, the slum dwellers contribute themselves to the development of the city in a positive image. According to UN-Habitat (ibid) informal settlements are not only a rational solution for shelter in the housing markets but they also constitute base camps for survival and escape from poverty. A large number of rural migrants are living in informal settlements and it is not a parasite in the city.

Eckstein Susan (1990) pointed out that shanty towns and squatter settlements are portrayed as "slums of hope and the inner-city areas "as slums of despair" in Latin America. Turner in this regard mentioned that after achieving some economic superiority, the slum dwellers try to move out from the informal settlements. This characteristic of the informal settlers is also supported by UN-HABITAT (2007).

Aluko and Amidu (2006) observed that the most vulnerable segment of the urban population in African cities was the low income groups residing in the urban fringe or in the centrally located public lands. The large segments of these low income groups have no choice but depend on informal land for access to housing and shelter (Hardoy and Satterthwaite, 1987). Thus, the factors like tenure insecurity, threat of eviction, poor access to basic amenities in these settlements undermine the slum dwellers in their socio-economic situation (Audefroy, 1994). Tenure status is one of the key elements in the poverty cycle and lack of tenure security is the barriers for most attempts to improve housing conditions, future planning among among the slum dwellers in most cases (Wegelin and Borgman, 1995). Tenure security has direct impact on access to basic services and on the investment at settlement level. Lack of tenure security also strengthens poverty and social exclusion of the urban poor (UNDP, 1991).

Hofmann et al. (2006) found that informal settlements represent a 'status quo' of housing and the living conditions is below the acceptance level in most cases. Sub-standard sanitary condition and high crime rates are few of the features in informal

settlement. These squatter settlements are also characterised by poverty, precarious living and working conditions (Kjellstrom et al. 2007).

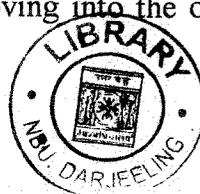
1.6.3: Urban Poor and Informal Settlements

Mcgee (1967) in his study found that illegal squatting is a common phenomenon in the cities of south East Asia. The squatter settlement means lack of public amenities, water and sanitation with common health hazards. Mohsin (1979) observed that the high degree of illiteracy among the slum children in Patna was primarily due to lack of educational facilities. Mani (1980) stressed on motivational aspects of education among the slum children in Madras and commented that lack of motivation and aspirations lead to dropouts.

Cities are the engines of economic growth and the place of complex networks of activities which are essential for human functions for living and working that can be operated and drawn by using the skills and knowledge (Harris, 1992). Due to high degree of commercialization of the urban economy, the poor people always needs higher cash incomes in order to survive and thus a large number of them are looking for jobs particularly in the informal sector (Wratten, 1995, Satterthwaite, 1997). Yeshwanth (1980) found a correlation between the family income and consumption pattern among the slum dwellers in Madras and came to the conclusion that more than 50 percent (52.1 percent) of the total expenditure is spent on food items.

Aiken (1981) in Peninsular Malaysia of Kuala Lumpur observed that the majority of the squatters were very poor and squatting was essentially a result of poverty for them. Unemployment, low-income and poor access to basic amenities was the major reason for widespread poverty in Kuala Lumpur for the urban poor. According to Karpat (1976) squatter settlements in Latin America, Africa, and Asia is the major concern for the third world cities, where, high levels of unemployment and low levels of income are very common. The informal sector has the capacity to absorb a greater number of the urban labour force. Therefore, this 'involved sector' of the urban economy employs most of the urban poor in Kuala Lumpur (Armstrong and McGee, 1968).

Aziz (*op.cit*) in his study found three important findings (1) the urban poor are primarily the rural migrants who are attracted to urban areas by high real wages in the unorganized sector (2) these urban poor moving into the organized urban sector by



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acquiring skill and knowledge from the informal sector and (3) the urban informal sector generates by absorbing the rural migrants and serve as a 'holding' sector for them. Laquian (2004) characterised the urban poor in Asian countries as a person with (a) lack of means to achieve a good quality of life and social well being (b) poor health, malnutrition, low levels of education, lack of skills and gainful employment (c) lack of opportunity for economic and social advancement, such as access to markets and ownership of assets, educational opportunities, health facilities etc that can provide assistance and ability to participate in the decision making process of the community. The study also found that in most Asian cities, the urban poor tend to concentrate in communities either in the inner city or in the periphery. Satterthwaite (1997) observed that the urban poor are living in inadequate over crowded shelters, suffers from diseases, lack of clean water, sanitation, air and noise pollution. The urban poor are commonly concentrated in the areas of high density with low rent. On the other hand, Beall and Kanji (1999) found that the linkage between the poor and city institutions is not unproblematic. A number of authorities have highlighted the weaknesses of local governments, which are frequently unable to address the needs of the poor and in some cases the urban poor are the victims of exclusion and discrimination.

In Asia, for example, the urban poor households are not only strongly integrated into the economy, but with different family size they always seek to diversify their income involving with different types of activities (Douglass, 1998). According to sustainable livelihood approach, the situation of the urban poor defined not only by their lack of wealth but also by their insecure and precarious condition in terms of coping with stress and shocks. The high cost of living of the urban poor is one of the factors that result in insecurity or vulnerability, and social exclusion (Chambers, 1995; Moser, 1998).

Several studies have pointed that majority of the urban poor in Bangladesh are rural poor. The incidence of urban poverty resulting from rapid urban growth indicated by the proliferation of squatter and slum settlements, especially in metropolitan areas. In many of the slums, overall conditions in housing and health services were worse than those in the rural areas (Choudhury 1978). On the other hand, Islam (*op.cit*) in his study quoted the voice of Haq-Hussian (1996) that "the

rural migrants in the city are not as much as the victims of 'culture of poverty' of Oscar Lewis. They are rather hard working and contribute significantly in the daily maintenance of the city life as well as themselves. Their involvement with services, informal and limited formal activities in the city have been found to improve their economic conditions and life chances. It may also be said that the longer their duration of stay in the city better the chance of economic and life condition".

Mitra (1994) in the study of Delhi slums found the negative elasticity of slum poverty with respect to rural-urban migration. High incidence of slums, employment problem and aggravate urban poverty was primarily due to inflow of rural poor along with high natural growth rate of urban population. Mitra also noted that in India, the excess-supply-limited-demand framework explains the growing urban poverty and the resulting growth of slum populations. The study of Hossain (2005) revealed that in Bangladesh, a significant portion of urban poor living in slums has experienced a miserable economic and social condition and cope with the adverse urban situations for livelihoods. Schak (1989) found that the beggars are living in squatter settlements around the suburb of Taipei. In terms of income generation, most of the beggar families were by no means as poor as the welfare recipient.

Fay (2005) in Latin America also observed that the urban poor are much more integrated with the market economy. But greater integration in the market economy also implies greater vulnerability to fluctuations in the economy. The greater integration in the market economy implies a higher monetization of food consumption. Food consumption is thus more sensitive to income and price fluctuations. Akrofi (2006) in Africa found that the urban poor in informal settlement survive with their own efforts and even most of the initiatives are deemed illegal. Informal settlements are overcrowded in most urban areas especially in the peri-urban areas, where, majority of the urban poor reside. These settlements are characterised by poor locations, low incomes, high population densities, housing that constructed largely by temporary materials, poor sanitary conditions, non-existent basic services and quasi-legal tenure (De Wit, 1998; Mitullah and Kibwana, 1998). On the other hand, Butterworth and Chance (1981) noted that the urban poor in Africa are struggling to meet and maintain the basic needs of food, water, shelter and safety. To them, education and ensuring social advancement for their children is secondary. The

result is a vicious cycle of poverty. A study by Stanwix (2009) on seven selective slums of Gujarat and Rajasthan found that most of the households were poor and they are suffering from access to basic amenities, the housing conditions for the most of the slums were not very good. The slum dwellers do not have any legal residential proof even though they are living in the slum areas for many years. The study also found that the households who did not have access to water, adequate sanitation and drainage facility are spending more on healthcare and reported more frequent illnesses. Spending was also positively correlated with income. The families with higher income living in better housing. Saving was much higher among the richer households.

Mohanty (2006) observed in Fiji Island that the urban poor living in the squatter settlements have limited resources and choices for their livelihood and they are more vulnerable. In this regard, Bryant (1992) also pointed out that all poor are vulnerable but not all vulnerable people are poor in Fiji. Poverty and vulnerability are closely related. The poor are more vulnerable socially, economically and environmentally. "Vulnerability by location and social disadvantage sometimes manifested as income poverty" (Cutter, 1996). Mohapatra et al (1998) in their study pointed out that income and other economic characteristics are not the crucial factor for good quality of life of the urban poor in shilling, but there are some other basic amenities which are also very responsible for good quality of life.

1.6.4: Urban Poor and Informal Sector

Hart (1970, 1973) was the first man who introduced the term informal sector and focused on its income opportunities that includes all income producing activities outside the formal sector. He also mentioned that the distinction between formal and informal income opportunities is essentially based on wage-earning and self-employment. The informal sector, on the other hand, is unprotected or even openly suppressed by the state (Weeks, 1975; Mazumdar, 1976).

Moser (1978) distinguished the nature of informal sector between the developed and less developed countries. Informal sector is characterized by some basic criteria like tax evasion, unregulated or unlicensed enterprises, illegality or criminality in less developed countries, Whereas, it offers the possibilities for growth in developed countries. The definition of informal sector prepared by ILO (1972)

refers “to the non-structured sector that has emerged in the urban centers as a result of the incapacity to absorb new entrants in the modern sector”. As a means of survival many of the new migrants find themselves engaged in the informal sector.

This informal sector typically used to refer to ways of making a living outside the formal wage economy, either as an alternative or as supplementary income (Bromley and Gerry, 1979). According to pessimistic point of view the informal sector was characterised by ‘marginality and poverty’. Empirical evidence provided by Papola (1981) in his study in Ahmedabad defined the informal sector as “a segment of the economy having certain characteristics, which lead to unfavourable conditions for the growth of enterprise and activities in this segment”. Noponen (1991) pointed out from the survey in Madras that the urban poor households survive through urban economy in different ways, Firstly: the earnings of women from self employed trading, home based services was lower than the men’s earning from casual wage or salaried work both in formal and informal sector. Second: due to economic stress in the family, the women helped in major ways by increasing earnings by secondary jobs. Males enjoy a wider range of employment opportunities than females. The largest share of the female heads of households was involved in self employed informal sector work activities. Bryant (1992) found that the urban poverty and vulnerability is remarkable among the new squatter settlements and urban fringe dwellers in Fiji, where, majority of the people are involved in the informal sector that have only erratic cash income but unable to meet basic needs. Another study by Reddy et al (2003) in Fiji observed that there has been a significant increase in the incomes and assets of those people who are involved in the informal sector in Fiji. The important point is that the average education of the informal sector workers was no higher than primary level. This study focused some of the key problems faced by the informal sector workers such as lack of access to credit facilities and problems to conduct the petty business due to national and municipal laws and regulations. With the same observation Bryant (1992), Mitra (*op.cit*) also tried to focus that there is a close relationship between the informal sector employment, urban poverty and slum inhabitation.

According to Chambers and Conway (1992) “livelihood compromises the capabilities, assets and activities required for a means of living. A livelihood is

sustainable when it can cope with and recover from stresses and shocks and manage to enhance its capabilities and assets both now and in the future, while not undermining the natural resource base". Many authors suggest that livelihoods tend to be most complex in urban areas, which the households draw on a wide variety of activities to capture income and other resources (Rakodi, 1997; Beall, 1997 Chambers, 1995).

A livelihood is considered to consist of the assets, activities and entitlements that enable the people to make a living (Singh et al, 1994). Chant (1994) explored that increased numbers of urban poor Mexicans try to make their living through informal sector activities. In terms of gender differentials the average earnings of women in his samples were just under half of their male counterparts. Sethuraman (1997) focused on the fact that the informal sector is a major source of employment and income in developing countries and it is expanding. It provides jobs to millions of the poor who were unemployed otherwise and many of urban poor improved their capabilities and incomes by working in this sector.

Oberai and Chanda (2001) highlighted that the informal sector stands out "as a potential provider of employment and incomes to millions of people who would otherwise lack the means of survival or as a breeding ground for entrepreneurship on a mass scale". This provides for survival but not necessarily help to create decent job. According to Breman (2002) informal sector included those people who work in the street, in homes, small-scale enterprises, power loom workshops etc. Breman further said that the realities of the informal sector can also be expressed strongly with the existence of slums. Timalsina (2007) in his study highlighted that street vending has been found increasing and it is the way of livelihoods to the urban poor in Kathmandu (Nepal). The author concluded that livelihood of the urban poor who are involved in informal sector in Katmandu can be termed as "struggling for living and living in the present, investing in the future" which indicates livelihood sustainability for the future generation. Reddy (2007) shown that informal sector is closely associated with poverty and squatter problems. With the similar opinion by Reddy, Mohanty (*op cit*) also stated that majority of poor get absorbed in the urban informal sector and the growth of activities in informal sector is directly linked to the growth of urban poor squatters in Fiji. According to Fidler and Webster (1996), the urban informal sector is

a major provider of employment and income to the three categories of socio-economic groups in urban areas: survivalists, the self-employed and very small businesses.

1.6.5: Social Capital

1.6.5 (1): Origin and Concept of Social Capital

In literature, there is a lot of controversy over the use of the term 'capital' (Schmid 2000; Smith and Kulynych 2002). According to the *Merriam--Webster Dictionary*, the term "capital", refers to "accumulated wealth" especially used to produce more wealth. In economic thought the term 'capital' originally meant an accumulated sum of money, which could be invested in the hope of a profitable return in the future (Field, 2003). The livelihood of the people requires a range of assets to achieve their self-defined goals, no single capital endowment is sufficient to provide the desired outcomes on its own. In a sustainable livelihood approach, the different forms of capital are equally important. Apart from human, physical, financial, natural and cultural capital, social capital is both a new as well as old concept used in various disciplines. The term "social capital" is a subset of the notion of the concept "social cohesion" developed by Durkheim in the late 19th century (1897) who studied the effects of modernization and industrialization on the forms of solidarity or social bonds.

The common opinion regarding the definitions of social capital by so many writers, researchers focused on the social relationship, faith and trust and interactions among people that have productive benefits livelihood strategy. Social capital itself does not have any clear definition and as a result definition of social capital depends on the discipline and level of investigation (Robison et al. 2002). On the basis of primary focus, a number of authors, writers defined social capital as;

- i. "Made up of social obligations (connections) which is convertible, in certain conditions, into economic capital and may be institutionalized in the form of a title of nobility" (Bourdieu, 1986)
- ii. "A resource (capital) that accrue to people by virtue of their mutual acquaintance and recognition (social) and that can be used for a variety of productive activities (Coleman, 1990; Bourdieu, 1991).
- iii. "It is a resource that actors derive from specific social structures and then use to pursue their interests; it is created by changes in the relationship among actors" (Baker, 1990).

- iv. "Friends, colleagues, and more general contacts through which people receive opportunities to use their financial and human capital" (Burt, 1992).
- v. "Ability of the actors to secure benefits by virtue of membership in social networks or other social structures" (Portes 1998).
- vi. "The information, trust, and norms of reciprocity inhering in one's social networks" (Woolcock, 1998).
- vii. At the same time, however, to other researchers social capital means the community level networks among individuals that lead to efficient outcomes regarding livelihood (Putnam, 2000).

1.6.5 (2): Types of Social Capital

- i. In literature, there are three types of social capital that includes;
- ii. "Bonding" is a horizontal association characterised by strong ties connecting family members, neighbours and close friends sharing similar demographic characteristics (World Bank, 2001; Whitley and McKenzie, 2005; Wallis, 1998).
- iii. "Bridging" is a vertical association characterised by weaker, but more cross-cutting ties within a hierarchical society e.g. connections with business associates, acquaintances, friends from different ethnic groups and organizations, friends of friends etc; (Dolfsma and Dannreuther, 2003; Narayan, 2002)
- iv. "Linking" social capital characterised by connections between those with differing levels of power or social status e.g. links between the political elite and the general public or between individuals from different social classes. This dimension of social capital is relatively new proposed by Woolcock (2001).

1.6.5 (3): Why Social Capital is Capital?

Instead of having controversy, social capital is similar to other forms of capital in the sense that it can be invested with the expectation of future flow of benefits (Adler and Kwon, 1999), is appropriable in the sense that the networks friendship can be used for other purposes, such as information gathering or advice (Coleman, 1988), is convertible because the advantages conferred by one's position in a social network can be converted to economic or other advantage (Bourdieu, 1986) and requires maintenance (Gant et al. 2002).

On the other hand, Social capital is different from other forms of capital because it resides in social relationships whereas other forms of capital can reside in the individual (Robison et al. 2002). It cannot be traded by individuals on an open

market like other forms of capital, but it remain embedded within a group (Glaeser et al. 2002). In terms of liquidity, economic capital is most liquid and can be easily convertible into human, physical and social capital. In contrary, the 'convertibility rate' of social capital into economic capital is lower, because social capital is less liquid and more 'sticky' (Anheier et al, 1995; Smart, 1993). In sum, social capital is an important family resource and thus commonly called "capital."

1.6.6: Social Capital and the Urban Poor

In social capital theory, migrant networks play an important role for permanent labor migration in both developed and developing world. In most cases, the economic factors forced to take initiative for migration, while, social networks in the form of social capital plays a significant role in providing information about the employment opportunities in the urban labour market. These migrant networks are simply the ties between the people that connect migrants, former migrants, and non migrants in origin and destination through kinship, friendship, recruiting agencies etc (Massey et al, 1998). Empirical evidence has shown that migrant networks have significant impact on chain migration (Ainsworth, 2002). Some other studies revealed that the migrants are relatively more successful to their desired level, when they moved through personal networks like friends/relatives (Massey et al 1987). Several studies of urbanization in Dhaka and elsewhere reveal that "acquaintances in the city play an active role in searching for accommodation for the new migrants" (Siddiqui et al, 1993; Majumder et al, 1996)

A study by Mitra (2004) on urban labour market found that social networks play an important role in accessing jobs in both formal and informal sector. Social capital enables the urban poor to cope with uncertainties and risks as well as social capital increase accessibility to jobs and earnings at the individual level (Edleman B et al. 2006)

Banerjee, (1986) found that the inflow of urban labour force for searching jobs comes directly from rural areas through contacts, and these contacts operate through relatives, friends, members of own caste groups and co- villagers. Edelman and Mitra (2006) in their study highlighted that political contact helps to access facilities such as tenure security and basic amenities. According to Aldrich and Sandhu, (1995) social capital is effective in generating improved outcome, while, political contact is simply

a temporary relief. Mortuza, (1992) and Huq-Hussain (1996) in Bangladesh found that the social networks support the new entrants to make their city life easy and encourage them to face the challenge and uncertainties of urban life even with providing jobs. In comparison, Reingold (1999) observed that there was an important racial and ethnic difference in the structure and composition of social networks among inner-city residents from low-poverty areas in Chicago, while, it does not seem that any particular group is excluded from employment opportunities. Social networks as a source of social capital have a positive image to overcome the constraints of urban poverty. Poverty may be cause of market-generated inequalities, but the poor have the potential to mitigate these inequalities either by individual strategies of self-help or by using their social relationships to build up their lack of human or material capital (Richards et al. 1998).

Aldridge et al (2002) pointed out that social capital not only an important variable for educational attainment, economic and business performance, but it is equally important in access to public health, community governance, and solve the economic problems (Bowles et al (2002). Fay (op cit) also observed that urbanisation not only results the urbanization of poverty, but it is also helps to reduce poverty. In other words, Warah, R (2005) in Kenya observed that migrants who were connected to each other had a better access to employment and housing in cities than those who are unconnected. Lack of access to housing, basic services or employment, in turn, further impacts poverty levels. The urban poor have little choice but to cope with urban life they use their social networks for everything like information about housing, employment, credit as well as physical security (Thomas 1995). Similarly, Roberts (1978) in his study found that social networks play a major role to build a house, find work, or getting financial help or medical emergencies through which the Latin American poor cope with the urban life. Edleman and Mitra (2006) noticed that apart from reducing the long-term vulnerability, social networks enable the slum dwellers to achieve self-sufficiency. They also noted that the social capital that the low income households possess needs to be maintained and should be used to develop access in basic amenities and improved living conditions.

1.7: Research Questions:

The study will be designed to address the following questions:

1. Who are the urban poor?

2. What are the major causes of migration into the urban squatters?
3. What are the causes of the rapid growth of informal settlements in the urban areas?
4. What types of social capital are used by the informal settlers for their socio-economic mobility?
5. What are the livelihood opportunities available in a rapidly growing urban economy?
6. What are the livelihood outcomes in terms of economic activities, expenditure, consumption, savings and access to basic amenities, family and social networking, of the urban poor?
7. What are the reasons behind the socio-economic disparities among the residents of the inner city and peripheral informal settlements?
8. What are the public and government responses towards creation of basic amenities and enabling infrastructure as well as livelihood opportunities for the urban poor?
9. What are the constraints of the urban poor in meeting their basic needs and securing livelihoods?
10. How are the livelihood resources or livelihood assets utilised by the urban poor for survival?
11. What are the survival strategies adopted by the urban poor?

1.8: Research Hypothesis:

The following hypothesis has been formulated to throw light on the issues relating to the study:

1. The process of urbanization leads to deepening of poverty among informal settlers.
2. Formation of social capital is an explicit poverty elimination strategy.
3. Rural urban wage differential is the cause of high growth of informal settlements in urban areas.
4. Informal settlers are economically vulnerable owing to lack of education and skill.
5. Positive co-relationship exists between migration, informal settlement and informal sector activities.
6. Informal sector is the sole provider of employment to the urban poor.
7. The income-food expenditure relationship of informal settlers follows the Engel's law.

8. The urban poor are vulnerable and are excluded from basic amenities enjoyed by the urban population.
9. Institutional credit facilities are absent due to illegal status of settlements.
10. Access to credit depends to a great extent on the quality of social relations.

1.9: Research Methodology

The main thrust of this study is to analyze the formation of different forms of social capital/networks to integrate the slum dwellers into the mainstream market economy and the role played by social capital in devising their livelihood strategy. It is also known that the social capital/network varies with the communities, race, sex, area of the residence, etc. So, the methodology of this study has been planned keeping in view the role and formation of social capital among the residents of inner-city and peripheral city squatter settlements assuming that the residents in the inner city are the older migrants and the residents the peripheral city are relatively the new migrants.

1.9.1: The Sample Squatter Settlements and Sampling Technique

Following the objective of the study, the purposive reference technique has been adopted to collect the information regarding older and new settlements from the existing and retired officials of the Urban Poverty Alleviation Cell (U.P.A), Councillors, Community Organizers, Siliguri Municipal Corporation, officials of the Refugee Relief and Rehabilitation Department, Siliguri, Government of West Bengal. The red shaded area in the map namely the Mazdoor and Lichubagan colony located in the heart of the city as well as the older central business area of Siliguri town have been identified by the officials as the inner-city squatter settlements where the residents are relatively older migrants.

On the other hand, from the outer boundaries (added area) of Siliguri Municipal Corporation another two squatter settlements namely Rajibnagar and Shivnagar Colony (yellow shaded area in the map) have been chosen as peripheral squatter settlements where the residents are normally the new migrants. From each of the inner and peripheral areas, two squatter settlements have been chosen that are inhabited by diverse communities within the population. The above information was once again collected from the respective officials of U.P.A, Councillors, Community Organisers, Siliguri Municipal Corporation (SMC), Refugee Relief and Rehabilitation Department, Siliguri, Government of West Bengal.

In case of selection of the sample households from each of the squatter colonies in the inner city, initially, an older migrant has been identified as the first sample respondent with the help of Resident Community Volunteers (RCVs). Assistance was sought from the first sample household to identify other older migrants. The new identified older migrant was further asked to identify another migrant possessing similar characteristic. This process was continued until the desired sample households were identified. Cross verification was also made amongst the referrals with regard to the validation of the duration of migration. The same technique was also adopted in case of selecting the sample households for the relatively new migrants in each of the colonies of the peripheral city. The technique through which such types of hidden population has been identified is popularly known as “*Snowball Sampling*” or “*Chain Referral Sampling*” or “*Network Sampling*” etc. This method relies on referrals from initially sampled respondents to other persons who are believed to have the same characteristics. This technique is used especially when it is difficult to identify members of the desired population. For the present study both linear and exponential non-discriminative snowball techniques of sampling have been applied.

1.9.2: The Sample Size of the Squatter Households

Out of 154 notified slums in SMC, four slums of the two categories (inner-city settlements and peripheral settlements) have been selected from the universe. In the inner city squatter settlements, there were 348 households in Mazdoor Colony with the inhabitants of 1656 slum dwellers and 375 households in the Lichubagan Colony with the residents of 1835 squatters/slum dwellers. On the other hand, in the peripheral city squatter settlements namely Rajibnagar and Shivnagar Colony, there were 359 and 615 households with the resident of 1710 and 3010 slum dwellers respectively.

From each of the inner and peripheral city squatter colonies/settlements a fixed number of 60 households have been taken. As a whole, 240 sample households from the four sample squatter settlements have been surveyed in the aggregate, taking 120 from the 2 inner city squatter settlements where the residents are the older migrants and 120 from the 2 peripheral squatter settlements where the residents are relatively the new migrants.

1.9.3: Survey Methodology

In pursuing the study, both the analytical and empirical methods have been combined. The relevant data and information have been collected from both the primary and secondary sources. The survey was conducted through a well structured questionnaire canvassed among the sample squatters of both the inner and peripheral city squatter settlements. With the help of Resident Community Volunteers (RCVs), Sundays and holidays were fixed for interview with the households by the researcher, since most of the residents in the slums remain busy with their work schedule in all other days of the week. Exhaustive information has been collected through personal interviews with the households. In most of the cases, the head of households have been selected for an interview. But in some cases it was not possible to interview the head of the households owing to their busy work schedule and in that case information was collected from their spouses or other senior members of the household. The primary survey has been conducted during the periods of October 2010 to March 2011. At the end of the primary field survey, the questionnaire was further scrutinized and the necessary improvements were made referring back to the households.

1.10: The Conceptual Framework

Asian countries have large populations which contribute huge numbers to the population shifting from rural to urban areas. This is the specific nature of urbanization in Asia. A key determinant of migration is the income differential between rural and urban regions (Gilbert and Gugler, 1982). Lee (1966) has divided the forces that influenced migration into negative and positive factors. The former are push factors that tend to force migrants to leave their native place, while the latter are pull factors attracting migrants to destination areas in the expectation of more livelihood opportunities and improving their standard of living.

A livelihood is considered to consist of the assets, activities and entitlements that enable people to make a living. The term "livelihoods" is used to refer to "the assets (all capitals) and income-generating activities that taken together determine the living gained by the individual or household" (Ellis, 2000). Lack of gainful employment coupled with poverty in rural areas, for the migrants with little financial capital or otherwise, the only option is to occupy a piece of vacant land to build their shelter.

These informal settlements are characterized by various names like informal settlements, squatter settlements, shanty towns, unorganized settlements, uncontrolled settlements, etc. Informal or spontaneous settlements are those settlements where the persons or squatters illegally occupy the government land, private land, railway land which is not registered in their names. Squatters are people who occupy land or buildings without the explicit permission of the owner (UN-HABITAT 2003).

Many of these settlements are growing almost as rapidly as the urban population growth rates. Besides, as cities grow, urban poverty is becoming increasingly relevant. UN estimates suggest that over 90 per cent of world population growth over the next 25 years will be in urban areas. By 2025, half the population in Asia and Africa may be living in cities and more than 80 per cent in Latin America. With this, the total number of urban poor will grow simultaneously.

Not surprisingly, the Asian region has the largest proportion of population living in slums or informal settlements. UN-Habitat (2003) estimates that in 2001, Asia had 554 million slum dwellers, or 60 percent of the world's total; Africa had 187 million slum dwellers (20 percent of the world's total), while Latin America and the Caribbean had 128 million slum dwellers (14 percent of the world's total). Worldwide, estimates are that one billion people are living in either slum or informal settlements, and this includes one third of the world's urban population (UNDP, 2005). In south Asia, slum and informal settlement populations constitute 58 percent of the total urban population, compared to 36.4 percent in East Asia, and 28 percent in south-east Asia. In addition, areas in developing countries with high concentrations of slums and slum dwellers are the fastest-growing urban areas. Many of these slum and informal settlements are located in poor and highly vulnerable locations.

The NSSO survey information (2004-2005) showed that out of a total work force of 422.61 million informal workers in India, only 34.84 million workers are employed in the formal workers. The NSS 61st round also covered non-agricultural enterprises in the informal sector in India. As per the NSS 61st round, 83.89 million workers were employed in the non-agricultural informal sector of the economy. It is being increasingly realized that the informal sector possesses massive potential in creating large scale employment opportunities for the urban poor. Thus, the informal

sector acts as a vehicle of employment provider and social development and social security, and yet it is marginalized from the development agenda.

The Siliguri Municipal Corporation (SMC) has 154 notified informal settlements namely slums and squatter settlements are located in almost all the wards with 1,75,012 population i.e., 36.41 percent of the total population of SMC (Census, 2001). Out of total population of slums, around 94,433 persons i.e., 55 percent (UPA Cell, SMC) are living below poverty line which is more than double the national level. Hence, the present study will explore the increasing rural-urban migration, informal settlements, and the formation of social capital among urban informal settlers for sustaining their livelihoods.

1.11: Chapterisation

The proposed study consists of the following nine chapters.

Chapter I: This chapter introduces the statement of the problem, importance and relevance of the study, the objective of the study, research questions, justification of the study, scope of the study, research methodology, research hypothesis, chapterisation of the study, limitation of the study and review of related literature will also be discussed in this chapter.

Chapter II: Informal Settlements and Urban Poor: The chapter covers the studies on urban slums and squatters in different parts of South Asia.

Chapter III: Urbanization, Migration and Demographic Changes in North Bengal: This chapter covers the demographic changes over the last sixty years in North Bengal with the special focus on Darjeeling district.

Chapter IV: Urban Poor in Informal Settlements of Siliguri Municipal Corporation: A brief history and features of the Siliguri town, urbanisation, migration and formation of informal settlements, occupation of informal settlers, locational environment, access to basic amenities, health and education, problems and constraints of urban poor is highlighted in this chapter.

Chapter V: Demographic Characteristics & Socio-Economic Status of the Urban Poor in the Inner City Settlements.

Chapter VI: Demographic Characteristics & Socio-Economic Status of the Urban Poor in the Peripheral City Settlements.

Chapter VII: Migration, Livelihood Opportunities and the Informal Sector in the Context of Informal Settlements under Siliguri Municipal Corporation: This chapter is

a synthesis of the experiences of the urban poor in the two types of settlements under study.

Chapter VIII: Social Capital Formation and Livelihood Strategies of the Squatters in the Inner and Peripheral City under Siliguri Municipal Corporation: In this chapter the role of social networking has been examined in access to livelihood opportunities like migration, housing settlement, access to employment, credit market etc., in both the settlements of SMCA under study.

Chapter IX: Summary Findings & Conclusion, Policy Review & Suggestions.

1.12: Limitation of the Study:

In recent past, both slums and squatter areas are often referred to as informal settlements. Alternatively, informal settlements are also commonly known as slums (UN-Habitat 2003). In Siliguri Municipal Corporation, no distinction has been made regarding informal settlements, and slums. All the informal settlements have been termed as slums. Hence the study used the term informal settlements as synonymous to slums and squatter settlements and the terms have been used interchangeably.

1.13: Data Processing:

After field investigation, the survey data has been analysed in terms of percentage, descriptive and inferential statistics. The descriptive statistics that includes mean, Standard Deviation (SD), ANOVA (Mean Difference) etc., have been used to analyse the socio economic variables of the households. On the other hand, correlation coefficient and the inferential statistics especially the chi-square test have also been applied to find out the degree of relationship and difference among the variables between inner and peripheral city squatter settlements. The technique of Multivariate analysis has been applied for the validation of Engel's law, based on expenditure pattern of food and non-food items in both inner and peripheral city. A model of Multinomial Logistic Regression has also been used to capture the role of social networks as a source of social capital in accessing employment /occupational choice within cities. Finally, an additive composite index on the quality of life of the squatter households has been constructed for the inner and peripheral city in order to gain understanding of the differential impact of the socio economic variables on the well being of the population respondents.

CHAPTER: II

INFORMAL SETTLEMENTS AND THE URBAN POOR: A STUDY OF URBAN SLUMS AND SQUATTERS IN SOUTH ASIA

2.1: Introduction:

Rapid urbanization has been accompanied by the steady growth of slum and squatter settlements in developing countries like India. It is evident from various literature sources that positive relationships exist between urbanization and migration, migration and incidence of slums and squatter settlements and development. The primary objective of the present chapter is to highlight the recent trends in urbanization and incidence of slums, the socio-economic conditions of the slum inhabitants in the developing regions with special reference to South Asian countries in the light of Millennium Development Goals (MDGs). The chapter also highlights the urban poverty situation and amenities among the slum and non-slum residents in developing countries. The success and failure regarding the improvement of slum conditions according to the targets set by Millennium Development Goals has also been discussed in this chapter.

2.2: Demographic and Economic Features in the Developing Regions of the World

The developing region comprises with all the regions of Africa, Asia (excluding Japan) and Latin America and the Caribbean, as well as Melanesia, Micronesia and Polynesia. The term “developing countries” is used to designate countries in the developing region. The developing region in the globe are characterised by wide variations in their physical, demographic and socio-economic characteristics, in which at present (2011) around 82 percent of the world’s population and 74.45 percent of the world’s urban population reside. Among the developing regions, Asia has housed the largest number of population around 4.21 billion in 2011, as against 4.16 billion in 2010. Based on world urbanization prospects 2011 revision, it has been projected that by the year 2020 the projected population in Asia will 4.56 billion. In Asian region, South Asia alone contributed 1.7 billion in 2010 and if the current trend continues, it is expected that the population will increase to around 1.9 billion by 2020. The rate of

growth of population in the developing region was approximately 1.55 percent, with population in Sub-Saharan Africa growing at an average rate of 2.57 percent annually during the period of 1990-2010, followed by South Asia at 1.79 percent, Latin America and the Caribbean at 1.44 percent. During the period 2000-2010, South Asia has been able to achieve high macroeconomic growth relating to GDP, which increased from 4.23 percent in 2000 to 8.69 percent in 2010, followed by Sub-Saharan Africa and the Latin America and the Caribbean (Table-2.2.1).

Table 2.2.1: Demographic and Economic Features in the Developing Regions of the World.

Indicators/ Country	South Asia		Sub-Saharan Africa		Latin America and the Caribbean	
	2000	2010	2000	2010	2000	2010
Total population (in Billions)	1.5	1.7	0.6	0.8	0.5	0.6
Urban Population (in Millions)	423	549	206	298	394	465
Slum Population (in Millions)	194	191	143	198	115	110
Human Development Index (HDI)	0.468	0.575	0.401	0.460	0.680	0.728
GDP Growth (Annual %)	4.23	8.69	3.63	4.95	3.98	6.00
GNI Per Capita PPP (Current International \$)	1450	3078	1311	2146	6721	10946

Source: World Development Indicators, database, <http://data.worldbank.org/data-catalog> accessed on 16.10.1012. Urban and rural population figures taken from World Urbanisation Prospects 2011 Revision, slum population figures taken from the State of the World's Cities 2012/13: Prosperity of Cities, UN-HABITAT.

According to UN-HABITAT, urbanisation is positively correlated with the process of economic development. Most of the nations with high per capita incomes and human development index are among the most urbanized and vice-versa. This correlation between urbanisation and economic development is clearly evident in Asia, where rapid urbanisation has been the major factor behind the growth dynamics, and the process of urbanization has also aided in bringing about overall reductions in poverty.

The economic data (Table-2.2.1) clearly indicates that Latin America and the Caribbean and the South Asian region was relatively better off than the African region particularly the sub-Saharan region. In general, various studies and reports evidenced that the Human Development Index is strongly correlated with the proportion of slum population i.e., the higher the percentage of slum population in any region, the lower is the Human Development Index (HDI). In the developing region, it is observed that

with the higher level of GNI per capita and HDI, the slum incidence is comparatively lower than that of the slum population in South Asia.

As per as the report of the World Bank, it is found that in 2008, 1.29 billion people lived in poverty below \$1.25 a day that is equivalent to 22 percent of the population in the developing world. Nearly three quarters lived in South Asia (571 million) and Sub-Saharan Africa (396 million). Another 284 million lived in East Asia, and less than 50 million in Latin America and the Caribbean, Middle East and North Africa, and Eastern Europe and Central Asia combined.

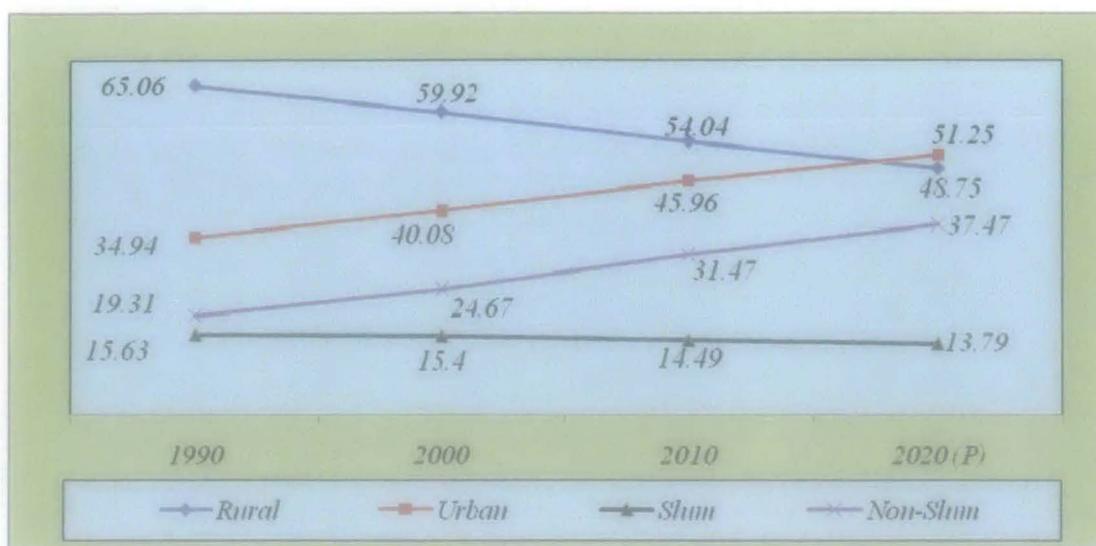
On the other hand, the study of Ravallion et al (2007) concerning urban poverty shown that as an absolute number and the proportion of urban population living below poverty line (using a poverty line of \$ 1 per day) in the developing regions have increased sharply during the period 1993-2002. In the sub-regions of the developing world, the highest percentage of urban population living below poverty line has been recorded by sub-Saharan Africa (40.38 percent), followed by south Asia (34.61 percent), Latin America and the Caribbean (9.49 percent) and middle east and northern Africa (0.75 percent) in 2002. Various studies also stated that South Asia is the only region in the developing world where the percentage of population living below poverty line has reduced sharply because some of the countries in South Asia like India have made significant progress in poverty reduction through its various poverty alleviation programmes.

2.2.1: Share of Urban, Rural and Slum Population in the Developing World

According to the world urbanization prospects, 2011 revision, for the first time in human history, the proportion of urban population in the globe reached at 52.08 percent in 2011, as against to 51.60 percent in 2010, i.e. there are one urban resident in every two persons in the world. If the current trend continues almost all of the world's demographic growth over the next four decades will be concentrated in urban areas. This global trend driven mostly by the dynamics of rapid urban growth in the developing world, where the urban population is expected to increase from 2.6 billion in 2010 to 3.27 billion in 2020 and 5.12 billion is likely to reach around 2050. In contrast, the world urban population is expected nearly double by 2050, increasing from 3.56 billion in 2010 to 4.28 billion in 2020 and 6.25 billion in 2050 (67.18 percent). At the same time, globally and regionally the rural population in absolute

number is increasing but their proportion is decreasing continuously (computed from World Urbanization Prospects 2011, revision).

Figure (2.2.1): Trends in the Share of Urban, Rural and Slum Population in the Developing World



Source: Computed from World Urbanization Prospects, 2011 Revision and State of the World's Cities 2012/13: Prosperity of Cities, UN-HABITAT.

Note 1: Share of Rural urban population is to the total population and share of slum and non-slum population to the total urban population of the developing region. Projected Rural urban proration of population based on urbanization prospects 2011 revision figure. The computed projection of Slum population based of annual increase of the slum population.

Note 2: According to UN-HABITAT the estimate of slum population based on either lacking one or more of the following five amenities:

- (1) Durable housing (a permanent structure providing protection from extreme climatic conditions)
- (2) Sufficient living area (no more than three people sharing a room)
- (3) Access to improved water (water that is sufficient, affordable and can be obtained without extreme effort)
- (4) Access to improved sanitation facilities (a private toilet, or a public one shared with a reasonable number of people) and
- (5) Secure tenure (protection against forced eviction). Since information on secure tenure is not available for most countries included in the UN-HABITAT database, however, only the first four indicators are used to define slum households, and then to estimate the proportion of the urban population living in slums.

Various studies reveal that most of the world's population growth in the coming decades will be absorbed by the urban areas in the developing economies. From Figure (2.2.1), it is observed that the share of urban population to the total population in the developing region increased from 34.94 percent in 1990 to 45.96 percent in 2010 and projection based on world urbanisation prospects the estimated share will increase to 49.48 percent in 2020. Whereas, the proportion of rural population decreased from 65.06 to 54.04 percent during the period of 1990-2010 and the projection was that it will further reduce to 48.75 percent by 2020. The share of urban population in the sub-regions of the developing world namely, Africa and Asia is expected to increase to 24.68 and 64.58 percent respectively by the middle of the century (2050) (Computed from World Urbanization Prospects, 2011 Revision).

The urban population living in slums as an absolute number in the globe is increasing, but its proportion to total urban population is decreasing. In 1990, there were 650 million (15.63 percent of the total population) slum dwellers in the developing region and it increased to 820 million (14.49 percent of the total population) in 2010 i.e., one in every seven human beings is a slum dweller and for every three urban persons, one is a slum dweller. If the current trend continues (annual increase) the slum figure is expected to reach around 880 million (13.79 percent of the total population) by 2020. The significant point is that 170 million new slum dwellers have been added to the world's urban population during the period of 1990-2010, i.e. around 8.5 million of slum dwellers are adding every year in the developing region.

2.2.2: Slum Population in the Developing World

With the rapid pace of urbanization, slums are also growing as a dominantly in the cities of the developing world. According to the latest data available in the State the World's Cities 2012/13), it is observed that Asia dominated the global picture, having a total of 499 million slum populations in 2010, followed by Africa (210 million), Latin America and the Caribbean (110 million) and if the annual increase of slum population during the period of 2000-2010 remains same the projected figure will be 512 million in Asia, 262 million in Africa and 105 million in Latin America and the Caribbean 105 by 2020. Among the developing regions (Northern Africa, Sub-Saharan Africa, Latin America and Caribbean and South Asia) in the world, the highest number of slum population in 2010 has been housed by Sub-Saharan Africa (198 million), where, for every two urban dwellers one is a slum resident, followed by South Asia (191 million), where, for every three urban dwellers one is a slum dweller, Latin America and the Caribbean (110 million), where, for every four urban residents one is a slum dweller and northern Africa (12 million). It has also been projected on the basis of annual increase that during the period of 2010-2020, the slum population will decrease by 3 million in northern Africa, 5 million in Latin America as against the increase in slum population by 55 million in sub-Saharan Africa (Table 2.1, Appendix A). The fact is that with the rapid growth of urbanisation, the majority of urban and slum population in the world are living in the developing region and the above analysis conformed to the view of Dwyer (1975) that the urban growth is spatially related to the growth of slums.

2.2.3: Level of Urbanisation (LOU) and Proportion of Slum & Non-Slum Population

From the statistical data (World Urbanization Prospects 2011 revision), it has been found that 63.18 percent of the global urban population and 86.43 percent of the developing world's urban population were concentrated in Asia and Africa taken together in 2010, and the computed projection of global and developing world's population will reach at 66.58 and 87.31 percent in 2020. At the same time, these two regions (Asia and Africa taken together) have housed 86.47 percent of the total slum population in the developing region and it can be predicted if the annual increase of slum population during the period of 2000-2010 remains same, the proportion of slum population will increase marginally to 87.95 percent by 2020.

Table (2.2.3): Level of Urbanisation (LOU) and Proportion of Slum & Non-Slum Population to the total Urban Population in developing Regions

Region/ LoU, Slum & Non-Slum Population	Proportion of Slum and Non-Slum Population											
	1990			2000			2010			2020 (P)		
	LOU	Slum	Non-Slum	LOU	Slum	Non-Slum	LOU	Slum	Non-Slum	LOU	Slum	Non-Slum
Developing Region	34.94	44.73	55.27	40.08	38.43	61.57	45.96	31.52	68.48	51.25	26.9	73.1
Northern Africa	45.64	31.46	68.54	48.41	18.34	81.66	51.25	11.96	88.04	54.08	7.52	92.48
Sub-Saharan Africa	28.16	73.62	26.38	32.16	69.43	30.57	36.27	66.41	33.59	40.74	59.34	40.66
Latin America & Caribbean	70.34	33.63	66.37	75.49	29.21	70.79	78.84	23.69	76.31	81.46	19.84	80.16
South Asia	26.45	57.42	42.58	28.97	45.94	54.06	32.24	34.7	65.3	36.02	26.73	73.27

Source: Computed from World Urbanization Prospects, 2011 Revision and State of the World's Cities 2012/13: Prosperity of Cities, UN-HABITAT.

Latin America and the Caribbean recorded as the second largest urbanised region in the world. Showing an increasing trend, Latin America and the Caribbean recorded significantly higher level of urbanization from 1990 to 2010, followed by Northern Africa and Sub-Saharan Africa. As evident, the level of urbanization in South Asia was relatively much lower during the same period under study. In terms of the proportion of slum and non-slum population, it is also seen that instead of a declining trend, the proportion of slum population has been sky high in Sub-Saharan Africa, followed by South Asia, Latin America and the Caribbean and Northern Africa between 1990 and 2010. The computed projection of slum population based on simple annual increase between the periods of 2000-2010, the proportion of slum population

in 2020 shows the similar trend i.e. the concentration of slum population will also be highest in Sub-Saharan Africa, followed by South Asia, Latin America and the Caribbean and Northern Africa.

2.3: Informal Sector Employment in Developing Regions

In terms of economic activity, majority of the urban poor in developing countries earn their living from informal sector activities located either within or outside the slum areas and this sector also plays a very significant role not only in the national economies but more significantly for the livelihood of many urban slum dwellers. According to the State of the World's Cities, 2006/07, around 85 per cent of all new employment opportunities in the world occurs in the informal economy. In developing countries, informal employment comprises 50 to 70 percent of non-agricultural employment. In the developing region and their sub-regions, a large portion of GDP comes from informal sector, for example, the share of informal sector in the GDP of sub-Saharan Africa was about 41 percent, followed by Asia (31 percent), Latin America (29 percent) and 27 percent in Northern Africa. In Latin America and the Caribbean, 7 out of 10 new jobs in urban areas are created in the informal sector. In sub-Saharan Africa, the informal sector accounts for about 78 percent of all non-agricultural employment. In Latin American and Northern Africa, it is 51 and 48 percent respectively. It is common to all the developing regions and countries that the maximum percentage of informal sector workers are migrant unskilled workers from rural to urban areas. However, it is true that the skilled and educated youth, who are unable to be absorbed in the formal labour market, the informal sector is the only available option to them.

2.4: Access to Basic Amenities of Urban Population in the developing Regions

The locus of poverty is moving from the countryside to cities and this process is presently recognised as the 'urbanization of poverty' (The Challenge of Slums, 2003). Poverty in the developing world is highly associated with rural areas which have increasingly become urbanized. About 40 to 80 percent of urban dwellers in the world live in poverty with little or absolutely no access to shelter, basic urban services and social amenities (Slums of the World, 2003, UN-HABITAT). Urbanization in developing countries have already shown a red signal, particularly due to increasing number and proportion of city residents who live in informal settlements either in the

heart of the cities or in the peri-urban areas. Evidences also indicated that it will increase continuously in the most developing countries due to structural adjustment problems, economic mistakes and the poor performance of formal housing and basic services. Projection made by Slums of the world, 2003, found that by the year 2020, the level of urban poverty in the world could reach 45 to 50 percent of the total population living in cities.

2.4: 1 Access to Safe Drinking Water and Sanitation

Inadequate sanitation, hygiene and water lead not only to sickness and deaths, but also to higher health care costs, lower school enrolment and retention rates, and lower labour productivity among slum dwellers than their non-slum counterparts (State of the World's Cities, 2010/11). Sustainable access to basic services is the key determinant of the human well being especially for the urban poor. Various studies (Mcgee, 1967; Satterthwaite, 1997) have revealed that as illegal squatting is a common phenomenon in the cities of the developing world particularly in Asia, the people living in slums suffer mostly from the lack of public amenities i.e. safe drinking water and sanitation are almost non-existent with the common health hazards.

Table (2.4.1) Access to Safe Drinking Water and Sanitation of Urban Population in developing Regions

Indicators/ Region	Developing Region		Sub-Saharan Africa		Latin America and the Caribbean		South Asia	
	1990	2010	1990	2010	1990	2010	1990	2010
Percentage of urban Population lacking Safe Drinking Water	7	5	17	17	5	4	10	4
Percentage of urban Population lacking improved Sanitation.	35	27	57	57	20	16	43	36
Relative change in Safe Water (%) (1990-2010)	-28.57		0.00		-20.00		-60.00	
Relative change in Sanitation (%) (1990-2010)	-22.86		0.00		-20.00		-16.28	

Source: Millennium Development Goals, 2012, Note: Negative relative change implies the decrease in the percentage of lacking safe drinking water and sanitation). Web site: <http://unstats.un.org/unsd/mdg/data.aspx>, Accessed on 16.10.12.2012

Table (2.4.1) shows the access to some basic amenities available to the urban population. Despite the high degree of urbanisation and substantial decrease in the percentage of informal settlers in the developing world, currently, 5 percent of the urban population does not have any access to safe drinking water. Among the sub-regions in the developing world, the highest percentage of urban population lacking in

improved water facilities has been recorded by sub-Saharan Africa (17 percent), followed by South Asia and Latin America and the Caribbean (4 percent each) in 2010. In terms of relative change in the lack of safe drinking water and sanitation of the urban population, South Asia has made significant improvement in access to safe drinking water compared to other developing regions shown in Table (2.4.1).

From table, it is also clear that in the developing region, the proportion of urban population lacking improved sanitation (32 percent) is worse off than access to safe drinking water (5 percent). The highest percentage of urban population lacking in improved sanitation at present (2010) in sub-Saharan Africa (57 percent), followed by south Asia (36 percent) and Latin America and the Caribbean (16 percent). In terms of improvement in access to sanitation, it is also observed that Latin America and the Caribbean has made significant progress with 20 percent relative decrease, followed by South Asia with 16.28 percent relative decrease but in sub-Saharan Africa no improvement in access to sanitation is found.

Poor sanitary conditions and poor water quality can cause sickness and diseases like diarrhea and other water borne diseases among children and adults and thus can have an impact on the life expectancy of the affected population. Among the sub-regions in the developing world, South Asia has shown impressive improvement, where, between 1990 and 2010, the percentage of urban population without access to safe drinking water decreased from 10 to 4 percent with 16.28 percent relative decrease, as against the reduction from 35 to 27 percent with 22.86 percent relative decline in the developing region. In contrast, the proportion of urban population remained the same during the period 1990-2010 in sub-Saharan Africa. On the other hand, Latin America and the Caribbean have made comparatively good progress in providing access to safe drinking water to their urban population. But, over the same period, the percentage of urban population lacking in safe drinking water in Latin America and the Caribbean decreased from 5 in 1990 to 4 percent in 2010 with 20 percent relative decrease to achieve the MDG's target (by 2020 a significant improvement in the lives of at least 100 million slum dwellers). South Asia has made significant progress in access to safe drinking water, followed by Latin America and the Caribbean and in African region practically the sub-Saharan Africa has failed to meet the target of MDG.

On the other hand, in these sub-regions of the developing world shown in Table (2.4.1), the percentage of urban population lacking improved sanitation was

highest in sub-Saharan Africa (57 percent) in 2010, followed by south Asia (36 percent), and the Latin America and the Caribbean (146 percent). The proportion of population lacking sanitation in South Asia and sub-Saharan Africa is around 3 and 4 times higher than that of the proportion in Latin America and the Caribbean. Despite, Latin America and the Caribbean has made significant progress in access to sanitation with 26.32 percent relative decrease during the period of 1990-2010 in the light of MDGs. In contrast, South Asia and sub-Saharan Africa have made marginal gain with 2.27 percent and 1.75 percent relative decrease in sanitation. In the developing region as a whole, access to safe drinking water among the urban population was much better than the access to improved sanitation.

2.5: Demographic and Economic Characteristics of South Asian Countries

Focusing our attention on some of the countries of South Asia, it is clear from Table - 2.5.1 and 2.5.2 that, in terms of latest data available on demographic and economic characteristics, India dominates all other countries in South Asia and it has housed majority of the urban and slum population (about 356 and 105 million respectively) in 2009, where, for every three human beings, one is urban and for every three urban persons, one is a slum dweller. Pakistan on the other hand, registered the 2nd highest urban and slum population (64 million and 30 million respectively), where for every two urban residents one is a slum dweller. Similarly, Bangladesh recorded the 3rd highest urban and slum population (45 million and 28 million respectively, where out of two urban persons one is slum dweller. Nepal, at the extreme end, shows relatively lower urban population (5 million) with 3 million slum population, while for every five urban human beings two are slum residents at the same time.

With the current annual increase during the period of 2000-2009, the projected slum population in 2020 will reduce significantly only in India, as against the increase in slum population among the other countries. In 2020, the expected slum population will reach about 86 million in India, 37 million in Pakistan, 30 million in Bangladesh, 4 million in Nepal. Based on actual urban and slum population, it has been observed that in India, during the period 2000-2009, about 64 million new urban residents (about 7 million every year) have been added to the country's urban population as against the reduction of 15 million (1.7 million every year) slum population. In Bangladesh, an additional about 14 million (1.6 million each year) urban and 2 million (0.2 million each year) new slum population have been added with the

country's urban and slum population, while in Pakistan, about 16 million (1.8 million every year) urban and 6 million (0.7 million every year) new slum population have been added. In Nepal, more than 2 million new urban and 1 million new slum populations have been added during the same period.

Table (2.5.1): Urban & Slum Population (in millions) in South Asian Countries

Country/Population	1990		2000		2009		2020 (P)	
	Urban	Slum	Urban	Slum	Urban	Slum	Urban	Slum
India	223	121	292	120	356	105	483	86
Nepal	2	1	3	2	5	3	7	4
Bangladesh	21	20	31	26	45	28	55	30
Pakistan	34	18	48	24	64	30	81	37

Source: State of the World's Cities 2012/13, UN-HABITAT, Note 2: urban population in 2020 is the projection of world's urbanization prospects 2011 revision. The slum figure for 2020 based on yearly increase of slum population between the year 2000 & 2009. Note (3): The remaining countries in South Asia have been excluded due to non-availability of slum figure.

2.5.1: Human Development Index (HDI) and Macro Economic Indicators

Statistical evidences indicate that despite some improvement over the past ten years, South Asian average for human development index (HDI) remains far below the average for developing countries. This is primarily due to the lower level of public expenditures on health and education as percentage of GDP for improving human development of the general population (Haq, 2009).

The story behind the economic growth in the south Asian region is quite uneven probably due to liberalization policies undertaken by these countries in 1990s.

Among the four south Asian countries, the last decade has witnessed significant increase in GDP growth rates in India and Bangladesh as against the decrease in Pakistan and Nepal (Table 2.5.2). Even with the global financial crisis, with a current GDP growth of 9.55 percent, India leads the region followed by Bangladesh (6.07 percent per cent), Nepal (4.82 per cent) and Pakistan (4.14 percent) in 2010. On the other hand, according to a World Bank report published in 2012, the Gross National Income (GNI) per capita converted to international dollars using purchasing power parity is highest in India, followed by Pakistan, Bangladesh and Nepal. Labor force participation rate is the proportion of the population ages 15 and above who are economically active during a specified period. It is found from the table (2.5.2) that during the period of 2000-2010, Labor force participation rate is significantly higher in Nepal, followed by Bangladesh, India and Pakistan.

Table (2.5.2): HDI and Economic Indicators in South Asian countries

Indicators/ Country	India		Bangladesh		Pakistan		Nepal	
	2000	2010	2000	2010	2000	2010	2000	2010
Human Development Index	0.461	0.542	0.422	0.496	0.436	0.503	0.398	0.455
GDP Annual Growth Rate (%)	3.98	9.55	5.94	6.07	4.26	4.14	6.20	4.82
GNI Per Capita PPP (Current international \$)	1510	3340	890	1810	1620	2780	800	1210
Labor Participation Rate (% of Total Population ages 15+)	59.50	55.60	70.50	70.80	50.80	53.20	85.90	83.90

Source: World Development Indicators, 2012, www.worldbank.org, accessed on 18.10.2012

It has been mentioned earlier that higher the value of HDI, the lower would be the incidence of slums. But practically, it was seen that among the four south Asian countries, the number of slum population has been increasing even with the increase in the value of HDI. In this region, India is the only country, where, the absolute number of slum population decreased sharply even with marginal increase in the value of the HDI. This is indicative of a possible transition of a certain magnitude of slum dwellers out from the conditions of slums due to effective slum development programmes and a possible declining trend in rural-urban migration. But, in contrast, with the increase in HDI, the number of slum population among the countries of Pakistan, Bangladesh and Nepal is also increasing indicating that these countries have failed to make substantial improvement in slum conditions (measured on the basis of income, education and health) and may be due to unabated flow of rural migrants to the urban centers. In terms of living conditions, the slum dwellers in Bangladesh, Pakistan and Nepal are much worse than India, drawing attention to the lack of government initiatives and interventions in improving the socioeconomic conditions of this segment of the population.

2.5.2: Urban and Rural Population below National Poverty Line

With no significant improvement in economic indicators and demographic characteristics, the World Bank stated that the proportion of world's poor in India living below international poverty line of \$ 1.25 per day (PPP) is 34.50 percent in 2008 and on the other hand, Bangladesh and Pakistan taken together has registered around 8 percent of the world's poor people (5.30 and 2.70 percent respectively). According to Millennium Development goals Indicators in 2010, the country level data shows that the highest percentage of population living below international poverty line of \$1.25 (PPP) per day was the highest in Bangladesh (43.30 percent),

followed by India (32.70 percent), Nepal (24.80 percent) and Pakistan (21.00 percent in 2008)

Table (2.5.3): Percentage of Population below National Poverty Line in South Asian Countries

Rural/ Urban/ Country	Bangladesh		India		Nepal		Pakistan	
	1996	2010	1994	2010	1996	2011	1999	2006
Rural	54.50	35.20	50.81	33.80	43.30	27.40	34.70	27.00
Urban	27.80	21.30	31.80	20.90	21.60	15.50	20.90	13.10
Relative Change (%)	1996-2010		1994-2010		1996-2011		1999-2006	
Rural	-35.41		-33.48		-36.72		-22.19	
Urban	-23.38		-34.28		-28.24		-37.32	

Source: Millennium Development Goals indicators, data base, Web site:<http://mdgs.un.org/unsd/mdg/Default.aspx>, Accessed on 20.10.12, Note: National Poverty Line is Internationally Adjusted

Table 2.5.3 represents the proportion of population below national poverty line in both the rural and urban areas of 4 South Asian countries at different points of time. It is evident that the percentage of urban population living below national poverty line by the latest year (shown in the above table) was highest in Bangladesh (21.30 percent), followed by India (20.90 percent), Nepal (15.50 percent) and Pakistan (13.10 percent). In contrast, at the same time, the percentage of rural population living below national poverty line was also highest in Bangladesh (43.8 percent), followed by India (33.80 percent), Nepal (27.40 percent) and Pakistan (27.00 percent). If we analyse the performance of urban poverty alleviation among the four south Asian countries, it is amply clear that Pakistan has made significant improvements in poverty alleviation with 37.32 percent relative decrease, followed by India with 34.28 percent relative decrease, Nepal with 28.93 percent relative decrease and Bangladesh with 23.38 percent relative decrease

2.5.3: Share of Urban, Slum & Non-Slum Population to total Urban, Slum & Non-Slum Population in South Asian Countries

The incidence of urban poverty resulting from rapid urban growth is visibly indicated by the proliferation of squatter and slum settlements, especially in metropolitan areas. In many of the slums, overall conditions in housing and health services were worse than those in the rural areas (Choudhury 1978). Since 1990, in terms of share of urban, slum and non-slum population to the total urban, slum and non-slum population in south Asia presented in Table (2.5.4) found that India has dominated all other countries in south Asia. In 2009, the share of urban and slum population in India

was about 8 and 4 times more than that of the share of Bangladesh, about 67 and 34 times more than that of Nepal and around 6 and 3 times more than that of Pakistan.

Table (2.5.4): Percentage Share of Population to total Urban, Slum & Non-Slum Population in South Asian Countries

Country	1990			2000			2009			2020 (P)		
	Urban	Slum	Non-Slum	Urban	Slum	Non-Slum	Urban	Slum	Non-Slum	Urban	Slum	Non-Slum
India	70.56	66.62	75.87	68.93	61.58	75.17	64.81	54.91	70.08	69.08	46.18	77.43
Nepal	0.53	0.66	0.37	0.77	1.08	0.51	0.96	1.61	0.62	1.02	2.28	0.56
Bangladesh	6.59	11.01	0.63	7.23	13.28	2.08	8.14	14.45	4.79	7.91	15.86	5.01
Pakistan	10.81	9.94	11.98	11.32	12.29	10.50	11.71	15.72	9.59	11.61	20.00	8.55

Source: Computed from world urbanization prospects 2011 revision and State of the World's Cities 2012/2013: Prosperity of city, UN-HABITAT

If the current trend of slum population between the periods of 2000-2009 remains continues, the share of slum population in India to the total slum population in south Asia is expected to reach about 46.18 percent in 2020, followed by Pakistan (20 percent), Bangladesh (15.86 percent) and Nepal (2.28 percent). The significant point is that when the share of urban and slum population in south Asia is increasing then at the same time the share of urban, slum and non-slum population in India is continuously declining indicating that other countries or at least one country other than India is urbanising at a faster rate than India, with higher slum incidence. From the statistical evidences, it is also seen that the share of non-slum population in all the countries except India was much lower than that of the share of slum population.

2.5.4: Level of Urbanisation (LOU) and Proportion of Slum & Non-Slum Population in South Asian Countries

So far as level of urbanization is concerned, from Table 2.5.5 it has been observed that since 1990, the degree of urbanization increased steadily in all the countries of south Asia, while, Pakistan recorded significantly higher level of urbanization, followed by India, Bangladesh and Nepal. In contrast, the proportion of slum population from 1990-2009 was highest in Bangladesh, followed by Nepal, Pakistan (except the year 1990 in which the percentage of slum population in Pakistan was lower than India) and India. Based on current annual increase (between the periods of 2000-2009) in slum population, the computed projection is that with the reducing

trend the proportion of slum population will be highest in Nepal, followed by Bangladesh, Pakistan and India by 2020.

Table (2.5.5): LOU and Percentage of Slum & Non-Slum Population in South Asian Countries

	1990			2000			2009			2020 (P)		
	LOU	Slum	Non-Slum	LOU	Slum	Non-Slum	LOU	Slum	Non-Slum	LOU	Slum	Non-Slum
India	25.55	54.21	45.79	27.67	41.05	58.95	29.72	29.40	70.60	39.44	17.87	82.13
Nepal	8.86	70.65	29.35	13.43	64.08	35.92	18.06	58.05	41.95	23.79	59.87	40.13
Bangladesh	19.81	95.90	4.10	23.59	84.46	15.54	27.56	61.60	38.40	37.22	53.58	46.42
Pakistan	30.58	52.79	47.21	33.14	49.88	50.12	35.59	46.57	53.43	46.76	46.06	53.94

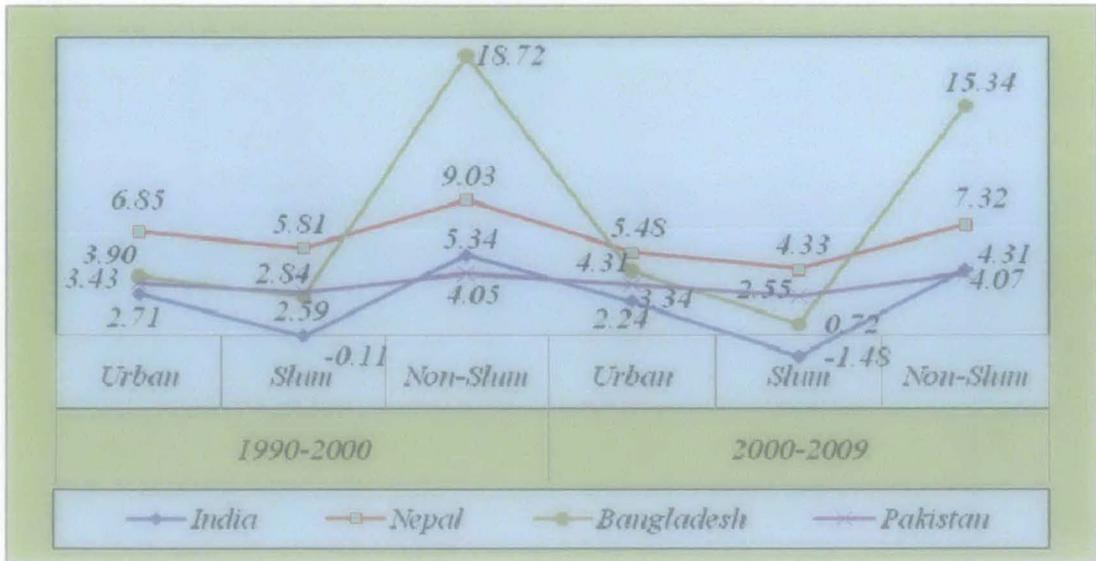
Source: Computed from World Urbanization Prospects 2011 Revision and State of the World's Cities 2012/2013: Prosperity of City, UN-HABITAT

A significant change in relation to the degree of urbanization and proportion of slum population is observed in south Asian countries. The level of urbanization in India increased from 25.55 to 29.72 percent during the period of 1990-2009, whereas, the proportion of slum population decreased from 54.21 to 29.40 percent and the reduction was the highest among the other countries in south Asia. In Bangladesh, the percentage of slum population (highest in south Asian countries) decreased from 95.90 to 61.60 percent. In Nepal, percentage of slum population decreased from 70.65 to 41.95 percent. Pakistan with higher level of urbanization, show a decrease in the proportion of slum population from 52.79 to 46.57 percent during 1990-2007. The higher level of urbanization along with relative lower proportionate decline in the slum population implies that the government has failed to improve the lives of slum dwellers may be due to the weak implementation of the poverty alleviation programmes, lack of scaling up the programmes and increasing in-migration. From the above discussion, one can conclude can be made that India is far better than other countries in terms of improvement the living conditions of the slum dwellers.

2.5.5: Annual Growth Rate Urban, Slum & Non-Slum Population in south Asia

Already, it has been shown that there was a declining trend in the growth rate of urban, slum and non-slum population in the developing regions. Yet, south Asia and northern Africa were exceptions, where slum growth rates were negative.

Figure (2.5.6): Annual Growth Rate of Urban, Slum & Non-Slum Population in South Asian Countries



Source: Computed from State of the World's Cities 2012/2013: Prosperity of Cities, UN-HABITAT

Among the four countries in south Asia, the annual growth rate of urban population was significantly higher in Nepal, followed by Bangladesh, Pakistan and India during the periods of 1990-2000 and 2000-2009. In contrast, the slum growth rate was also highest in Nepal, followed by Pakistan and Bangladesh at the same period of time. Among the south Asian countries shown in Table (2.5.6) India is the only country recorded the negative growth rate of slum population over the same periods (1990-2000 and 2000-2009).

2.6: Access to Basic Amenities among Slum/Non-slum Population in South Asian Countries

2.6.1: Types of Shelter Deprivation in Slums

Not all slums are homogeneous and not all slum dwellers suffer from the same degree of deprivation. According to UN-HABITAT, the degree of deprivation depends on how many of the five conditions that define slums (poor access to improved water, poor access to sanitation, non-durable housing, insufficient living area and insecure tenure) are prevailing within a slum household. Shelter deprivation is measured in terms of living area of the slum household. A house is considered to provide a sufficient living area for the household members if not more than three people share the same room (State of the World Cities, 2006/07).

Table (2.6.1): Shelter Deprivation of Slum households in South Asian Countries

Country	Percent of Slum Population by Shelter Deprivation (2005)				
	All types	One Shelter Deprivation	Two Shelter Deprivation	Three Shelter Deprivation	Four Shelter Deprivation
Bangladesh	70.8	27.5	29.7	13.4	0.2
India	34.7	27.8	6.9	---	NA
Nepal	60.7	34.4	12.3	14	---
Pakistan	---	---	---	---	---

Source: Computed from the "State of the World's Cities 2010/11": Bridging the Urban Divide, UN HABITAT

Table (2.6.1) illustrates the degree of shelter deprivation among the slum population in the four south Asian countries in 2005 based on the reports of the state of the world cities 2011/12. It is apparent from the above table that shelter deprivation of the slum households was highest in Bangladesh (70.80 percent), followed by Nepal (60.7 percent) and India (34.70 percent). On the other hand, in terms of different types of shelter deprivation, 57.20 percent of the household had one and two types of shelter deprivation taken together in Bangladesh as against 46.70 in Nepal and 34.70 percent in India. Three and four types of shelter deprivation taken together were significantly higher in both the Bangladesh and Nepal at about 14 percent. In terms of degree of shelter deprivation, the condition of slum households in India were much better compared to Bangladesh and Nepal.

2.6.2: Enrolment in Primary Education in Urban, Slum & Non-Slum Population by Shelter Deprivation

Education is one of the most important social assets that impact the well being of human society and its impact on the livelihood strategy is reflected by the socio-economic status of the people, particularly for the urban poor. Access to education is always greater in cities rather than rural areas, but as far as the enrolment in primary education of the urban poor is concerned, it is also a fact that social, cultural and economic barriers hinder the slum dwellers to enroll their children in schools and to complete primary education. According to UN-HABITAT reports 2010/11, the net enrolment ratios in the non-slum areas has increased but decreased in the slum areas in countries like Tanzania, Zambia and Zimbabwe. On the other hand, in Bangladesh, Nepal and Pakistan, less than 40 percent of the children in the poorest socio-economic quintile completed primary education compared to 70-80 percent in the richest quintile. In Nigeria, children are 35 percent less likely to attend school than those from non-slum areas. Similarly, in Bolivia, only 10 percent of children in poorest

quintile complete primary school as compared with 40 percent of those in non-slum areas.

In terms of net enrolment ratio in primary education among the South Asian countries (Table-2.6.2), India dominates not only the regions of the developing world but also the other South Asian countries. According to MDGs reports 2010 and 2012, the net enrolment ratio in primary education in India was 98.2 percent, followed by Bangladesh (88.4 percent) in 2008, Pakistan (74.1 percent) in 2010 and a lower percentage of net enrolment ratio has been registered by Nepal (61.6 percent) in 2008.

Table (2.6.2): Enrolment in Primary Education in Urban, Slum & Non-Slum by all types of Shelter Deprivation in South Asian Countries

Country	Year	Urban			Non-Slum			Slum		
		M	F	Gender Gap	M	F	Gender Gap	M	F	Gender Gap
Bangladesh	1996	77.70	74.90	2.80	87.00	75.80	11.20	66.20	73.70	-7.50
	2004	79.00	80.90	-1.90	92.50	78.40	14.10	77.70	81.10	-3.40
India	1998	91.00	88.20	2.80	96.60	95.20	1.40	86.80	83.20	3.60
	2005	80.10	80.50	-0.40	86.50	86.50	0.00	77.70	78.40	-0.70
Nepal	1996	83.80	85.50	-1.70	93.50	97.40	-3.90	80.70	81.50	-0.80
	2006	93.50	89.40	4.10	98.50	97.70	0.80	91.60	85.80	5.80
Pakistan	1990	75.00	69.90	5.10	83.00	83.50	-0.50	73.70	67.70	6.00
	2006	78.10	76.40	1.70	83.40	87.10	-3.70	76.90	73.70	3.20

Source: Computed from the "State of the World's Cities 2010/11": Bridging the Urban Divide, UN-HABITA

So far as enrolment in primary education among urban, slum and non-slum population is concerned, the latest data available from the state of the world cities 2011/12 for the four south Asian countries presented in Table (2.6.2), it has been seen that the primary enrolment in urban areas for both male and female were highest in Nepal (93.5 and 89.4 percent respectively) with the gender gap of 4.1 percentage points, followed by India (80.1 and 80.5 percent respectively) with gender gap of 0.4 percentage points, Pakistan (78.1 and 76.4 percent respectively) with gender gap of 1.7 percentage points and Bangladesh (77.7 and 74.9 percent respectively) with the gender gap of 2.8 percentage points. The statistical data clearly indicate that there exists wide variation in the gender disparity in primary enrolment in urban, slum and non-slum areas among the South Asian countries. But India and Bangladesh are the only countries, where gender disparity in enrolment in primary education is negative in the year 2004 and 2005 respectively, i.e., in these countries, the proportion of urban female enrolment in primary education was higher than the male counterpart.

As expected, slum enrolment in primary education was lower than the non-slum enrolment. Following the MDGs target, the enrolment in primary education for both male and female slum population in the latest available year among the countries shown in Table (2.6.2) was highest in Nepal (91.6 and 85.8 percent respectively), followed by Bangladesh (77.7 and 81.1 percent respectively), India (77.7 and 78.4 percent respectively) and Pakistan (76.9 and 73.7 percent respectively). When compared to India, the position of Bangladesh was far better in case of primary enrolment in urban, non-slum and slum areas. If we turn our attentions to the gender disparity in the enrolment of primary education among slum dwellers in South Asian countries, it is apparent that the female enrolment ratio in primary education among the slum dwellers in Bangladesh and India was higher than that of the male counterpart. In other countries namely, Pakistan and Nepal, the enrolment of male slum population in primary education was marginally higher than the female counterpart. Whatever be the progress and achievements, India is the only country in South Asia, where the enrolment in primary education has decreased substantially. But, Bangladesh, Pakistan and Nepal have made significant progress in the enrolment of primary education among the slum dwellers.

2.6.3: Malnourished Children (under5) in Urban, Slum & Non-Slum Population by Shelter Deprivation.

Demographic and health survey data between 1990 and 2007 shows that serious malnutrition has been widespread in urban slums of Africa, Asia, Latin America and the Caribbean. Children in the poorest income groups are malnourished at twice the rate of their counterparts in the richest ones (State of the World's Cities, 2010/11).

Table (2.6.3): Percentage of Malnourished Children (under 5) in Urban, Slum & Non-Slum Population in South Asia by Shelter Deprivation at different points of time

Country	Year	Total	Urban	Non-Slum	Slum
Bangladesh	1996	54.60	39.40	22.70	44.00
	2007	36.00	30.60	11.20	37.20
India	1992	51.80	44.50	39.00	52.60
	2005	42.50	34.30	21.00	39.50
Nepal	1996	48.40	35.40	15.70	38.10
	2006	42.70	29.00	15.00	34.80
Pakistan	1990	49.60	40.40	37.20	50.70
Relative change (%)					
	Year	Total	Urban	Non-Slum	Slum
Bangladesh	1996-'07	-34.07	-22.34	-50.66	-15.45
India	1992-'05	-17.95	-22.92	-46.15	-24.90
Nepal	1996-'06	-11.78	-18.08	-4.46	-8.66

Source: Computed from the "State of the World's Cities 2010/11": Bridging the Urban Divide, UN-HABITAT

From Table 2.6.3, it is found that in the 1990's, the proportion of malnourished children (under 5) in urban areas was highest in India (44.5 percent), followed by Pakistan (40.4 percent), Bangladesh (39.4 percent), Nepal (35.4 percent) and in the first decade of 21st Century, the proportion of malnourished children (under 5) reduced substantially to 34.3 percent in India, followed by Bangladesh (30.6 percent), and Nepal (29 percent). The percentage of malnourished children under five was substantially higher in slum areas compared to non-slum areas in all the countries of South Asia, where India and Pakistan have dominated all other countries. Focusing our attention to the progress in arresting the increase in malnourished children under 5 in both the slum and non-slum areas, it is clear from the Table 2.6.3 that the highest improvement in slum areas has taken place in India with 24.90 percent relative decrease, followed by Bangladesh with 15.45 percent relative decrease and comparatively slower improvement has taken place in Nepal with 8.66 percent relative decline. Thus, to narrow the gap between slum and non-slum areas, upgradation of slum and squatter settlements should effectively be linked with the health and nutritional programmes.

2.6.4: Cooking medium in Urban, Slum & Non-Slum Households by Shelter Deprivation

Statistical evidences show that among the countries of South Asia, there existed wide variations in types of fuel use among the slum/non-slum households. Among the South Asian countries as seen from Table (2.6.4), 43.70 percent of the slum household in India use LPG/Natural gas which was about 10 times higher than that of the slum household in Bangladesh (4.40 percent) and more than double in the slum household of Nepal (21.20 percent). Similarly, 78 percent of the non-slum population in India use LPG/Natural gas, followed by Nepal (59.90 percent) and Bangladesh 44.80 percent).

In terms of the use of non-solid fuel items in both the urban and non-slum areas, India recorded the highest percentage (about 60 and 80 percent respectively), followed by Nepal (about 44 and 65 percent respectively), Bangladesh (about 20 and 46 percent respectively). On the other hand, in these countries, the highest percentage of slum households in Nepal use wood as primary energy source at about 52 percent, followed by 49 percent in Bangladesh and 33 percent in India.

Table (2.6.4): Types of Energy used for Cooking in Urban, Slum & Non-Slum Households by Shelter Deprivation in South Asian Countries

Country	Year	Household	Electricity	LPG/Natural Gas	Kerosene	Wood	Coal	Other
Bangladesh	2006	Urban	0.50	19.30	0.60	55.00	...	24.60
		Slum	0.10	4.40	0.10	49.30	...	46.10
		Non-Slum	1.00	44.80	1.00	42.90	...	10.30
India	2006	Urban	0.90	58.70	8.20	22.00	4.80	5.40
		Slum	0.90	43.70	9.70	32.80	5.90	7.00
		Non-Slum	1.00	78.00	6.30	8.10	3.40	3.20
Nepal	2006	Urban	0.40	40.40	15.80	35.60	0.10	7.70
		Slum	...	21.20	15.60	52.40	0.10	10.70
		Non-Slum	0.80	59.90	16.00	18.20	0.20	4.90
Pakistan	2006	Urban	...	...	...	...	...	...
		Slum	...	...	...	...	...	...
		Non-Slum	...	...	...	...	...	...

Source: Computed from the "State of the World's Cities 2010/11": Bridging the Urban Divide, UN-HABITAT

Bangladesh, the only country in South Asia, where about 95 percent of the slum household use solid medium of cooking that includes traditional energy sources like straw, grass, dung, agricultural crop residue, sawdust etc., followed by 63 percent of the household in Nepal. In contrast, in India, about 54 percent of the slum household use commercial energy sources namely, electricity, LPG/Natural Gas, biogas and kerosene. Urban and non-slum residents also showed a similar picture, where about 80 and 53 percent of the households used traditional fuel in Bangladesh, followed by Nepal (about 23 and 43 percent respectively) and India (about 32 and 15 percent respectively). Among the traditional sources of solid fuel, maximum percentage of the households uses wood to meet the cooking energy needs.

2.7: Conclusion: MDGs and the Progress in the Lives of Slum Dwellers in the Developing World and South Asian Countries

In the light of Millennium Development Goal: 7, Target 11, the proportion of the urban population living in slums in the developing world has declined from 38.43 percent to an estimated 31.52 percent with 17.98 percent relative decrease, as against 14.08 percent relative decrease in the previous decade. According to the reports of the state of the world's cities 2011/12, a total of 227 million people in the developing world have moved out from slum conditions during 2000-2010 i.e. the target of MDG has achieved by 2.2 times before the deadline. Not only the significant numbers of slum dwellers have moved out from slum condition, but more than 200 million slum dwellers are also enjoying better living conditions.

Region wise slum scenario shows the living of 24 million slum dwellers (about 11 percent of the global moved out slum dwellers) in the last decade have been moved out in Africa, where, in Northern Africa the percentage of slum population declined faster than any other region of the developing region with the highest relative decrease of 18.79 percent during 2000-2010 as against 25.20 percent in 1990-2000. The comparative figures in the relative decrease between two decades clearly indicate that in northern Africa, an impressive improvement in the living conditions of slum dwellers has taken place prior to the implementation of the MDG's target. Thereafter, with the MDG target, the region with the effective government policies and implementation has been able to improve the conditions of 8.7 million slum dwellers.

2.7.1: Relative Change in Slum Population of the Developing Regions

In sub-Saharan Africa 16 million slum dwellers have moved out from slum conditions. This region with the highest percentage of slum population and second lowest percentage of urban population has recorded relative increase in the percentage of slum population (38.33 percent) in 2000-10, as against 39.57 percent in 1990-2000 (Table 2.7.1). The report of the state of the world's cities 2010/11 stated that there is no sign of narrowing the urban divide and it has also been predicted that nearly half of the growth in urban population will take place with high poverty and deprivation in sub-Saharan Africa by 2020. Countries in this region namely Benin, Ethiopia, Malawi, where the HDI is lower, the slum incidence is expected to remain very high at about 70 percent. Zimbabwe in particular, the percentage of slum population has increased from 3.3 to 17.9 percent during the period of 2000-2010, mainly because of forced eviction in 2005 and the deteriorating economy of the country (State of the World's cities, 2010/11).

Table (2.7.1): Relative Change in Slum Population of the Developing Regions

Region/ Relative change	Relative Change in Slum Population	
	1990-2000	2000-2010
Developing Region	16.83	7.90
Northern Africa	-25.20	-18.79
Sub-Saharan Africa	39.57	38.33
Latin America and Caribbean	9.73	-4.17
South Asia	6.99	-1.91

Source: State of the World's cities 2012/2013: Prosperity of cities, UN-HABITAT

Among the other major regions of the world, Latin America and the Caribbean have made comparatively good progress to attain the slum target, because four most

populated countries of Latin America namely Argentina, Colombia, Mexico and Brazil have significantly improved the living conditions of about 79 percent of the region's slum dwellers. Around 13 percent of the progress in the MDG slum target has been achieved by Latin America and the Caribbean, where 30 million people have moved out from slum conditions since the year 2000. The primary factors behind the success were economic and social policies that have improved incomes of the poor urban households.

On the other end, the report of the state of the world's cities, 2011/12 stated that Asia has been able to make successful efforts to reach the Millennium target during 2000 to 2010, for improving the lives of an estimated 172 million slum dwellers and they will no longer be deprived from adequate housing. In the Asian region, most significant progress has been made by Southern and Eastern Asia, where 145 million urban residents (73 million and 72 million, respectively) moved out from the slum conditions. South-Eastern Asia has also made significant progress with the improvement of 33 million slum residents, representing 22 per cent decrease during 2000-2010. Only Western Asia has shown little progress, where the number of slum dwellers increased by 12 million between 2000 to 2010 due to political disturbance that increased the number of refugees in slums and simultaneously the targeted programmes for the urban poor have been disrupted. Consequently, as an example, the percentage of slum population, particularly in Iraq, increased from 17 percent in 2000 (2.9 million) to 53 percent in 2010 (10.7 million). In contrast, growth of slums has declined significantly in countries like Indonesia, Vietnam and Philippines. Besides, in Cambodia, Myanmar, slum prevalence is also very high because the development parameters for the urban poor could provide only low quality of life. Eastern Asia as a whole has reduced slum incidence by an estimated 25 percent. However, with the continuing and rapid urban growth, it is expected that the number of slum dwellers in the region will increase to about 203 million in 2020 (computed on the basis of annual increase in slum population).

In South Asia, about 55 percent of the slum dwellers (105 million people) are concentrated in India, the most populated country in the sub-region. Based on India's significant reduction in slum prevalence, it has been predicted that the slum population in South Asia will reach 187 million in 2020 (computed on the basis of annual increase in slum population). In Bangladesh, still, slum prevalence remains

very high at 61.60 percent. The global financial crisis is also likely to cut the government revenues and abilities to invest in the delivery of housing and basic services which are most essential to narrow the urban divide. Several countries have made significant progress and are clearly moving ahead not only in slum reduction but also in slum prevention. It is estimated that in absolute numbers, China and India have improved the lives of not less than 125 million people out of slum conditions over the period 2000-2010.

2.7.2: Relative Change in Slum Population in South Asian Countries

As per as report of State of the World's Cities, 2010/11, disparities have increased with rapid economic growth of the countries. China has managed to improve living conditions of slums through economic reforms and modernisation policies. Pro-growth policies with the targeted pro-poor programmes have generally reduced the number of slum dwellers. More importantly, various targeted programmes in the expanding cities as well as among the newly developed slum dwellers (which provide cheap housing for the more than 8 million migrant workers who flock to the cities every year) have been accelerated through development mechanisms and consequently deliver success. In terms of moving out from the living conditions of the slums, it is evident from Table (2.7.2) that the relative deceleration in slum growth has occurred only in India among the Asian countries over the period 1990-2000 to 2000-2010 indicating that the country has more or less successful implemented its programmes to improve the condition of slums.

Table (2.7.2): Relative Change of Slum Population in South Asian Countries

Country/Relative Change	Relative Change in Slum Population	
	1990-2000	2000-2009
India	-1.09	-12.55
Nepal	75.88	46.43
Bangladesh	29.10	6.67
Pakistan	32.33	25.43

Source: Computed from State of the World's Cities 2012/2013: Prosperity of Cities, UN-HABITAT

But among all these countries, India has been successful in improving the lives of about 60 million slum dwellers during the periods of 2000 to 2010 (State of the World's Cities 2010/11) and the resulting proportion of slum population have reduced from 41.05 per cent in 2000 to an estimated 29.40 per cent in 2010, with a relative decrease of 12.55 per cent. This significant improvement in the lives of slum dwellers

has been possible for India mainly because of the four significant strategies: (1) increasing the productivity of the urban poor by building skills and providing access to micro-credit, (2) improving the living conditions of the poor through provision of basic services and development of slum settlements, (3) providing security of tenure to poor families living in unauthorised settlements and improving their access to low-cost housing and subsidised housing finance (4) empowering the urban poor through community development and encouraging their participation in decision-making process.

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CHAPTER: III

URBANIZATION, MIGRATION AND DEMOGRAPHIC CHANGES IN NORTH BENGAL

3.1: Introduction

North Bengal Region consisting of six northern districts in the state of west Bengal. This region is predominantly rural and is characterized by higher proportion of SC and ST population. The North Bengal region is far lagging from the rest of Bengal region and the state in terms of economic vibrancy. Among the districts of North Bengal, the development of Darjeeling district is of great importance due to its strategic and geographical location in the state. Urbanization process in Darjeeling district has a long history started from the colonial history in India. The study in the present chapter (3) tried is to explore the process of urbanization, migration and demographic changes in north Bengal with special reference to Darjeeling district. The study also analysed the socio-economic background of the urban and slum population in Darjeeling district compared to the other districts of North Bengal region, rest of Bengal and the state.

3.2: A Brief History of Darjeeling District in North Bengal Region

With a population of about 82 million in census 2001, West Bengal was the fourth most populous state situated in the eastern region of India accounting for about 2.7 percent of India's total area and about 7.8 percent of the country's total population. This state ranks first in terms of density of 904 persons per sq.kms as per 2001 Census. It is regarded as one of the most urbanised states in India with 27.97 percent of the population lives in the urban areas and it has shown a growth to the extent of about 20 percent during 1991-2001.

North Bengal consisting of six northern districts in the state of west Bengal is a region with varied landscape, terrain, morphology, economic and socio-cultural characteristics. At present, there are 19 districts in the state of west Bengal after the division of West Dinajpur into Uttar and Dakshin Dinajpur. The North Bengal region consists of six districts viz. (I) Cooch Behar, (II) Jalpaiguri, (III) Darjeeling, (IV) Uttar Dinajpur, (V) Dakshin Dinajpur and (VI) Malda. The whole of North Bengal region is broadly grouped into three areas (i) hill areas (ii) Sub-Himalayan areas and

(iii) the plains. The hill area consists of three sub-divisions of Darjeeling district and some parts of Jalpaiguri district. In these areas, we find three urban centers namely Darjeeling, Kalimpong and Kurseong. A stretch of the hill region in the plains is known as Terai and the most important urban centre of North Bengal namely Siliguri is situated in the Terai region. The sub-Himalayan area comprises some parts of the districts of Jalpaiguri and Coochbehar. The plain area comprises of Malda, West Dinajpur and major parts of Coochbehar and some parts of Jalpaiguri district (Das Gupta, 1988).

Statistical report from various census showed that the north Bengal region was a place of 14.72 million populations and it has less than 1/5th of the state's total population. On the other hand, there was 2.08 million urban populations just less than 1/11th of the state's urban population in 2001. But the growth rates of total and urban population in North Bengal since 1951 were significantly higher than that of the rest of Bengal and the State.

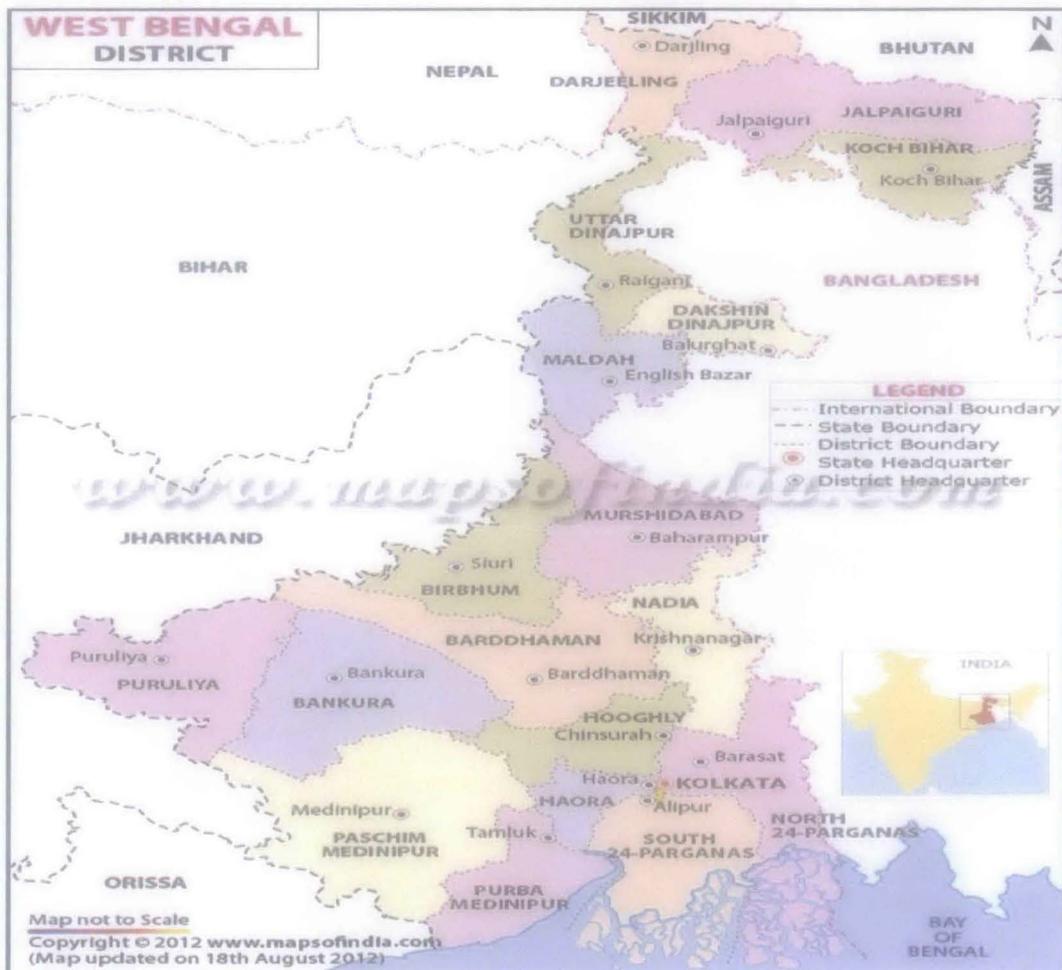
The North Bengal region covers an area of about 20934 sq km, which was about 24 percent of the total land area of the state. This region is predominantly rural and is characterized by higher proportion of SC and ST population. According to census 2001, the proportion of urban SC and ST population in North Bengal region was 16.48 and 2.57 percent respectively, far higher than the percentage of SC and ST population in the rest of Bengal region (12.70 and 1.07 percent respectively) and in the state (13.05 and 1.21 percent respectively). Among the districts of North Bengal, Darjeeling has recorded the lowest percentage of urban SC population (9.89 percent), as against the highest percentage of urban ST population (4.86 percent).

The development of Darjeeling district in North Bengal region is of great importance due to its strategic and geographical location in the state. Geographically, the Darjeeling district lies between 26°31' and 27°13' North latitude and between 87°59' and 88°53' East longitude (www.darjeeling.gov.in). The district is bordered by Nepal, Bhutan in the North East and Bangladesh in the South East (See Map 3.2.1). As per administrative set is concerned, the district has four sub-divisions namely Darjeeling, Kalimpong, Kurseong and Siliguri.

The Darjeeling district is the remarkable example of the growth of population due to immigration from outside the countries and the neighboring states. In 1839 under the

superintendentship of Dr. Arthur D.Campbell, urbanization process was started through the establishment of a sanatorium at the nucleus town that led to the growth of employment opportunities and added to the population growth. But at that time, the most important factor contributing to the growth of population had been the tea industry. Apart from Nepal, the people from Sikkim and Bhutan were also invited as a tea industry worker. In the terrain, a large number of coolies from Chotanagpur and Santal Parganas came to work in the tea gardens for high wage rate. But, the great bulk of the immigrants come from Nepal as cheap labourers to work in the tea industry (O'Malley, 1985).

Map 3.2.1: Districts of West Bengal and its Neighboring State and Countries



Source: www.mapsofindia.com

After the Anglo-Bhutan War in 1864, Kalimpong was a hamlet, with only two or three families known to reside there. Kalimpong was added to district of Darjeeling in 1866 and in 1866-1867, an Anglo-Bhutanese commission demarcated the common boundaries between the two, thereby giving shape to the Kalimpong subdivision and the Darjeeling district. Just after the war, the region became a subdivision of the

Western Duars district, and the year after the subdivision was merged with the district of Darjeeling. After Kalimpong had been brought under British Administration, the district was divided into two subdivisions, one including all the hills on both sides of the Tista and the Terai Sub-division which included the whole of the area, the foot of the hills. The headquarters of the Terai Sub-division was at Hanskhawa near Phansidewa from 1864 to 1880. Thereafter, it was transferred to Siliguri. In the meantime, Kurseong had begun to develop and in 1892, it was made the head quarters of a new subdivision, which include both the Terai and the lower hills of the Tista. Later, in 1907, Siliguri was declared as a subdivision, thus re-establishing the Terai Sub-division which had in 1891 been absorbed into the Kurseong Sub-division (O'Malley, 1985)

With India attaining independence on 15th August 1947, Darjeeling was merged with the state of West Bengal. A separate district of Darjeeling was established consisting of the hilly towns of Darjeeling, Kurseong, Kalimpong and some parts of the Terai region. When the People's Republic of China annexed Tibet in 1950, thousands of Tibetan refugees settled across Darjeeling district. The partition of Bengal in August 1947 left the boundaries of the district intact and the share of West Bengal was not affected. The district was placed thereafter in the Presidency Division. With the unique status of the district, the only remaining industry, that is the tea industry, continued to play a major role in the economy of the area. It has also been pointed out that the natural wealth of forests has been adversely affected by the ever growing population (Bengal district Gazetteers, Darjeeling, 1980).

When the tea Plantations started developing all around Darjeeling district a large number of immigrants flooded to work in the construction sites, the tea gardens and in other agricultural works. The total population of Darjeeling district was barely 100 in 1835 which grew to 94,712 in 1871, 155,179 in 1881 and 249,117 in 1901 where as urban population was 11.76 percent in 1881 and 8.59 percent in 1901. After the independence of India in 1947, the Darjeeling district is bounded in the north by the State Sikkim, in the south by the state of Bihar, while Uttar Dinajpur District and Bangladesh forms the East boarder and the South East by Jalpaiguri District and Bhutan and in West by the Kingdom of Nepal. In 2001, there were 16, 09,172 persons in the district, where 67.66 percent of the population resided in the rural areas and 32.34 percent in the urban areas. The total area of the District is 3149 sq.km which is 3.55 percent of the total area of West Bengal (88752 sq.km) and the density of the

population was 511 persons per sq.km in 2001. There are 12 CD blocks covering 708 Villages, 5 statutory towns (including part of Siliguri Municipal Corporation) and 4 census towns in the district (Census reports)

A significant part of the state is relatively more backward economically, and also tends to be less advanced in terms of human development index. These include large parts of the six northern districts of the state namely Darjeeling, Jalpaiguri, Kooch Behar, Uttar Dinajpur, Dakshin Dinajpur (Uttar and Dakshin Dinajpur district was undivided West Dinajpur upto 1991 Census report) and Malda district. On behalf of the study the state has been classified into two different regions North Bengal region comprising with northern six districts and the rest of Bengal region consist with the other 13 districts of the state.

3.3: Deprivation of Human Development Index (HDI) and Per Capita income of Urban Population in the Districts of North Bengal Region

Table 3.3.1: Per Capita Income & deprivation by HDI in the Districts of North Bengal

District / Regions/State	Per Capita Income at current prices 2004-05 (Rs)	Per Capita Income at current prices 2006-07 (Q) (Rs)	Health Index	Income Index	Education Index	HDI	HDI Rank
Cooch Behar	18402.71	26897.15	0.50	0.41	0.65	0.52	11
Jalpaiguri	19883.56	24353.43	0.61	0.38	0.60	0.53	10
Darjeeling	25199.24	30755.74	0.73	0.49	0.72	0.65	4
Uttar Dinajpur	13225.51	16457.64	0.62	0.39	0.53	0.51	13
Dakshin Dinajpur	17014.80	20203.06	0.62	0.39	0.53	0.51	13
Malda	18545.80	21720.52	0.49	0.36	0.48	0.44	17
North Bengal Region (Avg.)	18711.94	23397.92	---	---	---	---	---
Rest of the Bengal Region (Avg.)	22749.59	49542.41	---	---	---	---	---
West Bengal (the State)	22526.00	28753.31	0.70	0.43	0.69	0.61	---

Source: Statistical Abstract 2008), Bureau of Applied Economics & Statistics, Govt. of West Bengal, HDR (2004), West Bengal, Development and Planning Department, Govt. of WB. Note: Q for Quick Estimate, North Bengal comprises with six districts, Rest of Bengal region comprises with the districts other than the district of North Bengal in the state.

The estimates of Net District Domestic Product (NDDP) commonly known as District Income estimates are considered to be the most important indicators for the measurement of the economic growth of a district as well as the size of its economy. From the development point of view, Per capita income is an indicator for reflecting the well being of the population. The districts with higher per capita income indicate its higher status of the economic development. From Table (3.3.1), it is clear that the

per capita income of North Bengal region was much lower Rs. 18711.94 compared to rest of Bengal region (22749.59) and the state (22526.00). The per capita income among the northern districts of west Bengal namely Uttar Dinajpur, Dakshin Dinajpur, Malda, Coochbehar and Jalpaiguri were worse off than that of the other districts of the state. The only exception was Darjeeling district which placed on fourth rank in terms of per capita income in the state in 2004-05. The figures on quick estimate of per capita income shows that in the region of north Bengal, the per capita income is 2.12 times and 1.23 lower than that of the per capita income in the rest Bengal region and the state respectively i.e. the North Bengal region is far lagging from the rest of Bengal region and the state in terms of economic vibrancy. On the other hand, among the districts of North Bengal during the period of 2006-07, the increase in per capita income was significantly higher in Coochbehar District, followed by Darjeeling, Jalpaiguri, Uttar Dinajpur, Dakshin Dinajpur and Malda district. But, according to quick estimate of per capita income (2006-07), Darjeeling district placed the 3rd rank in the state.

Human Development Report, 2004, Government of WB documented that urbanized districts have higher levels of human development depriving the less urbanized ones. There are substantial differences across the districts, such as the HDI index ranges from 0.78 for Kolkata and 0.44 for Malda. On the basis of HDI, Darjeeling district bearing the 4th rank was much better off compared to other district of the state. Relating to human deprivation measured by HDI Components such as health, income and education index, the most deprived districts of West Bengal was Malda, followed by Coochbehar and undivided West Dinajpur. According to the HDR report, out of five district of North Bengal only Darjeling district has recorded lower level of deprivation in terms of health index (0.73), income index (0.49) and education index (0.65).

3.4: Urbanisation in the Districts of North Bengal Region

3.4.1: Urban Population and Density per sq.km

Table (3.4.1) illustrated that the total urban population and urban density per sq.km in the district of Darjeeling have increased manifold. From the period 1951-2001, urban population and it's density per sq.km have increased by 5.5 and 2.2 times in Darjeeling district, 7.2 and 2.2 times in North Bengal region, 3.4 and 1.2 times in the rest of Bengal region and 3.6 and 1.3 times in the state of West Bengal. One of

the significant points should be noted that in Darjeeling district, the density of urban population was significantly lower compared to other districts of North Bengal, but much higher than that of the density of the North Bengal region, rest of Bengal and the state.

Table (3.4.1): Urban Population and Density per sq.km in the Districts of North Bengal

District/ Region/ State	Urban Population (in thousands)						Urban Density/ sq.km					
	1951	1961	1971	1981	1991	2001	1951	1961	1971	1981	1991	2001
Cooch Behar	50	71	97	122	170	226	4456	3969	4166	4260	5648	5458
Jalpaiguri	66	124	168	311	458	607	2925	1710	2109	2110	2915	5013
Darjeeling	95	145	180	282	396	520	2851	3634	4517	4687	5717	6918
Uttar Dinajpur	42*	99*	174*	269*	417*	294	2169	1882	3175	4431	6879	6638
Dakshin Dinajpur						197						9315
Malda	35	51	68	97	187	241	4390	6511	8721	6750	8985	9497
North Bengal	288	490	687	1082	1628	2085	3051	2569	3345	3473	4817	6373
Rest of the Bengal	5994	8051	10280	13365	17080	20342	5444	5316	5893	5725	6234	6787
West Bengal	6282	8541	10967	14447	18708	22427	5255	5009	5624	5460	6079	6746

Source: Compiled and computed from various census reports.

***Note:** The population figure and urban density upto 1991 are based on undivided West Dinajpur district.

The level of industrialization in North Bengal region is much lower than that of the rest of Bengal region and the process of urbanization in North Bengal was always slow with compared to the rest of Bengal. In terms of level of urbanization, North Bengal region was far behind from the rest of Bengal region and the state. In 2001, there was only one in every seven persons live in urban areas of North Bengal, as against one in every three persons in the rest of Bengal and one in every four persons in the state live in urban areas. The increase in the LOU during the period of 1951- 2001 was 6.89 percent in North Bengal region, as against 4.25 percent increase in the LOU of the rest of Bengal and 4.09 percent in the state. Instead of having very lower pace urbanization, the increase in LOU was far higher in North Bengal region as compared to the rest of Bengal region and the state.

Table (3.4.2) Level of Urbanization in the Districts of North Bengal

District/Region/State	1951	1961	1971	1981	1991	2001
Cooch Behar	7.5	7	6.83	6.9	7.81	9.1
Jalpaiguri	7.21	9.11	9.6	14.05	16.36	17.84
Darjeeling	20.56	23.15	23.05	27.55	30.47	32.34
Uttar Dinajpur	4.29*	7.48*	9.34*	11.17*	13.34*	12.06
Dakshin Dinajpur						13.1
Malda	3.75	4.16	4.22	4.78	7.07	7.32
North Bengal Region	7.27	8.82	9.26	11.45	13.52	14.16
Rest of the Bengal Region	26.83	27.41	27.87	29.61	30.48	31.08
West Bengal (the State)	23.88	24.45	24.75	26.47	27.48	27.97

Source: Compiled and computed from various census reports. Mitra et al (1990): "Population and Area of Cities Towns and Urban Agglomerations 1872-1971" ICSSR, District's Census Handbook of 1971, 1981, 1991 (Village and Town Directory), Census of India-2001, WB, Series-20, Vol.1. *Note: Figures upto 1991 against undivided west Dinajpur District

Among the districts of North Bengal region, the process of urbanisation was not bright except Darjeeling district, while, there was one in every three persons who live in urban areas. On the other hand, since 1951, in the districts of North Bengal, the level of urbanization in Darjeeling district has increased exceptionally, except in 1971, where the level of urbanization decreased slightly (23.05 percent). During the period of 1951-2001, Darjeeling district has not only recorded higher level urbanization, but it was far higher than that of the LOU in all other districts of North Bengal region. Only in 1951-71, the LOU in Darjeeling district was lower than that of the level of urbanization in the state. Thereafter, from 1981 onwards the LOU in Darjeeling district dominated the rest of Bengal and the state (Table 3.4.2).

3.4.2: Annual Growth Rate of Urban Population

The notable point is that with the lower level of urbanization (LOU) the annual growth rates was significantly higher in North Bengal region, as against the annual growth rates of the rest Bengal region and the state. Darjeeling district shows the similar picture i.e. with lower level of urbanisation, the annual growth rates were far higher than that of the growth rates in the rest of Bengal and the state, except the growth rates in 1961-71, where the growth rate in the district was slightly lower than that of the growth rates in the rest of Bengal regions and the state. With wide variations, North Bengal region recorded the highest decrease in the annual growth rate of urban population by 2.2 times between the periods of 1951-61 to 1991-01,

followed by 1.7 times in the rest Bengal, 1.6 times in Darjeeling district and by 1.4 times in the state. But, the study also found that the growth rate of urban population in North Bengal is always higher than the growth rate of the rest of Bengal region and the state.

Table (3.4.3) Annual Growth Rate of Urban Population in the Districts of North Bengal

District/Region/State	1951-61	1961-71	1971-81	1981-91	1991-01
Cooch Behar	3.6	3.07	2.38	3.32	2.9
Jalpaiguri	6.47	3.1	6.35	3.94	2.85
Darjeeling	4.35	2.22	4.59	3.45	2.77
Uttar Dinajpur	8.97	5.79	4.46	4.5	1.65
Dakshin Dinajpur	3.75	2.97	3.63	6.74	2.59
North Bengal Region	5.45	3.44	4.65	4.17	2.51
Rest of the Bengal Region	3.00	2.47	2.66	2.48	1.76
West Bengal (the State)	3.12	2.53	2.79	2.62	1.83

Source: Compiled and computed from various census reports. Note: * Growth rates of undivided West Dinajpur District

A point should be noted that the annual growth rate of population in Darjeeling district was significantly higher during the periods of 1951-61 to 1971-81 as compared to the growth rates of other periods. The reasons behind the higher growth rates in those periods were due to huge immigration in the district for the partition of India 1947, and the partition of Bangladesh 1971.

3.4.3: Share of Urban Population to the total Urban Population in North Bengal Region

With the declining trend in the share of urban population to the total urban population of North Bengal region, Darjeeling district housed the highest share of urban population compared to the other district of North Bengal region during the period of 1951-2001.

Table (3.4.4) Share of Urban Population to the total Urban Population in North Bengal

District/Region	1951	1961	1971	1981	1991	2001
Cooch Behar	17.43	14.59	14.08	11.30	10.41	10.82
Jalpaiguri	22.97	25.29	24.48	28.78	28.16	29.10
Darjeeling	32.82	29.54	26.24	26.09	24.33	24.96
Uttar Dinajpur	14.57*	20.21*	25.29	24.85*	15.54	14.12
Dakshin Dinajpur					10.09	9.44
West Dinajpur	14.57	20.21	25.29	24.85	25.63	23.56
Malda	12.21	10.37	9.91	8.99	11.46	11.55
North Bengal Region	100.00	100.00	100.00	100.00	100.00	100.00

Source: Compiled and computed from various census reports. Note: * Index of urban concentration = share of urban population to the total urban population of north Bengal in the current year- share of urban population in the previous year. *Note: Figures upto 1991 against undivided west Dinajpur District

In terms of urban concentration, it is evident from Table-3.4.4 that more than 50 percent of the total urban population in North Bengal region has been concentrated in the Darjeeling and Jalpaiguri district taken together. On the other hand, from 1951-71, the urban concentration was highest in Darjeeling district with the LOU of 26 percent and thereafter from 1981 onwards, the highest concentration of urban population has been recorded by Jalpaiguri district with more than 28 percent LOU.

3.5: Migration in the Districts of North Bengal Region by Place of Last Residence

The twenty-first century is expected to witness not only sustained population growth but also high degree of urbanisation. Economic vibrancy of large urban centers offers large scale employment opportunities and means of livelihood, which are the ultimate cause of migration to these areas. In India, migration has played an important role for accelerating the urban growth. In the last three decades, the growth of class-I towns and megacities have been much faster than smaller towns (Sivaramkrishnan et al. 2005). In 2001, nearly 35 percent of the total populations in the 35 cities in the million plus category of India were migrants (Urban Poverty Report in India 2009, MoHUPA). Similarly, it is also important to note that the higher growth of population in North Bengal is not a result of significant immigration alone but also the cause of natural growth. A large proportion of immigration has been recorded in North Bengal in Census reports since the partition of India.

3.5.1: Total Urban Migrants in the Districts of North Bengal

From table (3.5.1), Census data evidenced that the total migrants and total urban migrants in absolute numbers have increased sharply among all the districts of North Bengal, rest of Bengal and the state. Among the districts of North Bengal, Jalpaiguri district accounted for the highest urban migrants (271 thousand), followed by Darjeeling district (173 thousand), Uttar Dinajpur (104 thousand), Malda (97 thousand), Coochbehar (92 thousand) and Dakshin Dinajpur district (73 thousand), i.e. according to census, 2001, one in every three human beings was migrants in all the regions and the state.

In terms of share of urban migrants to the total urban migrants in the state depicted in table (3.5.1), it is found that with the slow pace of urbanization the share of urban migrants in North Bengal region was 12 times lower than that of the share of rest of Bengal region in 1971, 8 times lower in 1991 and 9 times lower in 2001.

Table (3.5.1) Total Urban Migrants in the Districts of North Bengal

District/ Region/State	1971	1991	2001
Coochbehar	45 (1.07)	61 (1.14)	92 (1.10)
Jalpaiguri	86 (2.04)	197 (3.68)	271(3.23)
Darjeeling	81 (1.92)	145 (2.71)	173 (2.06)
Uttar Dinajpur	88 (2.09)*	141 (2.64)*	104 (1.24)
Dakshin Dinajpur			73 (0.87)
Malda	28 (0.67)	74 (1.38)	97 (1.16)
North Bengal Region	328 (7.79)	618 (11.56)	810 (9.66)
Rest of the Bengal Region	3880 (92.21)	4728 (88.42)	7579 (90.34)
West Bengal (the State)	4208 (100.00)	5347 (100.00)	8389 (100.00)

Source: Computed from Census of India-1971, WB, Series-22, part-II, D (i) & D (ii), Census of India-1991, WB, Series-26, Vol.1, Part- VA & VB, D Series, Migration tables, Census of India-2001, WB, (Migration tables from Electronic Media), Figures in parentheses represent the share of urban migrants to total urban migrants in the state.

*Note: Figures upto 1991 against undivided west Dinajpur District

On the other hand, in 1971, among the districts in North Bengal, the highest share of urban migrants has been housed by undivided West Dinajpur, followed by Jalpaiguri, Darjeeling, Coochbehar and Malda district. But, during the period of 1991-2001, largest share of urban migrants housed by Jalpaiguri district, followed by Darjeeling district, undivided West Dinajpur and Uttar Dinajpur district, Malda, Coochbehar district (Computed from various Census reports).

3.5.2: Share of Urban Migrants to the total Urban Migrants of North Bengal Region

In Darjeeling district the share of urban migrants has reduced sharply from 1971-2001, as against the steady increase in Jalpaiguri district. This means that from 1991 to 2001, inflow of urban migration Jalpaiguri district was significantly high as compared to the Darjeeling district (Table, 3.5.2).

Table (3.5.2) Share of urban migrants to the total urban migrants of North Bengal

Districts/Region/State	1971	1991	2001
Coochbehar	13.73	9.91	11.3
Jalpaiguri	26.27	31.88	33.53
Darjeeling	24.69	23.44	21.4
Uttar Dinajpur	26.84*	22.75*	12.82
Dakshin Dinajpur			8.98
Malda	8.47	12.02	11.97
North Bengal Region	100	100	100

Source: Computed from Census of India-1971, WB, Series-22, part-II, D (i) & D (ii), Census of India-1991, WB, Series-26, Vol.1, Part- VA & VB, D Series, Migration tables, Census of India-2001, WB, (Migration tables from Electronic Media), *Note: Figures upto 1991 against undivided west Dinajpur District

3.5.3: Proportion of Urban Migrants to total Migrants and total Urban Population

Table (3.5.3) shows that in North Bengal region, the proportion of urban migrants to the total migrants increased significantly from 13.4 percent to 18.79 percent during the period of 1971-200, against the sharp decrease from 34.94 to 32.12 percent in the rest of Bengal and 31.05 to 29.92 percent in the state over the period of 1971-91.

Table (3.5.3) Proportion of urban migrants to total Migrants and total urban population in the Districts of North Bengal

Districts/Region/State	Percentage of Urban Migrants to total Migrants			Percentage of Urban Migrants to total Urban Population		
	1971	1991	2001	1971	1991	2001
Coochbehar	9.00	11.15	12.14	46.59	36.15	40.56
Jalpaiguri	12.14	23.93	24.97	51.23	43.01	44.73
Darjeeling	32.08	44.82	39.37	44.91	36.58	33.29
Uttar Dinajpur	15.03*	16.82*	16.30	50.67*	33.71*	35.26
Dakshin Dinajpur			14.12			36.91
Malda	6.94	12.02	11.07	40.83	39.82	40.21
North Bengal	13.4	19.62	18.79	47.75	37.98	38.82
Rest of the Bengal	34.94	32.12	36.46	37.74	27.68	37.26
West Bengal	31.05	29.92	33.42	38.37	28.58	37.4

Source: Computed from Census of India-1971, WB, Series-22, part-II, D (i) & D (ii), Census of India-1991, WB, Series-26, Vol.1, Part- VA & VB, D Series, Migration tables, Census of India-2001, WB, (Migration tables from Electronic Media), *Note: Figures upto 1991 against undivided west Dinajpur District

In 2001, the proportion of migrants further increased to 36.46 and 33.42 percent respectively for the rest of Bengal and the state. On the other hand, the proportion of urban migrants to the total migrants in North Bengal region was 2.6 times, 1.6 times and 1.9 times higher than that of the proportion in the rest of Bengal and 2.3 times, 1.5 times and 1.8 times higher than that of the proportion of the state in 1971, 1991 and 2001 respectively. Among the districts of North Bengal, the percentage of urban migrants to total migrants was significantly higher in Darjeeling and Jalpaiguri district mainly due to huge inflow of migration from the neighboring rural/semi urban areas, districts, states and countries to Siliguri Municipal Corporation area (SMCA) which is only the major commercial and distribution centre in the North Eastern region.

Despite the declining trend in the proportion of urban migrants to the total urban population, it is observed that the percentage of urban migrants to the total population was significantly higher in North Bengal region compared to the rest of Bengal region and the state during 1971-2001. On the other hand, in the districts of North Bengal region, it is found that the proportion of urban migrants to the total

urban population in Darjeeling district was far lower than that of the proportion in all other districts over the whole periods.

3.5.4: Annual Growth Rate of Rural and Urban Migrants in the Districts of North Bengal

Table (3.5.4) presented the annual growth rate of rural and urban migrants in the districts of North Bengal, rest of Bengal region and the state, where it is observed that the annual growth rates of rural and urban population of North Bengal region were higher than that of the growth rates in the rest of Bengal and the state between the periods of 1971-1991 and 1991-2001. In contrast, the annual growth rate of rural migrants was far lower in North Bengal region compared the rest of Bengal and the state in 1971-91, but the growth rate of rural migrants in 1991-2001 was significantly higher in north Bengal region than that of the rest of Bengal region and the state. On the other hand, the growth rate of urban migrants was about 3 times higher in North Bengal region than that of the rest of Bengal region and the state, but in 1971-1991 the growth rate of urban migrants in north Bengal region was about 2 times lower than that of the rest of Bengal region and the state.

Table (3.5.4): Annual Growth Rate of Rural and Urban Migrants in the Districts of North Bengal

District/Region/State	Annual Growth Rate of Rural Migrants		Annual Growth Rate of Urban Migrants	
	1971-91	1991-2001	1971-91	1991-2001
Coochbehar	0.35	3.10	1.55	4.09
Jalpaiguri	0.03	2.67	4.23	3.25
Darjeeling	0.20	4.11	2.95	1.81
West Dinajpur	1.69	3.44	2.37	2.30
Malda	1.91	3.65	5.04	2.69
North Bengal	0.89	3.28	3.22	2.73
Rest of the Bengal	1.63	2.83	0.99	4.83
West Bengal	1.48	2.92	1.20	4.61

Source: Computed from Census of India-1971, WB, Series-22, part-II, D (i) & D (ii), Census of India-1991, WB, Series-26, Vol.1, Part- VA & VB, D Series, Migration tables, Census of India-2001, WB, (Migration tables from Electronic Media)

The district level data shows significant variations in the growth rates of rural and urban migration between the periods of 19971-91 and 1991-2001. As far as the growth rate of rural migration is concerned, it is found that during 1971-1991, the highest growth rate has been recorded by Malda district, followed by West Dinajpur, Coochbehar, Darjeeling and Jalpaiguri. But, in 1991-2001, the growth rate of rural migrants was significantly higher in Darjeeling district, followed by Malda, Coochbehar and Jalpaiguri district.

Among the six districts of North Bengal region in 1971-1991, the highest growth rate of urban migration has been recorded by Malda district, followed by Jalpaiguri, Darjeeling and undivided West Dinajpur and Coochbehar district. But, in 1991-2001, Coochbehar district recorded the higher growth rate of urban migrants, followed by Jalpaiguri, Malda, and West Dinajpur and Darjeeling district (Table 3.5.4). One of the notable points is that the growth rate of urban population in Darjeeling district during 1991-2001 was slightly lower than that of the growth rate of Coochbehar and Jalpaiguri district, but the growth rate of urban migrants in Darjeeling district was about 2 times lower than the growth rate of Coochbehar and Jalpaiguri during the same period of time.

3.5.5: Streams of Migration

From the distribution of urban migrants in different streams or sources by place of last residence, it may be observed from Table (3.5.5) that the proportion of urban migrants in all the streams excluding international migrants was significantly lower in North Bengal compared to the proportion in the rest of Bengal and the state during the period of 1971-2001. Despite the declining trend, the proportions of international urban migrants in North Bengal region over the whole periods (1971-2001) were significantly higher than that of the growth rates of urban migrants in the rest of Bengal region and the state. Among districts of North Bengal, instead of having declining trend in the proportion of international migrants, undivided West Dinajpur and divided West Dinajpur district (Uttar and Dakshin Dinajpur) recorded the higher proportion of international or cross boarder urban migrants, followed by Coochbehar, Jalpaiguri and Malda district during the periods of 1971-2001, as against the lower proportion in Darjeeling district. The notable point is that that among the different streams or sources of urban migration, Darjeeling district housed the highest proportion of inter-state migrants not only in the districts of North Bengal region but also in the rest of Bengal and the state during 1971-2001. From the table, it is also clear that allowing for minor variations, the percentages of inter-district and intra-district urban migrants in all the districts of North Bengal have increased substantially during 1971-2001.

Table (3.5.5): Streams of Migration by Place of Last Residence

Districts/Regions/State	1971				1991				2001			
	Inter-state	Inter-Dist.	Intra-Dist	Inter-national	Inter-state	Inter-Dist.	Intra-Dist	Inter-national	Inter-state	Inter-Dist.	Intra-Dist	Inter-national
Coochbehar	17.99	16.67	11.58	54.21	13.22	14.90	33.71	38.13	12.15	19.23	45.68	22.94
Jalpaiguri	22.85	13.00	14.54	49.61	17.37	22.98	29.56	30.05	18.73	29.50	31.52	20.26
Darjeeling	33.98	18.59	14.66	32.74	33.47	28.05	19.06	19.33	32.40	29.38	23.84	14.37
Uttar Dinajpur	13.11	11.07	13.78	62.04	12.08	15.83	34.00	38.09	15.58	27.72	29.90	26.79
Dakshin Dinajpur									3.85	18.73	34.01	43.41
Malda	14.60	21.89	18.07	45.44	13.22	24.59	33.99	28.13	10.05	22.60	46.63	20.72
North Bengal Region	21.56	15.12	14.26	49.06	19.03	21.93	29.05	29.94	18.13	26.29	33.30	22.27
Rest of the Bengal Region	32.44	24.79	14.77	27.99	27.72	25.02	25.22	22.00	21.37	31.54	33.70	13.39
West Bengal (the State)	31.59	24.04	14.73	29.64	26.72	24.67	25.66	22.92	21.06	31.03	33.66	14.25

Source: Computed from Census of India-1971, WB, Series-22, part-II, D (i) & D (ii), Census of India-1991, WB, Series-26, Vol.1, Part- VA & VB, D Series, Migration tables, Census of India-2001, WB, (Migration tables from Electronic Media), *Note: Figures upto 1991 agaist undivided west Dinajpur District.

3.6: Socio-Economic Characteristics of Urban Population in the Districts of North Bengal Region

3.6.1: Sex Ratio and Literacy Rate

Gender differentials in the distribution of population are evident from Table (3.6.1) with predominance of male population in the urban areas of North Bengal region. The urban sex ratio (males per 1000 females) of North Bengal was 926, far higher than the sex ratio in the rest of Bengal (889) and the state (893) in 2001. There is a sharp increase in the urban sex ratio among all the districts of North Bengal. Darjeeling district accounted for lower sex ratio compared to other districts of North Bengal, but it was notably higher than that of the sex ratio of the rest of Bengal and the state.

On the other hand, as far as literacy rate of the urban population is concerned, it is found that in the Darjeeling district, literacy rate for both male and female population excluding 0-6 years of age was higher than that of the literacy rate of all districts, regions and the state during 1991- 2001. The increase in the percentage of the literacy rate in Darjeeling district during the period of 1991-2001 was about 7 percent, as against 6 percent for both the state and the rest of Bengal. On the other hand, the increase in the literacy rate of North Bengal region was much higher than that of the increase in the rest of Bengal region and the state over the same period.

Table (3.6.1): Urban Sex Ratio and Literacy Rate (Excluding 0-6 Years of Age) in the Districts of North Bengal

District/Region/State	Sex ratio		Literacy Rate (Ex.0-6 Age)					
	1991	2001	1991			2001		
			T	M	F	T	M	F
Cooch Behar	951	964	77.23	82.63	71.55	85.18	90.38	79.77
Jalpaiguri	917	933	71.07	78.14	63.29	80.02	85.54	74.07
Darjeeling	868	899	76.82	81.8	70.98	83.34	87.66	78.52
Uttar Dinajpur	899*	893	76.6*	82.08*	70.45*	80.5	85.52	74.84
Dakshin Dinajpur		958				83.3	87.82	78.58
Malda	924	947	73.11	79.81	65.83	79.28	84.43	73.85
North Bengal Region	904	926	74.78	80.72	68.15	81.72	86.7	76.34
Rest of the Bengal Region	854	889	75.31	81.24	68.26	81.2	86.07	75.68
West Bengal (the State)	858	893	75.27	81.19	68.25	81.25	86.13	75.74

Source: computed from District's Census Handbook of 1971, 1981, 1991 (Village and Town Directory), Census of India-2001, WB, Series-20, Vol.1. *Note: undivided west Dinajpur District

One of the striking features was that the increase in the female literacy rate was higher than the male counterpart in the district, regions and the state.

3.6.2: Urban Work Participation Rate (WPR) in the Districts of North Bengal

In the vast rural area of North Bengal region, agricultural development has not been sufficient enough to sustain the increasing growth of population. Labour being a primary factor of production, the size of labour force is of great importance for the level of economic development in a country.

According to census 2001, out of total population of 2.09 million, there was 0.67 million urban workers (0.55 million male and 0.12 million female) in North Bengal, as against 6.92 million (5.82 million male and 1.11 million female) in the rest of Bengal region and 7.59 million (6.37 million male and 1.22 million female) in the state (Census 2001). Out of the total urban work force in North Bengal, the main and marginal workers were 0.62 million and 0.05 million respectively. In North Bengal, one in every two persons was in the workforce, as against one in every three persons in the rest of Bengal and the state. On the other hand, in 2001, there was one in every three urban persons in the workforce in North Bengal, rest of Bengal and the state. In Darjeeling district, out of total population of 1.61 million, 0.57 million was in the workforce constituting 0.40 million male and 0.17 million female, as against out of the total urban population of 0.52 million, 0.25 million was urban workers constituting 0.14 million male and 0.03 million female.

In terms of share of urban workers to the total urban workforce in North Bengal Darjeeling district has recorded the highest share at more than 28 percent, as against the second highest share of urban workers in Jalpaiguri district during the period of 1971-1991. In 2001, the share of workforce in the Darjeeling district decreased sharply to around 25 percent. But, in contrast, the share of workers in Jalpaiguri district increased to about 29 percent. The share of urban workforce to the total urban workers in Darjeeling and Jalpaiguri district taken together was about 54 percent throughout the decades and the remaining workforce has been shared by the other districts of North Bengal (Census reports).

Table (3.6.2), clearly shows that the urban work participation rate (WPR) in North Bengal region was far lower than the WPR in the rest of Bengal and the state during the four successive decades. Over the periods of 1971-2001, the WPR in North Bengal has increased substantially from 26.80 to 32.07 percent, as against the increase in the rest of Bengal region from 30.34 to 34.03 percent and the state from 30.12 to

33.85 percent. One of the notable features is that the female WPR in North Bengal was always higher than that of the female WPR in the rest of Bengal and the state.

Focusing our attention on the urban WPR in the districts of North Bengal region, it has been seen that the urban WPR in Darjeeling district was far higher than that of the WPR in all other districts of North Bengal region during the period of 1971-91, but in 2001, the WPR in Darjeeling district slightly lower than that of the WPR in Coochbehar and Jalpaiguri district. With the presence of wide variations, the highest increase in the WPR has taken place in West Dinajpur district, followed by other districts of north Bengal region.

One of the notable features is that the female urban WPR in Darjeeling district (8.89 percent) was not only higher than that of the WPR of all other districts of north Bengal region, but also higher than rest of Bengal region and the state over the period of 1971-91. Only in 2001, the female WPR in Darjeeling district was lower than the WPR of Dakshin Dinajpur district (Census reports).

Table (3.6.2): Urban Work Participation Rate in the Districts of North Bengal,

District/Region/ State	1971			1981			1991			2001		
	T	M	F	T	M	F	T	M	F	T	M	F
Cooch Behar	27.08	45.87	4.62	26.62	44.73	7.07	28.41	47.24	8.61	32.53	52.67	11.65
Jalpaiguri	27.89	47.66	4.04	27.98	48.41	4.91	29.50	49.77	7.40	32.44	52.43	11.00
Darjeeling	29.47	47.89	6.26	29.91	48.86	7.06	29.78	47.92	8.89	31.94	49.72	12.16
Uttar Dinajpur	23.59*	41.43	2.90	25.84*	44.49	5.12	26.69*	44.83	6.51	31.77	50.23	11.11
Dakshin Dinalpur										31.68	48.78	13.84
Malda	24.83	43.31	4.21	25.49	43.93	5.59	27.26	46.62	6.31	31.73	50.81	11.59
North Bengal Region	26.80	45.50	4.41	27.57	46.77	5.82	28.48	47.43	7.53	32.07	50.93	11.71
Rest of the Bengal Region	30.34	50.07	3.89	29.98	49.84	5.57	29.69	49.85	6.08	34.03	54.02	11.56
West Bengal (the State)	30.12	49.80	3.92	29.80	49.62	5.59	28.71	48.01	6.21	33.85	53.74	11.57

Source: Compiled and computed from various Census reports.

*Note: Figures upto 1991 against undivided west Dinajpur District

3.7: Basic Services to the Rural and Urban Population in the Districts of North Bengal Region

3.7. 1: Access to Safe Drinking Water, Electricity and Sanitation

Among the infrastructure that contribute to better health and quality of life are the facilities of availability of safe drinking water, sanitation and electricity connection. According to census 2001, access to safe drinking water, electricity and sanitation in both the rural and urban households in North Bengal was much lower than that of the percentage household in access to safe drinking water, electricity and sanitation in the rest of Bengal region and the state. The urban households with access all the above facilities was far better than the access to rural households in all the districts of north Bengal region, rest of Bengal and the state.

Based on Census reports depicted in Table (3.7.1), it is observed that the proportion of rural and urban households in Darjeeling district has not been well served with access to safe drinking water compared to the other districts of North Bengal region, rest of Bengal region and the state. Around 30 percent and 42 percent of the households have access to safe drinking water in the rural and urban areas respectively in Darjeeling district, as against 39 and 48 percent respectively in Jalpaiguri district. Whereas, in the rest of Bengal region, the state and other districts of north Bengal, at least 70 percent of the rural population and 81 percent of the urban population have access to safe drinking water facility.

Table (3.7.1): Access to Safe Drinking Water, Electricity and Sanitation in the Districts of North Bengal, 2001

Districts /Region/ State	Improved Drinking Water (near premises)		Electricity		Sanitation	
	Rural	Urban	Rural	Urban	Rural	Urban
Cooch Behar	79.70	87.43	7.36	68.76	23.37	87.07
Jalpaiguri	39.50	48.22	23.48	70.61	27.50	83.88
Darjeeling	29.08	41.58	42.11	82.45	46.86	84.44
Uttar Dinajpur	85.43	90.79	8.08	66.93	12.61	83.94
Dakshin Dinajpur	81.39	89.36	12.98	66.64	15.10	87.94
Malda	71.61	87.12	14.37	67.31	16.03	82.73
North Bengal Region	65.82	64.82	16.21	72.01	21.89	84.62
Rest of the Bengal Region	71.09	83.47	21.45	80.31	28.39	84.87
West Bengal (the State)	69.90	81.80	20.27	79.56	26.93	84.85

Source: Computed from Census of India- 2001, WB, Series-20, Tables on Houses, Household Amenities and Assets.

On the other hand, the percentage of households with access to electricity facilities in both the rural and urban areas of Darjeeling district was significantly higher than that

of the percentage of other districts of North Bengal, rest of Bengal region and the state. Similarly, access to sanitation facilities among the urban households in the districts of north Bengal was highest in Dakshin Dinajpur, followed by Coochbehar, Darjeeling, Uttardinajpur, Jalpaiguri and Malda district. In contrast, access to sanitary facilities in the rural areas was highest in Darjeeling district followed by other districts of north Bengal

The difference between North Bengal region and the rest of Bengal region was not sharp as there are some districts in both regions which are relatively better served as while there are some districts which not well served. In fact, districts of north Bengal region are much better off in terms of access to sanitation facilities in urban areas compared to the access to safe drinking water and electricity facilities. This can be partly because of urban concentration in few centers of north Bengal region.

3.8: Demographic and Economic Characteristics of Slum & Non-Slum Population in the Districts of North Bengal, 2001

3.8.1: Proportion of Slum & Non-slum population and Sex Ratio

According to census 2001, in India, a total of 42.6 million people in 640 cities/towns spread over 26 States/UTs reporting slums, are living in slums which constitute about 4 percent of the total population in the country. Slum dwellers in the country constitute nearly one seventh of the total urban population of the states/UTs reporting slums. West Bengal accounts for 4.1 million slum population in 59 cities/towns, which constitute 9.62 percent of the total slum population of the country (Census, 2001). In west Bengal, the North Bengal region comprises with six districts and out of districts, 7 municipal areas in five districts have been reported slums in census 2001.

A total of 0.38 million slum population comprising 0.20 million male and 0.18 million females has been enumerated in the slums of 7 cities and towns reporting slums in Census 2001, spread across 5 districts of North Bengal region. The slum population constitute more than one third of the total urban population in the North Bengal region, as against the proportion of slum population in the state. This implies that concentration of slum population in North Bengal region was much higher than that of the rest of Bengal region and the state. (Computed from Census 2001, Slums in India)

Table (3.8.1): Proportion of Slum & Non-Slum Population in the Districts of North Bengal

District / Region/ State	Proportion of Slum & Non-Slum Population in Town / Cities Reporting Slums						Sex Ratio	
	Non-Slum			Slum			Non-Slum	Slum
	T	M	F	T	M	F		
Jalpaiguri	80.86	80.81	80.91	19.14	19.19	19.09	973	966
Darjeeling	68.37	68.14	68.62	31.63	31.86	31.38	897	877
Uttar Dinajpur	59.34	59.67	58.97	40.66	40.33	41.03	879	905
Dakshin Dinajpur	70.15	70.07	70.22	29.85	29.93	29.78	973	966
Malda	64.01	63.73	64.30	35.99	36.27	35.70	957	721
North Bengal Region	68.54	68.36	68.74	31.46	31.64	31.26	923	907
Rest of the Bengal Region	73.27	72.87	73.73	26.73	27.13	26.27	887	849
West Bengal (the State)	72.89	72.52	73.32	27.11	27.48	26.68	889	854

Source: Slums of India, Census 2001, Vol.1, Government of India

Among the cities/towns in the four districts of North Bengal region reporting slums (computed from Census, 2001, Slums of India), the highest share of slum population has been recorded by Darjeeling district that is about half of the total slum population in North Bengal region, followed by Dakshin Dinajpur, Malda, Uttar Dinajpur and Jalpaiguri district placed at last position with the share of 8.67 percent slum population. On the other hand, of the total slum population in the cities/towns reporting slums in the state, the share of slum population was also the highest for Darjeeling district, followed other districts of north Bengal.

According to the various reports, (Census, Planning Commission of West Bengal) the North Bengal region is still predominantly rural compared to the state with large number of SC and ST people lives in this region. Similarly, the proportion of SC and ST population in the slums of North Bengal was much higher at 19.57 and 1.7 percent respectively, as against 13.20 and 1.18 percent respectively in the rest of Bengal and 13.79 and 1.23percent respectively in the state. Among the districts of North Bengal, the highest percentage of SC slum population is concentrated in the district of Dakshin Dinajpur, followed by Jalpaiguri, Uttar Dinajpur. Darjeeling district has the fourth highest SC slum population in the districts of north Bengal region. The ST population again evident in Dakshin Dinajpur district, followed by Darjeeling, Malda, Uttar Dinajpur and Jalpaiguri district (Census, 2001)

District wise break up of slum and non-slum population presented in table (3.8.1) shows that the proportion of slum population was highest in Uttar Dinajpur district, followed by Malda, Darjeeling, Dakshin Dinajpur and Jalpaiguri district. One can point out that the percentages of female slum population in all the districts of

North Bengal region, the rest of Bengal and the state were significantly lower than that of the percentages of non-slum population.

Sex composition, i.e., the distribution of population among males and females there was predominance of male population in the slum areas compared to non-slum areas. The sex ratio of the slum population in North Bengal region was 907 females per 1000 males in 2001, lower than the sex ratio in non-slum area (923) (Table, 3.8.1). However, the sex ratio in both the slum and non-slum areas in north Bengal region were higher than the sex ratio of the slum and non-slum areas in rest of Bengal region (849 and 887 respectively) and the state (854 and 889 respectively). In the districts of Jalpaiguri and West Dinajpur, the sex ratio among the slum population was notably higher than the sex ratio of other districts in North Bengal, rest of Bengal and the state. The sex ratio of slums in Darjeeling district was much lower (877) compared to other districts of North Bengal and the state. The lower sex ratio may be accounted probably due to high mortality rate, increasing male migration etc. Only the Uttar Dinajpur and Dakshin Dinajpur district in north Bengal region have registered the higher sex ratio in slum population.

3.8.2: Literacy Rate of Slum & Non-Slum Population in the Districts of North Bengal Region

Table (3.8.2): Literacy Rate of Slum & Non-Slum Population (Excluding 0-6 Age) in the Districts of North Bengal, 2001

District/Region/State	Slum				Non-Slum			
	P	M	F	G. Gap	P	M	F	G. Gap
Jalpaiguri	84.29	88.89	79.51	9.38	87.28	91.27	83.17	8.10
Darjeeling	68.94	75.84	60.96	14.88	85.20	88.84	81.12	7.72
Uttar Dinajpur	78.42	83.56	72.66	10.89	88.70	92.1	84.83	7.27
Dakshin Dinajpur	74.86	80.69	68.81	11.88	90.57	93.55	87.53	6.02
Malda	72.07	78.38	65.29	13.09	89.01	92.21	85.68	6.53
North Bengal Region	73.07	79.21	66.24	12.97	87.06	90.57	83.26	7.31
Rest of the Bengal Region	74.57	79.39	68.83	10.56	85.39	86.67	83.93	2.74
West Bengal (the State)	74.44	79.37	68.58	10.79	85.51	86.96	83.87	3.09

Source: Slums of India, Census 2001, Vol.1, Government of India

As per literacy rate of the slum and non-slum population depicted in table (3.8.2) is concerned, it is observed that in North Bengal region, the literacy rate of slum population was significantly lower at 73.07 percent, compared to 74.57 percent in the rest of Bengal region and 74.44 percent in the state. The literacy rate among the

non-slum population was much higher in north Bengal region than that of the literacy rate in the rest of Bengal and the state. Table (2.16) shows that there the gender gap among the slum population was notably higher than that of the non-slum population in all the districts of North Bengal, rest of Bengal region and the state.

On the other hand, in the five districts in North Bengal, the literacy rates of the slum and non-slum population were lowest in Darjeeling district at 68.94 and 85.20 percent respectively. The highest gender gap in literacy rate has also been noticed in Darjeeling district among the slum populations in all the districts of north Bengal, the regions and the state.

3.8.3: Work Participation Rate (WPR) Slum & Non-Slum Population

Statistical evidences show that the North Bengal region has substantially larger proportion of cultivators and agricultural workers (68.67 percent) compared to the rest Bengal (58.37 percent) (Planning Commission, 2002). From Table 3.8.3, it is clear that nearly one third of the slum dwellers in North Bengal are engaged in workforce, slightly higher than the percentage of non-slum workers and these WPR in both the slum and non-slum areas of north Bengal region was significantly lower than the WPR in the rest of Bengal region and the state

Table (3.8.3): Work Participation Rate (WPR) Slum & Non-Slum Population, 2001

District / Region/ State	Non-Slum				Slum			
	T	M	F	G. Gap	T	M	F	G. Gap
Jalpaiguri	32.01	51.28	12.15	39.13	33.07	51.07	14.38	36.69
Darjeeling	32.85	52.34	11.11	41.23	33.33	52.53	11.43	41.1
Uttar Dinajpur	32.24	50.1	11.91	38.19	31.11	48.62	11.76	36.86
Dakshin Dinajpur	30.46	47.74	12.7	35.04	31.57	47.76	14.82	32.94
Malda	30.27	50.48	9.16	41.32	31.02	49.34	11.41	37.93
North Bengal	32.04	51.16	11.32	39.84	32.38	50.75	12.12	38.63
Rest of the Bengal	34.41	55.05	11.14	43.91	34.41	54.03	11.28	42.75
West Bengal	34.23	54.76	11.16	43.61	34.22	53.73	11.36	42.37

Source: Slums of India, Census 2001, Vol.1, Government of India

Sex wise distribution of WPR shows that male WPR in the slums were far higher than that of the female counterpart i.e., one in every second male and one in every eight female is in workforce in the slums of north Bengal. The gender gap in the WPR of north Bengal region was also lower in both the slum and non-slum areas compared to the gender gap in the rest of Bengal and the state.

Among the districts of North Bengal, the highest WPR in both the slum and non-slum areas has been recorded by Darjeeling district. The WPR in the slums of

Darjeeling district was higher than that of the WPR in the other districts of North Bengal, but lower than that of the WPR in the rest of Bengal region and the State. In almost all the district of North Bengal region (cities/towns of North Bengal region reporting slums, Census 2001), the WPR in slum areas was slightly higher than the WPR in the non-slum areas. Similarly, male WPR was quite ahead of female WPR in both the slum and non-slum areas. Out of the five districts of North Bengal the gender differential in slums was highest in Darjeeling district with compared to the other districts indicates that the percentage of females workers in the slums of Darjeeling district were quite lower in workforce.

3.8.4: Slum & Non-Slum Workers in Different Categories of Activities

So far as slum and non-slum workers engaged in different types of activities, it is seen from Table 3.8.4 (a) that there is a predominance of main workers in the slum areas. The proportion of main workers in both the slum and non-slum areas was higher in North Bengal region compared to the proportion in the rest of Bengal and the state.

District wise distribution of main workers in the slums found that Jalpaiguri has highest proportion of main workers, followed by Uttar Dinajpur, Darjeeling Malda and Dakshin Dinajpur District. The proportion of main workers in the districts of North Bengal is much higher than that of the proportion in the rest of Bengal and the state (around 90.00 percent each). The proportion of marginal worker in both the slum and non-slum areas of North Bengal were lower than the proportion in the rest of Bengal region) and the state.

From Table, 3.8.4 (a), it is also observed that the percentage of marginal workers in the slums was much higher compared to proportion of non-slum marginal workers in all the districts of North Bengal region, rest of Bengal region and the state. Among the districts of North Bengal Darjeeling district has the second highest marginal workers (7.44 percent).

Table 3.8.4 (a): Distribution of Slum & Non-Slum Workers in Different Categories of Activities in the Districts of North Bengal

District / Region/ State	Distribution of various category of Workers to the total Slum & Non-Slum Workers of Town/Cities Reporting Slums											
	Main Workers						Marginal workers					
	Non-Slum			Slum			Non-Slum			Slum		
	T	M	F	T	M	F	T	M	F	T	M	F
Jalpaiguri	95.25	96.42	90.17	93.62	96.74	82.17	4.75	3.58	9.83	6.38	3.26	17.83
Darjeeling	94.15	95.48	87.16	92.56	94.60	81.89	5.85	4.52	12.84	7.44	5.40	18.11
Uttar Dinajpur	92.42	94.47	82.62	93.44	95.99	81.82	7.58	5.53	17.38	6.56	4.01	18.18
Dakshin Dinajpur	94.99	96.03	90.98	91.17	93.59	83.08	5.01	3.97	8.91	8.83	6.41	16.92
Malda	96.60	97.38	92.13	91.27	94.02	78.54	3.40	2.62	7.87	8.73	5.98	21.46
North Bengal Region	94.51	95.80	88.18	92.47	94.83	81.58	5.53	4.20	12.06	7.53	5.17	18.42
Rest of the Bengal Region	92.90	94.46	84.18	90.09	92.08	78.90	7.10	5.50	16.01	9.91	8.01	20.60
West Bengal (the State)	93.01	94.56	84.49	90.30	92.31	79.18	6.99	5.41	15.70	9.70	7.77	20.38
District / Region/ State	Agriculture and Cultivators						Household Industry Workers					
	Non-Slum			Slum			Non-Slum			Slum		
	T	M	F	T	M	F	T	M	F	T	M	F
Jalpaiguri	0.70	0.62	1.05	0.26	0.20	0.47	2.20	1.64	4.62	3.80	2.19	9.72
Darjeeling	0.78	0.61	1.66	0.62	0.43	1.56	2.29	1.75	5.12	2.41	1.98	4.67
Uttar Dinajpur	0.92	0.91	0.99	2.21	1.63	4.88	3.59	2.39	9.32	4.32	2.36	13.25
Dakshin Dinajpur	1.02	0.95	1.29	1.95	1.85	2.27	2.09	1.11	5.90	4.41	2.19	11.80
Malda Dist.	0.61	0.46	1.49	1.48	1.33	2.19	1.34	1.02	3.18	3.09	1.40	10.93
North Bengal Region	0.79	0.66	1.40	1.12	0.88	2.20	2.29	1.71	5.14	3.16	1.88	9.11
Rest of the Bengal Region	1.19	1.06	1.87	1.79	1.61	2.84	3.17	2.23	8.41	4.66	3.37	11.93
West Bengal (the State)	1.16	1.04	1.83	1.73	1.54	2.77	3.11	2.20	8.15	4.52	3.24	11.64

Source: Slums of India, Census 2001, Vol.1, Government of India

Generally, it is expected that almost all the entire work force in slum areas are engaged in non-agricultural activities, but practically it is observed that 95.72 percent of the slum workers in North Bengal region were engaged in other category of workforce, followed by household industry and the workers engaged in agricultural and cultivation taken together. The percentage of workers engaged in agriculture and cultivation and household industry in both the slum and non-slum areas of North Bengal region were far lower than that of the percentage in the rest of Bengal and the state.

As far as the slum and non-slum workers engaged in household industry is concerned, it is found from the table that the proportion of household industry workers in the slums was significantly higher than that of the proportion in the non-slum areas among all the districts of North Bengal region, while, Dakshin Dinajpur district registered the higher proportion of household industry workers in slums areas, followed by other districts of north Bengal

Table 3.8.4 (b): Percentage of Other Workers in the Slum & Non-Slum Population in the Districts of North Bengal

District / Region/ State	Non-Slum			Slum		
	T	M	F	T	M	F
Jalpaiguri	97.10	97.74	94.33	95.94	97.61	89.81
Darjeeling	93.88	94.10	93.16	94.86	96.10	91.12
Darjeeling	96.94	98.03	91.21	96.97	97.59	93.77
Uttar Dinajpur	95.49	96.70	89.69	93.57	96.01	81.88
Dakshin Dinajpur	96.89	97.95	92.80	93.65	95.96	85.93
Malda	98.05	98.52	95.33	95.43	97.27	86.88
North Bengal Region	96.92	98.08	91.26	95.72	97.24	88.68
Rest of the Bengal Region	95.38	96.40	89.69	93.55	95.03	85.23
West Bengal (the State)	95.49	96.51	89.82	93.74	95.22	85.59

Source: Slums of India, Census 2001, Vol.1, Government of India

With regard to workers engaged in other category, it is seen from Table, 3.8.4 (b) that the proportion of slum worker engaged in 'other category' in North Bengal region was much higher than that of the proportion in the State and the country as a whole. Similarly, the proportion workers engaged in 'other category' of worker in non-slum areas of North Bengal was also higher compared to the rest of Bengal and the state.

In the districts of North Bengal, the workers engaged in 'other category' was highest in the slums of Darjeeling District, followed by other districts. The proportion

of slum workers engaged in other category in all the districts of North Bengal are much higher than that of the proportion in the rest of Bengal region, the state and the nation as a whole. Similarly, workers engaged in other category of work in the slums of Darjeeling district was not only higher than that of the non-slum areas, but it was also higher than the proportion in the slums of North Bengal region, rest of Bengal, the state and the country as a whole.

3.9: Conclusion

North Bengal region, a significant part of the state is relatively more backward in terms of various development indicators. The region is predominantly rural with higher proportion of SC and ST population compared to the state average. With regard to economic and human development indicators the districts of this region are lagged far behind over the decades in the state. However, Darjeeling district is placed much better among the districts of North Bengal with the development indicators. Instead of having poor ranking in development indicators, the growth rate of urban population in North Bengal region is always higher than that of the growth rate of the rest of Bengal and the state. Rural urban migration from the neighboring states and districts as well as cross boarder migration is one of the important factors for high growth rate of urban population. Darjeeling districts also show the similar picture. The process of urbanization without industrialisation in North Bengal and Darjeeling district was always slow with compared to the rest of Bengal. Despite, the low level of urbanization the slums and squatters have increased substantially in the districts of north Bengal. In terms of socio-economic indicators, the slum dwellers in north Bengal region and Darjeeling district were far behind from the rest of Bengal and the state. Lack of access to safe drinking water, drainage facility and proper sanitation are the common features in these settlements. The poor people in these settlements are struggling extremely with the urban life for their survival. In the light of the Millennium Development Goals, the emergence of slums in this region has thrown a serious challenge to the Urban Local Bodies (ULBs) as well as state and central government.

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CHAPTER: IV

URBAN POOR IN INFORMAL SETTLEMENTS OF SILIGURI MUNICIPAL CORPORATION AREA (SMCA)

4:1 Introduction

Rapid urbanization and increasing economic opportunities in the cities like Siliguri Municipal Corporation Areas (SMCA) have attracted large numbers of rural migrants from neighboring districts, states and countries. Siliguri is not only the fastest growing towns in the state and the country, but the town is also the economic hub for the states of north east India. The high potential of the town to absorb migrant population in the informal labour market is the consequence of large number of squatter slums in the city. The purpose of the present chapter is to study the pattern of urbanization, migration and incidence of informal settlements in the municipal towns of Darjeeling district with special reference to Siliguri Municipal Corporation (SMC). The chapter is also an exploration of the socio-economic characteristics among the slum and non-slum population in the municipal areas.

4.2: Historical Backdrop of Siliguri Town

Siliguri is situated in the plains of Himalayas and on the banks of the river Mahananda. The city is popularly known as the gateway or the chicken neck of north east India because its corridor is connected with the north-eastern states to the rest of India. Geographically, Siliguri is situated at the latitude of 26° 72" N and the longitude of 88° 41" E (Basu and Saha, 2011). Siliguri village was situated on fairly high ground and the meaning of this village by its name is 'the Stony Site' because the Mahanadi flows near the city and deposits a mass of broken stone brought down from the hills. Siliguri was a tiny village with a population of 784 prior to 1901 (O'Malley). It grew from a small village of Saktigarh or popularly known as 'Puratan Siliguri' located near the Bardhaman road under Rajganj police station, Jalpaiguri district (Chattopadhaya, 2010). At present, the place is known as Saktinagar colony (Ward No. 31) under Siliguri Municipal Corporation. In 1907, Siliguri was declared as a subdivision (mentioned earlier). The importance of Siliguri increased just after declaration of this area as a town when the Coronation Bridge across the Tista River in 1934 linked Siliguri with Assam, Coochbehar and upper Duars (Chakraborty,

1990). Siliguri received its recognition as a Municipal town with a population of 32,480 with the area of 15.54 sq. km in 1951 and it extended further to 41.90 sq. km in 1994 when it was upgraded to Siliguri Municipal Corporation (SMC).

Siliguri town is bounded by international borders of Bangladesh, Bhutan, and Nepal. It is also linked with the traditional trade route of Sikkim, Nepal, Bhutan and Tibet (Map 4.2.1). During the initial period of its growth, Siliguri attracted migrants from its hinterlands like Bihar, Uttar Pradesh and Assam and with the passing of time Siliguri acquired a cosmopolitan character. This is an indicator of the rapid pace of urbanisation in Siliguri Urban Area (SUA), which comprises of the SMC (partially covering Darjeeling district with the area of 20.10 sq. km, and inhabited by 2,84,602 persons and partly covering Jalpaiguri district with the area of 20.81 sq. km, and inhabited by 1,87,772 persons) and the adjacent urban growth centers. Thus Siliguri Urban Area has an area of 117.54 sq. km out of which 68.90 sq. km falls under Jalpaiguri district and 48.64 sq. km falls under Darjeeling district (Census, 2001).

4.2.1: Location of Siliguri Town (Map)



The population strength of Siliguri increased by leaps and bounds within Siliguri Municipal area and there was a steady growth of population during the periods of 1951-61, 1971-81 and 1991-2001 compared to other periods. The notable point is that the annual growth rates of SMC in all the decades were far higher than that of the urban growth rate at the district level. The growth rate reached its zenith during 1991-01 at 8.09 percent which was about 3 times higher than the growth rate of the urban Darjeeling district (2.77 percent) and the Nation (2.77 percent) as well as 4 times higher than the growth rate of the state of West Bengal (1.83 percent).

Gradually, with the passing of time, Siliguri town displayed its vital potentiality and grew as a centre for trade between India and Sikkim, Bhutan, Nepal and Tibet. Assam rail link in 1950's, the NH-31 and other road networks made this town a gateway to North-East India (Ghosh et al, 1995). Finally, in the wake of national emergency in 1962, this town assumed a vital strategic importance from the national point of view. The growth of the town received momentum just after independence of India. First, there were thousands of refugees pouring in from East Pakistan after the country was divided. In 1960s, there were the refugees from Assam who lost their home in anti-Bengali riots. During this period there were several wars, where Siliguri was at the centre stage of the 1962 war with China, 1965 war with Pakistan, 1971 war for creation of Bangladesh. Each of these events contributed to a major inflow of refugees to the town. Thus, an important component of this increasing share of population was the inflow of migration into the city. During 1971-81, the Bangladesh war further added huge number of refugees to the town. After 1981, some important State Government offices were established in Siliguri to meet the growing commercial needs thus attracting employment in the tertiary sector. Moreover, as a gateway to the Himalayas, Siliguri is a point of important tourist activities which stimulates the economy of the town (Ghosh et al, *op.cit*).

4.3: Urbanisation in Siliguri and other Municipal Towns in Darjeeling District

Exploring the urban scenario, it is evident that between 1901 and 1951, the proportion of urban population has remained static at about 7 percent in North Bengal region. Since 1951, the proportion has increased marginally (Census: 1961). From a tiny village, Siliguri grew as a city of around 4.3 lakhs of population (2001) within a span of 50 years and slowly but steadily grew as a major centre of transport and

commercial activities in relation to its hinterland spread over the districts of North Bengal, Bihar, Assam, Sikkim and Bhutan. Siliguri town, due to its locational advantage is the only major commercial and distribution centre in the North Eastern region.

Siliguri shows consistently high growth rate of population over the 60 years of its existence. From 1951 onwards, the demography of Siliguri and its adjoining areas changed rapidly due the influx of refugees from the neighboring districts, states and other countries. In absolute terms, the population of four Municipal towns in Darjeeling district has increased rapidly but the increase in population of Siliguri Municipal Corporation has reached sky high over the period between 1951 and 2001. According to census data, the population of Siliguri Municipal Corporation has increased by 15 times between 1951-2001, followed 3 times each by Darjeeling and Kurseong and Kalimpong by about 2.5 times.

In absolute terms, a population of less than 800 in 1901 has multiplied manifold to 32,480 in 1951, 216950 in 1991, and the figure reached at 4, 27,374 in 2001 due to the reclassification of the SMC area (Census Report 2001). It has also been projected that based on the growth rate of 1951-2001, the total population of SMC is expected to reach at 809 thousand by 2011, as against 135 thousand in Darjeeling Municipality, 52 thousand in Kalimpong and 51 thousand in Kurseong Municipality. According to Census 2001, among the four municipal towns in Darjeeling district, the population of SMC was about 4 times higher than the Darjeeling Municipality, 11 times higher than the Kalimpong Municipality and 12 times higher than the Kurseong Municipality. From Table 4.2.1, it has also been observed that out of four municipal areas and the urban Darjeeling district, the SMC has recorded the highest relative increase in population during all the decades. The highest relative increase has taken place (117.51 percent) during 1991-2001, partly due to reclassification of the municipal area among other reasons, followed by (103.13 percent) in 1951-61, possibly because of huge immigration due to partition of India in 1947, 58.76 percent in 1971-81, primarily due to further immigration during and after Bangladesh war of liberation in 1971, and between 1981-91, the relative increase in population was the lowest (40.91 percent). *[Relative Change in Population = {(Population in the Current Year- Population in the Previous year) / (Population in the Previous Year)} x 100]*

4.3.1: Urban Population and its share to the Total Population in the District.

From Table 4.3.1, it is clear that the share of population of SMC to the total urban population of the district was comparatively higher than that of the share of all other Municipalities in the district from the period of 1951-2001 except 1951, when the share of population in Darjeeling Municipality to the district's total urban population was higher than the share of population in SMC. Siliguri municipal town accounts for not only the largest share of urban population among the towns of Darjeeling district but accommodating more than half the total urban population of the district since 1971.

Table 4.3.1: Urban Population and its share to the Total Population in the District

Municipality/Corporation	Total Population ('000)							Share of Population to the District's Total Urban Population					
	1951	1961	1971	1981	1991	2001	2011 (P) ^a	1951	1961	1971	1981	1991	2001
Darjeeling	34	41	43	58	73	107	135	35.57	28.11	23.79	20.42	18.45	20.60
Kalimpong	17	25	23	29	39	43	52	17.65	17.36	13.00	10.24	9.80	8.26
Kurseong	12	13	16	18	27	40	51	12.40	9.27	9.11	6.38	6.76	7.69
Siliguri (MC)	32	65	97	154	217	472	809	12.40	45.27	54.09	54.71	54.78	90.77 ^b

Source: Compiled and computed from Mitra et al (1990): "Population and Area of Cities Towns and Urban Agglomerations 1872-1971" ICSSR, District's Census Handbook of 1961, 1971, 1981, 1991 ((Village and Town Directory), Census of India-2001, WB, Series-20, Vol 1, ^a Note: projected population based on the AGR of 1951-2001. ^b Note: SMC has been considered in Darjeeling district as because the smaller proportion of population belong to Jalpaiguri district.

From the above table, it is observed that the share of population has reduced substantially in almost all the municipal towns/cities except SMC during the period of 1951-1981. Between 1981 and 2001, the share of population increased marginally in Darjeeling and Kurseong Municipality. On the other hand, in SMC, the share of population to the district's total urban population has increased significantly since 1951. [As mentioned earlier, it has been noted that SMC has two parts; part-I belonging to Darjeeling district with 54.69 percent population to the total urban population of Darjeeling district and part-II belonging to Jalpaiguri district with 30.94 percent population to the total urban population of Jalpaiguri district. As a small proportion of population in SMC belongs to Jalpaiguri district, hence SMC as a whole has been considered under Darjeeling district and that's why the share of population in SMC to the total population of Darjeeling district in 2001 shown the figure of 90.77 percent and as a result the total percentage of population in all the municipal areas has crossed 100 percent].

4.3.2: Density, Urban Concentration and Annual Growth Rate of Population in Municipalities of Darjeeling District

Table 4.3.2 depicts the density, urban concentration and annual growth rate of population in the municipal town of Darjeeling district, where it is found that the density of population in Siliguri Municipality area was substantially high over the decades. The alarming point is that the density of population in the SMC was much higher than that of the density in all other Municipalities of the district and the state since 1951. On the other hand, compared to other municipal corporations in the state, the density of population in SMC was significantly higher than that of the density in othe municipal corporation in the state except Kolkata and Howrah Municipal Corporation, where the density of population were much higher than the density of Siliguri Municipal Corporation in 2001.

Table 4.3.2: Density, Urban Concentration and Annual Growth Rate of Population in Municipalities of Darjeeling District

Municipality/ Corporation	Density Per Sq. Km						Index of Concentration*				
	1951	1961	1971	1981	1991	2001	1951-61	61-71	71-81	81-91	91-01
Darjeeling	3164	3846	4065	5450	6912	10142	-7.46	-4.32	-3.37	-1.97	2.15
Kalimpong	1789	2892	2699	3328	4474	4954	-0.29	-4.36	-2.76	-0.43	-1.54
Kurseong	3020	2655	3252	3566	5299	7847	-3.13	-0.16	-2.73	0.37	0.93
Siliguri (MC)	3485	4213	6273	9934	13961	11274	10.89	8.83	0.62	0.06	35.99
Municipality	Annual Growth Rate										
	1951-61	1961-71	1971-81	1981-91	1991-01						
Darjeeling (M)	1.92	0.53	3.00	2.41	3.91						
Kalimpong(M)	4.18	-0.69	2.12	3.00	1.02						
Kurseong (M)	1.36	2.05	0.92	4.04	4.11						
Siliguri (MC)	7.26	4.06	4.70	3.46	8.09						

Source: District's Census Handbook of 1971, 1981, 1991 (Village and Town Directory), Census of India-2001, WB, Series-20, Vol.1. **Note:** * Index of urban concentration = share of urban population to the total urban population of the district in the current year- share of urban population to the total urban population of the district in the previous year

Again, it is abundantly clear from the above table that among the four municipal towns in Darjeeling district, the index of concentration of urban population (a process in which an increasing proportion of urban population is concentrated in a particular area i.e. the higher the degree of urban concentration the higher is the inflow of migration in that area) in SMC was the highest over all the decades. Of the four municipal towns, in terms of urban concentration SMC alone accounted for around 55 percent of the total urban population between the periods of 1971 to 2001. From the table it is also observed that during the periods of 1951-1991, the degree of urban

concentration was declining in all the municipal towns, but in 2001, the index of concentration increased further in Darjeeling, Kurseong and SMCA.

The annual growth rates of the four municipal towns in Darjeeling district showed that the growth rates were exceptionally higher in SMC compared to the growth rates of all other municipal areas in the district for all the decades. The annual growth rate of SMC during the period 1991-2001 was not only higher (8.09 percent) than the north Bengal region (2.51 percent), rest of Bengal region (1.76 percent) and the state (1.83 percent) but was also higher than the growth rate of all the municipal corporations in West Bengal (the State) namely AMC (6.13 percent), DMC (1.48 percent), CMC (3.03 percent), HMC (0.59 percent) and KMC (0.39 percent) in West Bengal as well as the million plus cities like Greater Mumbai (2.70 percent), Kolkata (1.82 percent), Delhi (4.34 percent) and Chennai (1.92 percent) (NIUA, 2008).

It has also been seen that the inflow of population among the towns/cities of Darjeeling district was highest in SMC during the period 1991-2001 with 8.09 percent urban growth rate, which was largely due to the reclassification of the municipal area and immigration from the neighboring districts and from within the district. As earlier mentioned, owing to Partition of India in 1947, there was a large movement of Displaced Person from East Pakistan to this region registering an annual growth rate of 7.26 percent between 1951 and 61. In the third phase, there was huge influx of population in SMC with the growth rate of 4.70 percent between 1971 and 1981 following the Bangladesh war of liberation in 1971.

Various studies stated that on the whole, during the period 1951-71, the huge influx of population to SMC was of immigrant refugees from erstwhile East Pakistan. A point should be noted that the immigrant refugees were mostly Bengali Hindus from erstwhile East Pakistan. In addition to this a significant number of refugees from Assam moved in to SMC, who were forced to leave Assam due to communal riots. Large number of refugees from border areas due to Indo-China border conflict coupled with construction of military establishments and increase in communication facilities, all contributed to the steady growth of migrant population. They came to occupy a quantitatively important segment of population in the district with the majority having settled in the plains of Siliguri sub-division. Further in 1971-81, the Bangladesh war added to the already broad population base but after 1981, important

state government offices were established in Siliguri to facilitate administration while attracting employment in the tertiary sector.

4.4: Migration Characteristics in SMC and other Urban Agglomerations (UAs) in North Bengal

4.4.1: Total Population, Migrants and Annual Growth Rate of UAs / Cities in North Bengal

The six districts of North Bengal have experienced phenomenal growth in urban areas over the past two decades. The growth experienced by Siliguri Municipal Corporation however has been overwhelming, outweighing all the other UAs. According to Census 2001, the absolute number of migrants was the highest at 231 thousand in SMC, followed by approximately 70 thousand in English Bazaar UA (Malda district), 50 thousand in Raiganj UA (Uttar Dinajpur district), 46 thousand in Balurghat UA (Dakshin Dinajpur district), and around 39 thousand in Alipurduar UA (Jalpaiguri district) The percentage of urban migrants to the total population in the Urban Agglomerations/ Cities of North Bengal, SMC has recorded significantly higher percentage of migrants (81.63 percent) in 1991. The percentage of migrants in SMC was higher than that of the proportions in all other UAs of North Bengal region. The percentage of migrants to the total population in all the UAs of North Bengal have also decreased sharply between the period of 1991-2001, except Balurghat UA, where the proportion of migrants increased marginally from 29.76 to 31.93 percent in 1991-2001. But, the notable point is that the proportion of migrants reduced significantly by around two times during the same periods of time in SMCA.

Table 4.4.1: Total Population/ Migrants and Annual Growth Rate to UAs / Cities in North Bengal by Place of Last Residence

Urban Agglomerations (UAs) / City	Total Population (in '000)		Total Migrants (in '000)		Percentage of Migrants		Annual Growth Rate of Population	Annual Growth Rate of Migrants
	1991	2001	1991	2001	1991	2001	(1991-01)	(1991-01)
Alipurduar UA	102.80	114.00	37.30	39.40	36.30	34.52	1.04	0.54
Siliguri MC	217.00	472.40	177.10	231.30	81.63	48.96	8.09	2.71
Balurghat UA	126.20	143.30	37.60	45.80	29.76	31.93	1.28	2.00
Raiganj UA	159.30	175.00	46.10	50.20	28.97	28.68	0.95	0.85
English Bazar UA	177.20	224.40	70.30	78.80	39.66	35.12	2.39	1.16

Source: Census of India-1991, WB, Series-26, part- VA & VB, D Series, Migration tables, Census of India-1991, WB, Series-26, part-II, A Census of India -2001, WB, (Migration tables in electronic Media) Census of India - 2001, WB, Series-20, Vol.1, table A5, A6 & A7.

The annual growth rates of total population and migrant population in SMC were substantially higher than all other UAs of North Bengal during 1991-2001. The growth rate of population and migrants in SMC were about 7.8 and 1.4 times higher than the growth rate of Alipurduar UAs, 6.3 and 1.4 times higher than that of the growth rates of Balurghat UAs, 8.5 and 3.2 times higher than that of the growth rates of Raiganj UAs and 3.4 and 2.3 times higher than that of the growth rates of English Bazaar UAs (Table-4.4.1). One point should be noted that the annual growth rate of population in all the UAs and cities of North Bengal were higher than the growth rate of migrant population except Balurghat UAs, where the annual growth rate of migrant population was higher than the growth rate of urban population during 1991-2001.

4.4.2: Migration by Reasons to UAs/Cities

The distribution of migrant population by reasons as enumerated in Census (Table-4.4.2) for the UAs and cities of North Bengal during the period of 1991-2001 shows that in SMC, a greater proportion of population migrated primarily owing to family movement, followed by other reasons such as employment, marriage, business and education.

From Table 4.4.2 shown later, it has also been seen that the proportion of migrant population by reasons in all categories of SMC has reduced sharply during the period 1991-2001, except migration due to other reasons. The decline in migration was highest in case of nuptial migration, followed by family movement, employment, business and education. In contrast, the proportion of migration due to other reasons in SMC increased from 19.36 percent in 1991 to 34.30 percent in 2001. Among all the UAs, the proportion of migration due to employment reason was highest in SMC during 1991-2001. Similarly, percentage of migration due to business reasons was also highest in SMC among all the UAs in north Bengal region. From the Table 4.3.2, one of the important features that deserve attention is the high percentage of migration owing to education in Raiganj UA, followed by Balurghat UA during the period 1991-2001. But in contrast, the proportion of migration was lowest for education in SMC over the same period.

4.5: Social Characteristics in the Municipal Towns of Darjeeling District

4.5.1: Literacy Rate and Sex Ratio

As noted in the earlier chapter, literacy rate of Darjeeling district have consistently remained the highest among the 6 districts of North Bengal. As such, the district also has a favourable sex ratio compared to the other 6 districts. However, the favourable sex ratio is not uniform throughout the district as is seen in Table 4.5.1. The Table depicts the sex ratio and literacy rate in the municipal towns of Darjeeling district, where, the sex ratio (male per 1000 females) in SMC was not only lower (885) among the other Municipal towns of the district, but also lower than that of the other municipal corporations in the state namely AMC (895), CMC (927) and the state (893) (Census, 2001). On the other hand, it is also observed that the sex ratio of SMC was much higher than that of the sex ratio of million plus cities namely greater Mumbai (822), Kolkata (869), Delhi (822) (NIUA, 2008). The low sex-ratio may be due to the poor health of women and hence lower life expectancy in addition to increasing male migration, among other reasons.

Education is one of the most important indicators of social development. It plays a significant role in devising the livelihood strategy of the people. Table 4.5.1 clearly shows that among all the municipal areas of Darjeeling district, the highest literacy rate has been recorded by Kurseong Municipality, followed by Darjeeling Municipality, Kalimpong Municipality and SMC with 74.23 percent literacy rate has registered the lowest position in 1991. But in 2001, the highest literacy rate has been registered Darjeeling Municipality, followed by Kurseong Kalimpong Municipality and SMC again recorded a far lower level of literacy rate (68.81 percent) in 2001. Female literacy rate was very low (63.25 percent) in SMC representing the general characteristics of the state. The notable point is that the gender gap in education was much lower in SMC compared to the other municipal areas in 1991, but in 2001, the highest gender gap in education has been observed in Kalimpong Municipality, followed by SMC.

Table (4.4:2): Percentage Distribution of Migrants (Place of Last Residence) by reasons to UAs/Cities of North Bengal by Reasons

Urban Agglomerations / City	Employment		Business		Education		Family Moved		Marriage		Others	
	1991	2001	1991	2001	1991	2001	1991	2001	1991	2001	1991	2001
Alipurduar U.A	13.12	11.08	2.49	2.41	2.87	1.18	33.12	35.46	21.87	23.69	26.53	25.47
Siliguri MC	20.28	17.37	6	4.47	2.01	0.68	34.13	29.56	18.22	13.61	19.36	34.3
Balurghat UA	8.57	8.64	1.52	1.94	3.14	2.78	33.46	35.8	33.99	22.48	19.31	28.37
Raiganj UA	9.3	12.35	2.67	3.31	5.27	4.66	22.62	33.46	20.9	22.62	39.25	23.62
English Bazar UA	16.9	11.21	2.9	3.07	2.25	1.52	30.14	30.73	23.44	20.09	24.37	33.37

Source: Computed from Census of India-1991, WB, Series-26, part- VA & VB D Series, Migration tables, Census of India -2001, WB.

Table 4.5:1: Literacy Rate and Sex Ratio in the Municipal Towns of Darjeeling District

Municipality/ Corporation	Sex ratio						Literacy rate (Excluding 0-6 age)							
	1951	1961	1971	1981	1991	2001	1991				2001			
							P	M	F	Gender Gap	P	M	F	Gender Gap
Darjeeling (M)	825	788	865	862	935	915	83.04	88.14	77.56	10.58	89.81	93.49	85.79	7.70
Kalimpong (M)	811	800	848	932	944	928	79.12	84.17	73.73	10.44	86.11	91.54	80.26	11.28
Kurseong (M)	835	862	887	915	913	961	83.8	88.53	78.55	9.98	89.59	93.66	85.35	8.31
Siliguri (MC)	554	651	736	794	824	885	74.23	78.6	68.81	9.79	77.93	82.79	72.38	10.41

District's Census Handbook of 1971, 1981, 1991 (Village and Town Directory)
Census of India-2001, WB, Series-20, Vol.1

4.6: Economic Livelihoods in the Municipal Towns of Darjeeling District

4.6.1: Work Participation Rate

In the vast area of Darjeeling district, the only existing tea industry was unable to accelerate economic development and it has also been associated with poor industrialisation in the area. A majority of the urban dwellers earn their livelihood from the service sector. Lack of expansion of the formal sector employment associated with the ever expanding informal sector resulted in serious unbalanced economic growth. This sector primarily absorbs the poor rural migrants. The majority in the informal sector in Siliguri are the street vendors, hawkers, rickshaw pullers, construction workers, labour in a wholesale shops, repairing, domestic helps, drivers, etc (Ghosh et al, op cit). According to Dasgupta (1988), retail trade is the most important source of employment in most of the towns of North Bengal. In terms of population-employment ratio for the wholesale trade, the North Bengal region can be termed as wholesale oriented town.

Table 4.6:1 Work Participation Rate (WPR) in the Municipal Towns of Darjeeling District

Municipality WPR	1971			1981			1991			2001		
	T	M	F	T	M	F	T	M	F	T	M	F
Darjeeling	28.69	43.77	11.25	29.40	45.52	10.71	25.08	39.17	10.00	30.98	44.90	15.78
Kalimpong	27.89	44.62	8.17	27.01	42.33	10.56	26.04	41.43	9.73	31.12	48.58	12.32
Kurseong	25.12	39.16	9.29	26.49	41.40	10.19	24.65	37.87	10.16	25.16	36.63	13.22
Siliguri (MC)	30.93	51.57	2.91	31.68	52.95	4.89	33.53	54.36	8.25	33.46	54.08	10.16

Source: Computed from District's Census Handbook of 1971, 1981, 1991 (Village and Town Directory), Census of India-2001, WB, Series-20, Vol.1

Table 4.6.1 illustrates the work participation rate in the municipal towns of Darjeeling district, where it is found that over the period 1971-2001, the WPR in SMC was not only higher among municipal towns in Darjeeling district but also higher than the WPR of urban Darjeeling district, North Bengal region and the State. The higher growth rate of population in SMC may be partly due to greater employment opportunities in the informal sectors. The gender disparity i.e., the difference between male and female WPR is clear from the Table 4.5.1. During the period between 1971-2001, the female WPR in SMC was lower not only among all the municipal towns in the district but also lower than the WPR of north Bengal region, rest of Bengal region and the State except 1991, when the female WPR was much higher in SMC compared to the male counterpart.

4.7: Demographic and Social characteristics of Slum & Non-Slum Populations in the Municipal Towns of Darjeeling District

Generally, cities are the engine of economic growth. Rapid pace of urbanization and growth of new towns/ cities to an extent has experienced the excessive demand for basic services and lack of these services cause deterioration of the physical environment. The quality of life suffers due to continuous inflow of migrants and as a result the gap between demand and supply of basic services and other infrastructure increases in these areas. Unchecked population growth in the cities creates housing problem due to high land prices which forces the urban poor to settle for informal solutions resulting in mushrooming of slums and squatter settlements.

The expanding economic opportunities in the tertiary sector of Siliguri have influenced the inflow of migration from the neighboring districts and the state. As Siliguri is becoming the fastest growing town in the state as well as in the country, consequently slum population are also growing at an alarming pace. A majority of the slum dwellers are engaged in unskilled, low paid jobs and if self employed, living at subsistence level of income. They are not only low skilled but also illiterate. Employment generation programmes in the informal sector are very often threatened by the lack of skills of the poor. The status of health, particularly that of mother and child is also very poor in the slums. Any programme on slum development thus should concentrate not only on improving the level of earning but also on improving the social and physical infrastructure simultaneously so that there is overall improvement in the quality of life which will help in pulling the slum dwellers out of the vicious circle of poverty (Ghosh et al, 1995). SMC has been attaching priority in its budget on the welfare of the economically weaker section of the people generally living in slum areas. According to Census 2001, there were 154 notified slums in 47 wards of SMC with 1, 75,012 slum populations in 33,230 families; whereas in Darjeeling municipality, the total number of slum population was only 8,329 comprising 4,360 males and 3,969 females. With the objective of involving poor people for whom most of the developmental activities have been planned, with the passing of time 15 Community Development Society (CDS, registered under Society Act) and Resident Community Volunteer (RCV) have been formed in SMC. Out of 33,230 families, the number of BPL families was 26,000 (Report of SMC, 2005).

A total of 0.38 million population comprising 0.20 million male and 0.18 million females have been enumerated in the slums of 7 cities/towns spread across 5 districts of North Bengal region. The slum population constitute more than one third (31.46 percent) of the total urban population in the North Bengal region, as against 1/4th slum population in the State (27.1 percent) i.e., concentration of slum population in North Bengal was much higher than the concentration of slum population in rest of the State (26.73 percent).

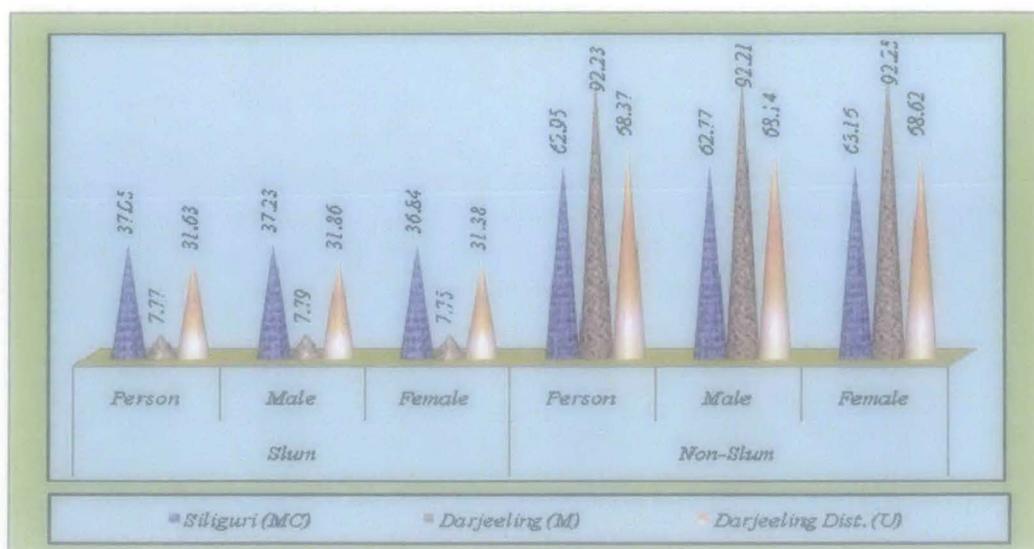
According to Census 2001, the concentration of slum population in 6 large cities of West Bengal is evident from the fact that about 52 percent of the total slum population (Cities/Towns reporting slums, Census 2001) in West Bengal lives in these cities. As an absolute number the highest slum population has been registered by Kolkata Municipal Corporation (KMC) about 1485 thousand (32.48 percent of the total population), followed by Siliguri Municipal Corporation (SMC) about 175 thousand (37.05 percent), Asansol Municipal Corporation (AMC) about 158 thousand (33.30 percent), Durgapur Municipal Corporation (DMC) about 147 thousand (29.79 percent), Howrah Municipal Corporation (HMC) about 118 thousand (11.74 percent), and Chandannagar Municipal Corporation (CMC) about 43 thousand (26.45 percent).

On the other hand, among the six Municipal Corporations in West Bengal, the KMC alone accounts for about one third (36 percent) of the slum population to the total slum population in the State reporting slums in towns/cities (Census 2001). Next to KMC, the second highest share of slum population in the State has been concentrated in SMC (4.25 percent), followed by AMC (3.85 percent), DMC (3.57 percent), HMC (2.87 percent), and CMC (1.04 percent).

4.7.1: Slum & Non-slum Population in the Municipal towns of Darjeeling District

Census data on slums depict that among districts of North Bengal region, the highest share of slum population was in Darjeeling district (47.96 percent). On the other hand, 96.46 percent slum population to the total slum population in the district is housed by SMC alone and the remaining 4.54 percent housed by the Darjeeling municipality.

Figure 4.7.1: Percentage of Slum & Non-slum Population to the total Slum & Non-Slum population in the Municipal towns and Darjeeling District (U)



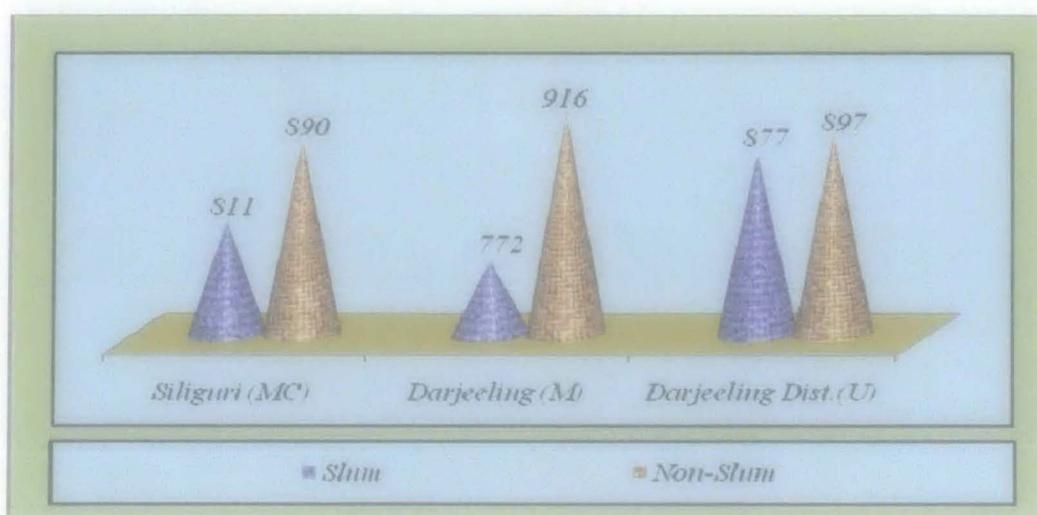
Source: Slums of India, Census 2001, Vol.1, Government of India

In terms of concentration of slums in the towns/cities of North Bengal region, it is found from Figure (4.7.1) that the SMC had highest concentration of slum population (37.05 percent), as against 7.77 percent in Darjeeling municipality and 31.63 percent in Darjeeling district as a whole. The Figure also shows that the proportion of non-slum female population in all the municipal areas and in the district were marginally higher than the proportion of males. But, in contrast, the proportion of female slum population was marginally lower than that of the males in the municipal towns and urban district as a whole. The alarming point is that the proportion of slum population of SMC (37.05 percent) was not only significantly higher than the municipal corporations in the State, the North Bengal region, and the rest of Bengal region but also higher than the million plus cities like Delhi (18.7 percent), Chennai (18.9 percent) and Kolkata (32.48 percent) to the total urban population (NUIA, 2008). The proportion of slum population in other cities and towns of north Bengal reporting slums were 40.66 percent in Raiganj Municipality, 35.99 percent in English Bazaar Municipality, 29.85 percent in Balurghat Municipality, 38.86 percent in Alipurduar Municipality and 4.77 percent in Jalpaiguri Municipality (Computed from slums of India, Census-2001)

4.7.2: Sex Ratio of Slum & Non-Slum population in the Municipal Towns of Darjeeling District

Sex composition, i.e., the distribution of population among males and females, there was preponderance of male population in the slum areas compared to non-slum areas. Figure (4.7.2) depicted the sex ratio of slums in the municipal towns and urban Darjeeling district as a whole, where, the sex ratio in the slums of SMC was 811 as against 772 in Darjeeling municipality and 877 in urban Darjeeling district. The sex ratio of slums was far below than that of the non-slum areas in all the municipal areas.

Figure (4.7.2): Sex Ratio of Slum & Non-Slum Population in the Municipal Towns of Darjeeling District



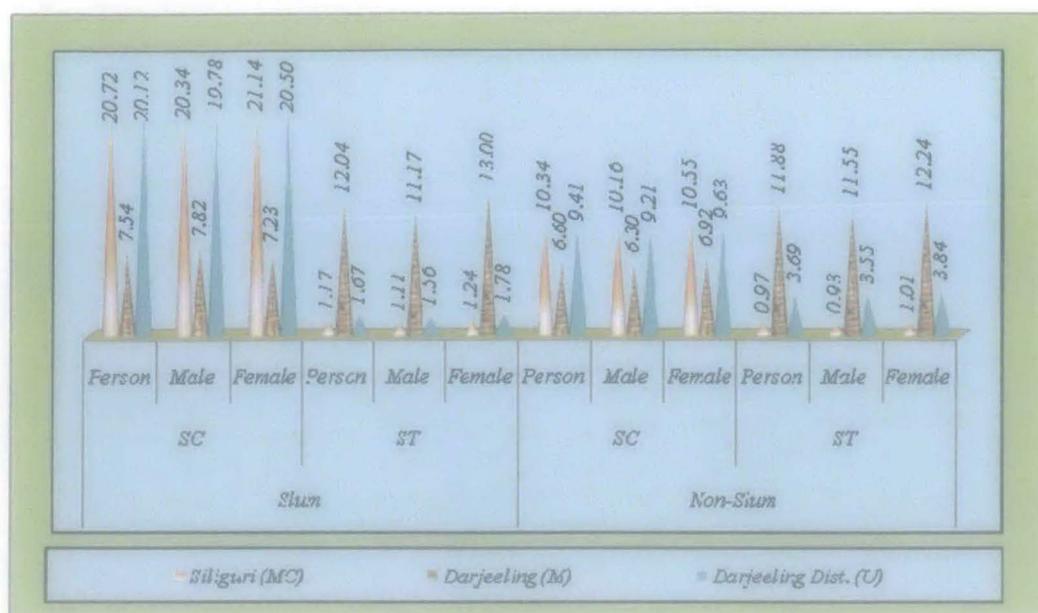
Source: Computed from Slums of India, Census 2001, Vol.1, Government of India

From the statistical data derived from the Census, it has been seen that except Balurghat and Raiganj Municipality, all other Municipalities in North Bengal region accounted for significantly lower sex ratio in slums. The lower sex ratio may be attributed to various reasons like poor access to healthcare by women, higher mortality rate of women, increasing male migration, etc.

4.7.3: Social Composition of Slum & Non-Slum Population in the Municipal Towns of Darjeeling District

Among the social characteristics, the proportions of Schedule Caste and Schedule Tribe slum population in the municipal areas of Darjeeling district were much higher than that of the proportions in the non-slum areas (Figure-4.7.3). In SMC, the percentage of SC slum and non-slum population was about 18 and 11 times higher than the percentage of ST population in slum and non-slum areas.

Figure (4.7.3): Percentage of SC and ST population in Slum and Non-Slum areas of the Municipal Towns/Cities in Darjeeling District.



Source: Computed from Slums of India, Census 2001, Vol.1, Government of India

On the other hand, the percentage of SC and ST population in the slums of Darjeeling municipality was higher than that of the non-slum population. In terms of social castes, the proportion of SC slum population was 3 times higher in SMC than that of the Darjeeling municipality and in contrast the ST population in Darjeeling municipality was about 10 times higher than the proportion of ST population in SMC.

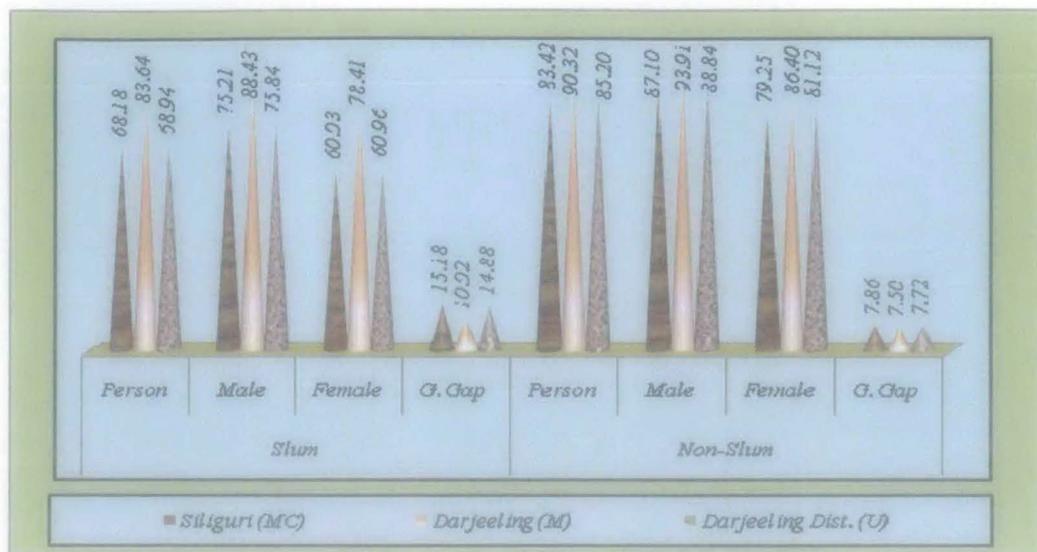
The proportion of female SC and ST in both the slum and non-slum areas to the total slum and non-slum population of SMC were slightly higher than the male counterpart. The only exception is Darjeeling municipality, while, the proportion of SC male slum population was slightly higher than the female counterpart. From the statistical evidences (Slums of India, Census, 2001), it has also been seen that the percentage of SC population in the slums of Jalpaiguri Municipality was more than two times higher (about 49 percent) than that of the proportion in Balurghat Municipality (about 22 percent).

4.7.4: Literacy Rate among Slum & Non-Slum population in the Municipal Towns of Darjeeling District

Figure (4.7.4) shows the literacy rate of slum and non-slum population in the municipal town and the district as a whole where it is found that the literacy rates among the municipal cities/towns of Darjeeling district in both the slum and non-slum

areas was much higher in Darjeeling Municipality compared to SMC and the Darjeeling district as a whole.

Figure (4.7.4): Literacy Rate among the Slum & Non-Slum population in the Municipal towns in Darjeeling District



Source: Computed from Slums of India, Census 2001, Vol.1, Government of India

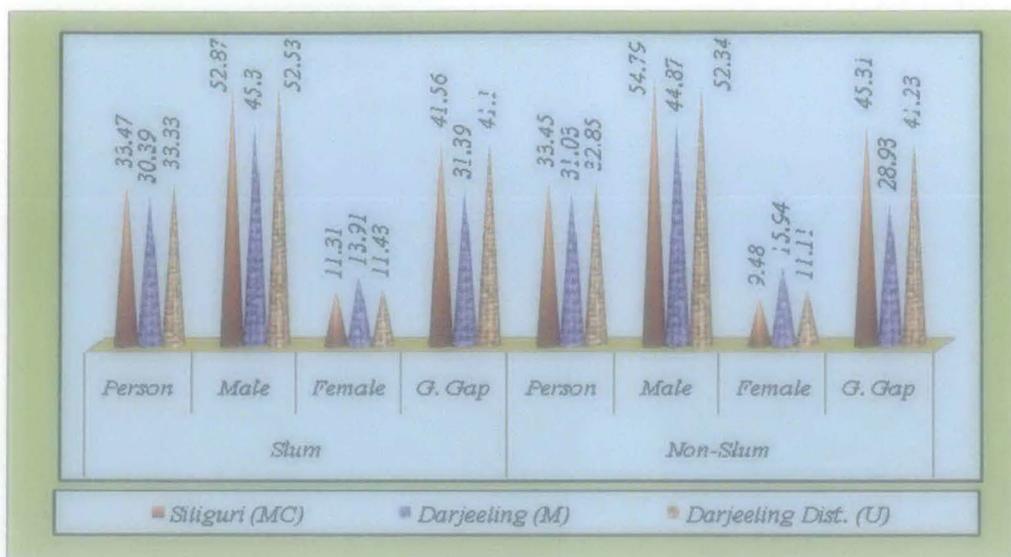
SMC accounts for 68.18 percent (75.21 percent male and 60.03 percent female) literacy rate in slums, as against 83.42 percent literacy rate (87.10 percent male and 79.25 percent female) in non-slum areas. The gender differentials in literacy rate in both the slum and non-slum areas is also evident from Figure (4.6.4), where the highest gender disparity in both the slum and non-slum areas has been observed in SMC compared to other municipal towns in the district.

4.8: Economic Activities of the Slum & Non-slum Population in the Municipal Towns of Darjeeling District

4.8.1: Work Participation Rate of Slum & Non-slum Population in the Municipal Towns

Economic livelihood is reflected through the participation in the workforce. Table (4.8.1) shows that among the municipal areas in Darjeeling district, the WPR in SMC for both the slum and non-slum population was 33.5 percent, far higher than that of the WPRs of Darjeeling Municipality. To the total workforce in the slums of Darjeeling district, SMC alone contributes 95.86 percent, as against 4.14 percent in Darjeeling municipality.

Figure (4.8.1): Work Participation Rate (WPR) of Slum & Non-slum Population in the Towns of Darjeeling District



Source: Computed from Census 2001, Slums of India, Vol.1, Government of India.

The WPR among the female slum population in all the municipal areas was higher than the non-slum female WPR. The highest female WPR has been recorded by Darjeeling municipality in both the slum and non-slum areas (13.91 and 15.94 percent respectively) compared to the WPR of SMC (11.31 and 9.48 percent respectively) and the urban Darjeeling district (11.43 and 11.11 percent respectively). On the other hand, compared to the Darjeeling municipality and the urban Darjeeling district, the gender gap in the slum population of SMC was the highest (41.56 percentage points), as against the gender gap of non-slum population (45.31 percentage points).

4.8.2: Distribution of Workers of Slum & Non-Slum population by different Categories of Work in the municipal towns of Darjeeling District

Table (4.8.2) shows the distribution of various categories of workers among the Slum and Non-Slum population in the municipal towns and the district as a whole, where, it is clear that the percentage of main and marginal workers in the slums of SMC and Darjeeling municipality was more or less same (about 93 and 7 percent). In contrast, the proportion of main workers in the non-slum areas was highest in SMC (94.63 percent), followed by Darjeeling municipality (92.61 percent). On the other hand, the proportion of marginal workers in the non-slum areas was highest in Darjeeling

municipality (7.31 percent), and followed by SMC (5.37 percent). The percentage of female marginal workers in both the slum and non-slum areas was significantly higher than the male counterpart in both the municipal areas.

Table (4.8.2): Distribution of Main and Marginal Workers in various Categories to the total Workers in the Municipal Towns of Darjeeling District

Category of Workers		Siliguri (MC)			Darjeeling (M)			Darjeeling Dist.		
		T	M	F	T	M	F	T	M	F
Main	Slum	92.55	94.66	81.31	92.69	93.01	91.49	92.56	94.60	81.89
	Non-Slum	94.63	96.08	85.17	92.61	93.24	90.65	94.15	95.48	87.16
Marginal	Slum	7.45	5.34	18.69	7.31	6.99	8.51	7.44	5.40	18.11
	Non-Slum	5.37	3.92	14.83	7.39	6.76	9.35	5.85	4.52	12.84
Agriculture & Cultivators	Slum	0.54	0.39	1.37	2.25	1.37	4.71	0.62	0.43	1.56
	Non-Slum	0.63	0.49	1.54	1.25	1.07	1.87	0.78	0.61	1.66
Household Industry	Slum	2.39	1.96	4.70	2.88	2.53	4.17	2.41	1.98	4.67
	Non-Slum	1.49	0.92	5.20	4.87	4.83	4.96	2.29	1.75	5.12
Other	Slum	97.06	97.65	93.93	94.86	96.10	91.12	96.97	97.59	93.77
	Non-Slum	97.88	99.08	90.10	93.88	94.10	93.16	96.94	98.03	91.21

Source: Computed from Slums of India, Census 2001, Vol.1, Government of India

Among the municipal towns in Darjeeling district reporting slums, the proportion of workers engaged in agriculture and cultivation taken together was far lower in both the slum and non-slum areas of SMC, as against the proportions in Darjeeling Municipality, as well as the urban Darjeeling district. One of the striking features is that in both the slum and non-slum areas, the proportions of female workers in agriculture and cultivation taken together was significantly higher than the percentage of males.

In urban Darjeeling district, the proportion of slum workers engaged in household industry slums was higher than that of the proportion of non-slum workers. Among the municipal towns in the district reporting slums, the percentage of workers engaged in household industry was highest in Darjeeling municipality, followed by SMC. In terms of the workers engaged in household industry in both the slum and non-slum areas, the proportion of household industry workers in the slums of SMC was much higher than that of the non-slum area but the adverse scenario has been observed in Darjeeling municipality. From the Table (4.7.2), it has been seen that the proportion of female household industry workers in both the slum and non-slum areas were conventionally much higher than that of the male counterpart.

At the other extreme, the percentages of other category of workers in both the slum and non-slum areas of SMC were much higher than the percentage of Darjeeling municipality. The proportions of female workers of other category in both the slum and non-slum areas of SMC and Darjeeling municipality were far lower than the percentage of males.

4.9: Financial Scenario of Siliguri Municipal Corporation (SMC) Area

Due to its strategic location, employment opportunities etc., influx of large number of population to Siliguri continues from neighboring district, states and other places. As a result, Siliguri developed in an unscientific and unplanned manner with large number of informal settlements in the heart of the city and in the peripheral city. Therefore, there is an urgent need for raising the level of investment in all fronts to develop the physical infrastructure especially for the vast number of people belonging to the weaker section of the society.

4.9.1: Total and per capita Expenditure/Receipt under Different Heads in SMC between 1985-86 and 2009-10

For every financial year, SMC presents its budget for two major accounts (i) revenue accounts and (ii) capital accounts. Revenue expenditures are incurred out of the municipal revenue fund. The size of the revenue expenditure of SMC is mainly determined by the size of the available financial resources. These resources are generally classified into tax-revenue, non-tax revenue and state transfers to municipal bodies termed as grants or revenue grants. On the other hand, in the capital account, grants, loans and advances constitute the whole of capital income from which capital expenditure is financed.

With the rapid growth of population in SMC, the total receipt, both in revenue and capital accounts, has increased by about 52 times during the period 1985-86 to 2009-10. Since 2000-01, total receipt in capital accounts exceeded the total receipt in revenue accounts, except in 2004-05, where, the receipt in revenue account was higher than the capital account. Based on total receipt, total expenditure has also increased by about 61 times over the period 1985-86 to 2009-10. From Table 4.9.1 (Appendix B), it is also evident that the per capita expenditure was always lower than the per capita receipt in SMC, except in the year 1989-90, when per capita expenditure exceeded the per capita receipt. In per capita terms, both the revenue and

capital expenditure in capital account have increased sharply except in 2004-05, when per capita revenue and expenditure in capital account have decreased slightly from the previous period. Similarly per capita revenue receipt and expenditure have increased notably during the period 1985-86 to 2009-10. The fact is that the capital receipt consists of grants for various schemes for physical infrastructure and the capital expenditure consists of expenditure on development projects like water supply, drainage and other public works. The estimates of per capita capital expenditure in SMC exceed per capita expenditure in revenue account from 1989-90 to 2009-10, the only exception was 2004-05.

4.9.2: Expenditure under different heads by Urban Poverty Alleviation (UPA) & Slum Improvement Cell in SMC (1985-86 to 2009-10)

Again, Table 4.9.2 shows that total expenditure for Urban Poverty Alleviation (UPA) & Slum Improvement, and its percentage to the total expenditure in SMC, have increased by approximately 6 and 3 times respectively, over the decade 2000-01 to 2009-10. In per capita terms, the table clearly shows that the per capita expenditure for UPA and Slum improvement was far lower than the per capita expenditure as a whole for the successive years. Between the periods of 1985-86 to 2000-2001, per capita total expenditure as a whole increased substantially, but there was no available data on the expenditure of UPA and slum improvement. Thus, the data available over the periods of 2000-2001 to 2009-2010, it is observed that there was no steady increase or decrease in per capita expenditure for UPA and slum improvement and as a whole. For example, per capita expenditure as a whole and for UPA and slum improvement decreased significantly during 2004-05 and 2009-10, as against significant increase in 2008-09.

Total expenditure for UPA and Slum Improvement in revenue account was much lower than that of the total expenditure in capital account during the period of 2000-01 to 2009-10. Similarly, percentage of expenditures for UPA and Slum Improvement in capital account was far higher than the percentage of expenditure in revenue account. It has also been observed that per capita expenditure for UPA and slum improvement in revenue account was highest in 2000-01 and thereafter it has declined gradually during the period of 2004-05 to 2008-09, but in 2009-10, per capita expenditure for the same increased marginally. Per capita expenditure for UPA

and Slum Improvement as a whole was much lower in 2004-05, possibly due to discontinuing the disbursement of funds for certain development projects.

Table 4.9.2: Per capita Expenditure under UPA & Slum Improvement in SMC

Heads of Receipt and Expenditure in UPA & Slum improvement	1985-1986	1989-1990	2000-2001	2004-2005	2008-2009	2009-2010
Total Expenditure for UPA & Slum Improvement (in Lakh)	NA	NA	202.86	262.87	1385.82	1284.41
Percentage of Expenditure for UPA & Slum improvement to total expenditure of SMC	NA	NA	6.98	9.59	19.69	22.68
Per Capita Total Expenditure for UPA & Slum Improvement (in Rs)	NA	NA	115.91	106.41	429.86	369.11
Total Expenditure for UPA & Slum Improvement (in Rs) in Revenue A/C (in Rs)	NA	NA	17.66	24.91	27.86	34.78
Percentage of Expenditure in Revenue A/C for UPA & Slum improvement to total Revenue Expenditure of SMC	NA	NA	1.63	1.6	1.11	1.37
Per Capita Expenditure for UPA & Slum Improvement (in Rs) in Revenue A/C (in Rs)	NA	NA	10.09	10.08	8.64	9.99
Total Expenditure for UPA & Slum Improvement (in Rs) in Capital A/C (in Lakh)	NA	NA	185.2	237.97	1357.97	1249.63
Percentage of Expenditure in Capital A/C for UPA & Slum improvement to total Capital Expenditure of SMC	NA	NA	10.14	20.06	29.97	39.93
Per Capita Expenditure for UPA & Slum Improvement (in Rs) in Capital A/C (in Rs)	NA	NA	105.82	96.33	421.22	359.12

Source: Computed from various budgets and Reports SMC, ****Note:** Projected slum population in 1989-90 has been calculated from 63 slums in 30 wards when Siliguri was under municipality and the estimated/projected slum population of 2004-05, 2008-09 and 2009-10 has been calculated on the basis of A.G.R for the period of 1989-90 and census slum figure of 1991. All per capita figures are calculated from available data.

Total expenditure for UPA and Slum Improvement in revenue account was much lower than that of the total expenditure in capital account during the period of 2000-01 to 2009-10. Similarly, percentage of expenditures for UPA and Slum Improvement in capital account was far higher than the percentage of expenditure in revenue account. It has also been observed that per capita expenditure for UPA and slum improvement in revenue account was highest in 2000-01 and thereafter it has declined gradually during the period of 2004-05 to 2008-09, but in 2009-10, per capita expenditure for the same increased marginally. Per capita expenditure for UPA and Slum Improvement as a whole was much lower in 2004-05, possibly due to discontinuing the disbursement of funds for certain development projects.

4.9.3: Financial Status of the Schemes under Integrated Housing and Slum Development Programme (IHSDP)

The financial status under UPA & Slum Improvement has already been discussed. The schemes under IHSDP are closely associated with the urban poor and the slum dwellers. Hence it is essential to discuss about the financial support of IHSDP and its progress in SMCA. From the Table 4.9.3 (Appendix B), it is clear that from 2007-2009, a sum of Rs. 9679.69 lakhs has been released in three different phases of IHSDP by the Central and State government, Urban Local Bodies (ULBs), including beneficiary contribution for the development projects namely dwelling houses among the urban poor, slum infrastructural development, and other development projects. The time limit for implementing the project under IHSDP has also been mentioned for different phases. Out of total project cost in three phases, the highest fund has been made by Central Government with Rs. 6933.67 lakhs (71.63 percent), followed by the State with Rs. 1705.1 lakhs (17.61 percent), beneficiary contribution of 810.08 lakhs (8.37 percent), and ULBs with Rs. 230.88 lakhs (2.38 percent). As a whole, 52.31 percent of total project cost under IHSDP (all phases) during the period 2007-09 has been released for the dwelling units of the urban poor, followed by 'other' development projects (41.41 percent), and for slum infrastructural development project only 6.22 percent of the total project cost has been released during that period (Table 4.9.3).

4.9: Concluding Remarks

With more than one third of the total population under Siliguri Municipal Corporation Area residing in slums, it warrants research on the development of such areas and the quality of life that the population in these slums is subject to. While several development programmes aim at elevating the socioeconomic status of the urban poor, it actually falls short of reaching the ever growing slum population. In spite of the poor infrastructural facilities and the poor living conditions of the slum population, they devise their own strategies to survive the various odds. Of the various strategies, social networking in seeking employment opportunities and income generation is deemed to be an important strategy. The following empirical chapters deal with the survey results undertaken in several slums under the SMCA to justify the need for research on the slum population as well as to seek answers to the research questions and validation of the hypotheses.

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CHAPTER: V

DEMOGRAPHIC CHARACTERISTICS AND SOCIO ECONOMIC STATUS OF THE URBAN POOR IN THE INNER CITY SQUATTER SETTLEMENTS

5.1: Introduction

It is apparent from the previous chapter that of all the Municipalities present in the six districts of North Bengal, Siliguri Municipal Corporation Area houses the largest number of slum and non-slum population. This warrants a micro-level study to obtain a vivid picture of the socio-economic status of the slum settlers and the livelihood strategies adopted by them for mere survival. The present chapter thus is a case study of inner city squatter settlements where mostly the older migrants reside. The objective of the sample study, as mentioned earlier, is to understand the socio-economic status of the squatters in Siliguri Municipal Corporation Area (SMCA) in terms of the accessibility to different types of assets that aid in widening the choice of livelihood. The demographic composition in terms of duration of residence, sex ratio, family size, caste, religion and migratory characteristics has been discussed in detail. The socio-economic characteristics of the sample squatters have also been discussed in terms of different livelihood assets. The economic livelihood in terms of income, expenditure and savings of the households has been interpreted graphically using descriptive statistics. A multivariate regression analysis based on Engel's law has been applied to estimate the Marginal Propensity to Consume (MPC) of the sample slum dwellers and expenditure elasticity on different food and non-food items. Finally, a composite index of 'quality of life' has been constructed on the basis of observations under four different sets of indicators that generally reflect the well being of the squatters.

5.2: Demographic and Social Characteristics of the Sample Households in the Inner City Squatter settlements of SMCA

5.2.1 Population, Duration Residence, Family Size, and Sex Ratio

It has been mentioned earlier (in sampling methodology) that two notified squatter settlements have been selected for study, namely the Mazdoor colony and the Lichubagan Colony. From Mazdoor colony, a fixed sample of 60 households with 344 populations and from Lichubagan colony, a sample of 60 households with 334 populations was selected for the study. In the aggregate, the inner city study sample

comprised of (the colonies taken together) 120 households with 678 squatters. The average length of residence or migration of the squatter households was around 39 years in the inner city, while, the average duration of residence of the households was slightly higher in Mazdoor colony at about 40 years compared to 37 years in Lichubagan colony i.e., the households in Mazdoor colony is marginally older than the households in the Lichubagan colony. Average family size of the squatter households was around 6 in both the colonies and in the inner city as a whole.

Table (5.2.1): Population, Duration Residence, Family Size, and Sex Ratio in the Inner City

Squatter Settlements	Total Hhs	Total population			Duration of Residence/ (Yrs.)	Avg. Family Size	Sex Ratio
		M	F	P			
Mazdoor Colony	60	177 (51.45)	167 (48.55)	344 (100.0)	40.25	6	944
Lichu Bagan Colony	60	177 (52.99)	157 (47.01)	334 (100.0)	37.4	6	887
Inner City	120	354 (52.21)	324 (47.79)	678(100.0)	38.83	6	915

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses indicate the percentage of total population

The sample data also found that the average family size was about 7 among Muslim households in both the colonies and in the inner city. But, in terms of caste, it was much higher in general caste, followed by SC and OBC. Following the distribution of population among males and females, there was preponderance of male population. The overall sex ratio i.e., females per 1000 male in urban areas particularly in large cities are strongly affected by migration. Large cities in general, have lower sex ratio (more males than females) due to higher in-migration of single males than females. In the sample study the sex ratio was 915 in the inner city, while in the Mazdoor colony, it was significantly higher (944) than that of the sex ratio in Lichubagan colony (887). The higher sex ratio was due to more family in migration of the former

5.2.2 Social Caste, Religion, Mother Language and Marital Status

Table (5.2.2) illustrates the social characteristics of the squatters in the inner city. So far as social caste is concerned, it is observed that more than fifty percent of the squatters was SC (54.72 percent), followed by general caste (42.04 percent) and OBC (3.24 percent). The proportion of SC squatters in Lichubagan was significantly higher than that of the proportion in Mazdoor colony. The reason behind the high concentration of SC squatters in Lichubagan colony was primarily due to

Table (5.2.2): Social Caste, Religion, Mother Language and Marital Status of the Squatters in the Inner City

Social Characters/Squatter Settlements		Mazdoor Colony			Lichubagan Colony			Inner City		
		M	F	P	M	F	P	M	F	P
Social Castes	General	99 (50.51)	97 (49.49)	196 (56.98)	48 (53.93)	41 (46.07)	89 (26.65)	147 (51.58)	138 (48.42)	285 (42.04)
	SC	70 (53.85)	60 (46.15)	130 (37.79)	127 (52.70)	114 (47.30)	241 (72.16)	197 (53.10)	174 (46.90)	371 (54.72)
	OBC	8 (44.44)	10 (55.56)	18 (5.23)	2 (50.00)	2 (50.00)	4 (1.20)	10 (45.45)	12 (54.45)	22 (3.24)
Religion	Hindu	104 (51.23)	99 (48.77)	203 (59.01)	149 (53.02)	132 (46.98)	281 (84.13)	253 (52.27)	231 (47.73)	484 (71.39)
	Muslim	73 (51.77)	68 (48.23)	141 (40.99)	28 (52.83)	25 (47.17)	53 (15.87)	101 (52.06)	93 (47.94)	194 (28.61)
Mother Language	Bengali	12 (38.71)	19 (61.29)	31 (9.01)	93 (55.69)	74 (44.31)	167 (50.00)	105 (53.03)	93 (46.97)	198 (29.20)
	Hindi	165 (52.72)	148 (47.28)	313 (90.99)	84 (50.30)	83 (49.70)	167 (50.00)	249 (51.88)	231 (48.13)	480 (70.80)
Marital Status	Married	79 (49.38)	81 (50.62)	160 (46.51)	75 (50.00)	75 (50.00)	150 (44.91)	154 (49.68)	156 (50.32)	310 (45.72)
	Abandoned lady*	---	0	0	---	2 (1.27)	---	---	2 (0.62)	---
	Widow*	---	13 (7.78)	---	---	15 (9.55)	---	---	28 (8.6)	---

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses indicate the percentage of total male, female and total population, * percentage of total females

Table (5.2.4): Distribution of Squatters by Age group and Dependency Ratio in the Inner City

Age Group/Dependency Ratio/Settlements	Mazdoor Colony			Lichubagan Colony			Inner City		
	M	F	P	M	F	P	M	F	P
Below 15	48 (27.12)	45 (26.95)	93 (27.03)	39 (22.03)	40 (25.48)	79 (23.65)	87 (24.58)	85 (26.23)	172 (25.37)
15-29	68 (38.42)	51 (30.54)	119 (34.59)	70 (39.55)	48 (30.57)	118 (35.33)	138 (38.98)	99 (30.56)	237 (34.96)
30-64	50 (28.25)	55 (32.93)	105 (30.52)	55 (31.07)	57 (36.31)	112 (33.53)	105 (29.66)	112 (34.57)	217 (32.01)
65 & above	11 (6.21)	16 (9.58)	27 (7.85)	13 (7.34)	12 (7.64)	25 (7.49)	24 (6.78)	28 (8.64)	52 (7.67)
Total	177 (100.0)	167 (100.0)	344 (100.0)	117 (100.0)	157 (100.0)	334 (100.0)	354 (100.0)	324 (100.0)	678 (100.0)
Child Dependency Ratio	40.68	42.45	41.52	31.2	38.1	34.5	50	57.55	53.57
Aged Dependency Ratio	9.32	15.09	12.05	10.4	11.43	10.92	41.6	49.52	45.41
Total Dependency Ratio	50	57.55	53.57	9.88	13.27	11.48	45.68	53.55	49.45

Source: Field Survey (Oct. 2010 – March 2011). Figures in parentheses indicate the percentage of total squatters, Note: Child Dependency Ratio = (% of age below 15) / (% of age between 15 & 64), Aged Dependency Ratio = (% of age 65 & above) / (% of age between 15 & 64), Total Dependency Ratio = (% of age below 15 + % of Age 65 and above) / (% of age between 15

influx of SC refugees from Bangladesh. In terms of Social caste, significant heterogeneity is found between the colonies ($\chi^2 = 82.16, P < .001$).

In terms of religion of the squatter in the inner city, 71.39 percent was Hindu and remaining percentage was Muslim. Similarly, between the colonies, the percentage of Hindu was significantly higher in Lichubagan colony as compared to the Mazdoor colony and as a result based on religions, significant heterogeneity has been found between the colonies ($\chi^2 = 52.35, P < .001$).

Linguistically, the squatters have two different vernaculars, Bengali and Hindi in the inner city, while, majority of the squatters (about 71 percent) speak in Hindi, since most of them had migrated from Hindi speaking states and in contrast 29.20 percent slum dwellers spoke in Bengali and most of them had migrated from nearby Bengali speaking districts. The percentage of squatters with Hindi mother tongue was much higher in Mazdoor colony as compared to Lichubagan colony i.e., in terms of vernacular, the squatters also displayed heterogeneity between the colonies ($\chi^2 = 137, P < .001$).

Marital status reflects the socio-economic conditions of the family or a community. In the inner city, 45.72 percent of the total squatters were married with equal proportion of male and female married. Between the colonies, the percentage of married squatters was higher in Mazdoor colony (46.51 percent) compared to Lichubagan colony (44.91 percent) resulting lower sex ratio. The percentage of abandoned women was only 0.62 percent, as against 8.6 percent widow in the inner city. But, no abandoned women were found in Mazdoor colony as against 1.27 percent in Lichubagan colony. The percentage of widow was marginally higher in Lichubagan colony compared to the Mazdoor colony.

5.2.4 Distribution of Squatters by Age groups and Dependency Ratio

In general, population and sex ratio differs across the age groups. The distribution of age not only indicates the magnitude of the people in economically active stage but also reflects the socio demographic characteristics of a society or community. From Table 5.1.3, it is found that a greater number of squatters was in the age group of 15-29 years (34.96 percent), followed by the age group of 30-64 (32.01 percent), below 15 (25.37 percent) and 65 and above (7.67 percent). The squatters of less than 15 years of age was about 26 percent which was consistent with the fact that the fertility

level is declining along with the concentration of in-migration in the age group of 15-29 years of age. The percentage of female squatters was also higher in almost all the age groups reflecting higher female in-migration/family migration into the city. The study revealed that the proportion squatter in the age group of 15-29 years was significantly higher due to the presence of other than first generation migrants in the inner city. Within colonies, same scenario prevails in the distribution of population by age group.

In each section of community, there are people of every age with different economic status and the people who are too old or young sometimes depend to a great extent on those employed person. It is beneficial for researcher to express this fact in a mathematical way, what is called the dependency ratio. In economics and other disciplines, the dependency ratio is simply an age-population ratio of those who are not in the labour force (the dependent part) and those who are in the labor force (the productive part). Dependency ratio is one of the most important factors that determine the human well being of the urban poor squatters. Various studies revealed that a high dependency ratio exerts economic pressure on the households and thereby reduces well being of the poor squatters and slums dwellers. In the present study, total dependence ratio of the slum dwellers was 49.45 percent in the inner city, while the female dependence ratio was significantly higher (53.55 percent) than that of the male counterpart (45.68 percent). Within colonies, the child and aged dependency ratio was far higher in Mazdoor colony than that of the child and aged dependency ratio in Lichubagan colony. The child and aged female dependency ratio were also higher than that of the males in both the colonies (Table-5.2.4).

5.3 Migration Characteristics of the Sample Households in the Inner City Squatter Settlements of SMCA

5.3.1 Migration by Generation & Reasons

The growth of towns/cities over the years was due to both migration and natural growth. The larger the town/city the greater is the proportion of migration and the greater is the diversification of the population in terms of ethnic-linguistic-religious composition. According to Goldscheider (1971) migration includes all types of residential change from one place of residence to another. Migration decision making is interpreted more as a household livelihood strategy than the individual choice (Stark, 1991; McDowell & de Haan, 1997). Mears (1997) expressed that "migration

is an essential for survival and it has a disequilibrating effect on population distribution and does not close to the income gap in Africa". Migration is a major component in the demographic profile of SMCA. About 49 percent of the total population in SMCA was migrants (Census, 2001). Migration by generation and reasons are depicted in Table (5.3.1), where it is found that first generation migrants was significantly lower in the inner city as a whole at 38.05 percent as against 61.95 percent in other than first generation migrants. The percentage of female migrants in both the first and other than first generation was almost equal around 50 percent. The proportion of female migrants in first generation was higher than the males primarily due to nuptial reasons and the presence of higher number of female headed households in both the colonies and the inner city squatter settlements as a whole.

In the colonies, Lichubagan accounts for higher percentage of first generation migrants (31.07 percent) as compared to the Mazdoor colony (22.03 percent). Based on male and female migrants by generations, significant heterogeneity is found between the colonies ($\chi^2=44.63$, $P < .001$).

So far as economic and non-economic reasons of migration are concerned, it is observed from Table (5.3.1) that 48.45 percent of the squatters have migrated due to economic reasons, as against 51.55 percent for non-economic reasons inner city as a whole. But in the colonies, migration among squatters due to economic reasons was significantly higher in Mazdoor colony (52.42 percent) than that of the migration in Lichubagan colony (44.78 percent). Based on male and female migration by economic reasons, significant difference is found between the colonies ($\chi^2=66.30$, $P < .001$).

In non-economic reasons, the migration due to marriage was 3 times higher than that of the migration due to other than marriage in the inner city. Migration due to marriage was overwhelmingly high in Mazdoor colony (88.14 percent) as compared to Lichubagan colony (64.86 percent). In terms of migration due to marriage and other than marriage, significant difference is found between the colonies ($\chi^2=9.53$, $P < .01$).

Table (5.3.1): Migration by Generation & Reasons behind Migration of the Squatters in the Inner City

Generation & Reasons for Migration in the inner city Squatter Settlements								
Squatter Settlements/ Sex		Migration by Generation			Purpose of Migration			
		Total Migrants	First Gen.	Other than First Gen.	Eco.	Non-Eco. (1+2)	1. Marriage*	2. Other than Marriage*
Mazdoor Colony	M	177	39 (22.03)	138 (77.97)	34 (87.18)	5 (12.82)	1 (20.00)	4 (80.00)
	F	167	85 (50.90)	82 (49.10)	31 (36.47)	54 (63.53)	51 (94.44)	3 (5.56)
	P	344	124 (36.05)	220 (63.95)	65 (52.42)	59 (47.58)	52 (88.14)	7 (11.86)
Lichu bagan Colony	M	177	55 (31.07)	122 (68.93)	42 (76.36)	13 (23.64)	1 (7.69)	12 (92.31)
	F	157	79 (50.32)	78 (49.68)	18 (22.78)	61 (77.22)	47 (77.05)	14 (22.95)
	P	334	134 (40.12)	200 (59.88)	60 (44.78)	74 (55.22)	48 (64.86)	26 (35.14)
Inner City	M	354	94 (26.55)	260 (73.45)	76 (80.85)	18 (19.15)	2 (11.11)	16 (88.89)
	F	324	164 (50.62)	160 (49.38)	49 (29.88)	115 (70.12)	98 (85.22)	17 (14.78)
	P	678	258 (38.05)	420 (61.95)	125 (48.45)	133 (51.55)	100 (75.19)	33 (24.81)

Source: Field Survey (Oct. 2010 – March 2011)

Figures in the parentheses indicate the percentage of total migrants, *1 & *2 indicates non-economic migrants

5.3.2 Streams of Migration

Table (5.3.2) illustrates the streams of migration and migratory movement by origin. It is known that the higher the urban settlements, the higher are the likelihood of its attracting migrants from different parts of the state and the country. The sample study on migration by streams recorded that majority of the squatters in the inner city squatter settlements were inter-state migrants from the poor BIMARAL states (58.91 percent), followed by inter-district migrants from the poor neighbouring districts of Coochbehar, Malda, Uttar and Dakshin Dinajpur and Malda (24.42 percent), international migrants particularly from Bangladesh and Pakistan (9.69 percent) and intra-district migrants from the neighbouring small urban centers and poor remote villages (6.98 percent). The same scenario prevails in the colonies i.e., a large number of squatters were inter-state migrants, followed by inter-district, and intra-district and international. On the other hand, inter-district and intra-district female migrants were higher than that of the male counterpart in Mazdoor colony, but in Lichubagan colony, the proportion of female inter-state and intra-district migrants were higher than that of the males. In terms of migration by streams, significant difference is seen between the colonies ($\chi^2 = 35.85, P < .001$).

As far as the migratory movement is concerned, let us examine where they come from and where they go. As mentioned earlier that in most cases, regional disparities in income, increasing unemployment and underemployment pushes the rural/urban and semi-urban poor to the cities in search of employment and better livelihoods. With this regard, the origin and destination of the squatters the study found that the rural-urban migration was substantially higher than that of the urban-urban migration in both the colonies and in the inner city as a whole. About 85 percent of the squatters that had migrated from rural areas in the inner city, while, rural-urban migration was marginally higher in Mazdoor colony at about 85 percent compared to 84 percent in Lichubagan colony. Based on rural-urban migration by gender, χ^2 test show that there was no significant difference between the colonies.

Table (5.3.2): Streams of Migration among the Squatters in the Inner City

Squatter Settlements /Sex/Streams of Migration		Migrant in first Gen.	Streams of Migration				Migratory Movement	
			Inter-State	Inter-Dist	Intra-Dist	Inter-national	Rural-Urban	Urban-Urban
Mazdoor Colony	M	39	30 (76.92)	5 (12.82)	0 (0.00)	4 (10.26)	36 (92.31)	3 (7.69)
	F	85	61 (71.76)	12 (14.12)	10 (11.76)	2 (2.35)	70 (82.35)	15 (17.65)
	P	124	91 (73.39)	17 (13.71)	10 (8.06)	6 (4.84)	106 (85.48)	18 (14.52)
Lichu bagan Colony	M	55	24 (43.64)	21 (38.18)	0 (0.00)	10 (18.18)	46 (83.64)	9 (16.36)
	F	79	37 (46.84)	25 (31.65)	8 (10.13)	9 (11.39)	67 (84.81)	12 (15.19)
	P	134	61 (45.52)	46 (34.33)	8 (5.97)	19 (14.18)	113 (84.33)	21 (15.67)
Inner City	M	94	54 (57.45)	26 (27.66)	0 (0.00)	14 (14.89)	82 (87.23)	12 (12.77)
	F	164	98 (59.76)	37 (22.56)	18 (10.98)	11 (6.71)	137 (83.54)	27 (16.46)
	P	258	152 (58.91)	63 (24.42)	18 (6.98)	25 (9.69)	219 (84.88)	39 (15.12)

Source: Field Survey (Oct. 2010 – March 2011)

Figures in the parentheses indicate the percentage of total migrants in first generation

5.3.3 Push and Pull Factors of Migration of the Squatter Households

Migration inflow to the cities from neighboring countries, states, districts and rural/urban/semi-urban areas within the districts was mainly due to better economic prospects though some non-economic factors are also important. Based on survey data shown in Table (5.3.3), it is observed that 78.22 percent of the households have migrated absolutely for economic reasons and remaining proportion for non-economic reasons in the inner city. Whereas, migration due to non-economic reason was around 3 times higher in Lichubagan colony as compared to the Mazdoor colony.

Table (5.3.3): Push and Pull Factors of Migration among the Households in the Inner City

Purpose and Factors of Migration		Mazdoor Colony	Lichubagan Colony	Inner City
Hhs & Purpose of Migration	Total Households in first Generation	48	53	101
	Economic	42 (87.50)	37 (69.81)	79 (78.22)
	Non-Economic	6 (12.50)	16 (30.19)	22 (21.78)
Eco.Push Factor	Unemployment/ non- Availability of Work	19 (45.24)	21 (56.76)	40 (50.63)
	Acute Poverty	7 (16.67)	3 (8.11)	10 (12.66)
	Income Differential	16 (38.10)	13 (35.14)	29 (36.71)
Eco.Pull Factor	Greater Employment Opportunity	26 (61.90)	24 (64.86)	50 (63.29)
	High Wage Rate	16 (38.10)	13 (35.14)	2(36.71)
Non-Eco. Push Factor	Partition of India 1947	2 (33.33)	2 (12.50)	4 (18.18)
	Bangladesh war of Independence 1971	2 (33.33)	9 (56.25)	11 (50.00)
	Ethnic Violence	0 (0.00)	1 (6.25)	1 (4.55)
	Family Conflict	2 (33.33)	0 (0.00)	2 (9.09)
	Ecological Displacement (floods, erosion etc)	0 (0.00)	4 (25.00)	4 (18.18)
Non-Eco. Pull Factor	Social Safety/Security	4 (66.67)	12 (75.00)	16 (72.73)
	Better Future	2 (33.33)	4 (25.00)	6 (27.27)

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses indicate the percentage of total households, * Note: Hhs with acute poverty are those who were unable to manage two meals/day regularly), Better public services were not only the sole factor of migration but it was along with other factors

The economic and non-economic factors of migration have been classified into two categories; economic push and pull factors and non-economic push and pull factors. Among the economic push factors, more than 50 percent of the households that had migrated due to unemployment or non-availability of work, followed by income differential (36.71 percent), and acute poverty (12.66 percent) in the inner city. The notable point is that the migration due to acute poverty was more than double in Mazdoor colony compared to the Lichubagan colony. Therefore, the study reveals that unemployment or non-availability of work was the crucial push factor of

migration, followed by income differential and acute poverty in both the colonies and in the inner city as a whole.

Economic push and pull factors are often complementary to each other and thus migration due to greater employment opportunity (63.29 percent) and high wage rate (36.71 percent) in the inner city were supported non-availability of work and low wage rate at origin.. Similar characteristics regarding pull factors of migration is evident in both the colonies.

In non-economic push factors, fifty percent of migration among the squatter households was due to partition of Bangladesh, followed by partition of India 1947 (18.18 percent), ecological displacement due to floods, soil erosion, droughts (18.18 percent) family conflict (9.09 percent) and ethnic violence (4.55 percent) in the inner city. Between the colonies, wide variation in terms of non-economic push factors for migration has been found. Non-economic push and pull factors are also complementary to each other and hence migration of the squatter households due to social security and safety was overwhelmingly high than that of the migration due to better future in both the colonies and in the inner city as a whole.

5.4 Human Capital Generation of the Sample Households in the Inner city Squatter Settlements of SMCA

All types of livelihood assets are important for subsistence of the urban poor especially for the squatters or slum dwellers in the city areas. Human capital is a broad concept which identifies human characteristics. Among all the livelihood assets, human capital is most important contributing factor for socio-economic development and well being of the squatters. According to various livelihood approaches, human capital that includes skills, knowledge, ability to work and good health enable the slum dwellers to pursue and achieve different livelihood strategies. In the context of development, no one can achieve economic well-being or poverty reduction with low human capital base. Various studies also supported the existence of positive relationship between human capital and income. Low human capital base in general is the root cause of socio-economic backwardness.

5.4.1 Literacy Rate (Excluding 0-6 Age)

The present sample study depicted in Table (5.4.1) shows that 65.79 percent of the squatters were literate with the gender gap of 21.62 percentage points in the inner city,

while the literacy rate and gender gap were far higher in Lichubagan colony as compared to Mazdoor colony. The higher gender gap implies the lower level of female literacy than that of the male counterpart and vice versa. Based on male and female literate squatters, no significant difference is seen by χ^2 test between the colonies at 5 percent level.

Table (5.4.1): Literacy Rate (Excluding 0-6 Age) of the Squatters in the Inner City

Squatter Settlements/ Literacy Rate	M	F	T	G. Gap (M-F) in %
Mazdoor colony	110 (73.33)	78 (53.42)	188 (63.51)	19.91
Lichubagan Colony	132 (78.57)	80 (55.56)	212 (67.95)	23.02
Inner City	242 (76.10)	158 (54.48)	400 (65.79)	21.62

Source: Field Survey (Oct. 2010 – March 2011), Figures in the Parentheses indicate the Percentage of total population (ex.0-6 age)

5.4.2 Level of Education (Excluding 0-6 Age)

Table (5.4.2) illustrates the level of education of the squatters in the inner city settlements of SMCA. From the study it is found that 23.19 percent of the squatters were illiterate in the inner city, while female illiteracy dominated the male counterpart. Between the colonies, illiteracy was significantly higher in Mazdoor colony at 28.38 percent as against 18.27 percent in Lichbagan colony. The gender gaps among the illiterate squatters in both the colonies were -17.95 and -17.16 percentage points respectively indicating that the female illiteracy was higher than that of the male counterpart. It has already been mentioned that the Mazdoor colony was a place of highly concentrated old migrants from Bihar and other parts of the country and because of their economic backwardness along with the lack of aspirations and motivation (particularly for women education) the level of illiteracy for both the male and female was much higher.

On the other hand, 11.02 percent of the total squatters are functionally literate (who can sign only) in the inner city with the gender gap of -3.91 percentage points i.e. percentage of functionally literate female was far higher than that of the male counterpart. In the colonies, the proportion of functionally literate was lower in

Table (5.4.2): Level of Education (Excluding 0-6 Age) of the Squatters in the Inner City

Level of Education	Mazdoor Colony				Lichubagan Colony				Inner City			
	M	F	P	G. Gap (M-F)	M	F	P	G. Gap (M-F)	M	F	P	G. Gap (M-F)
Illiterate	29 (19.46)	55 (37.41)	84 (28.38)	-17.95	17 (10.12)	40 (27.78)	57 (18.27)	-17.16	46 (14.51)	95 (32.65)	141 (23.19)	-18.14
Functionally Literate	10 (6.71)	14 (9.52)	24 (8.11)	-2.81	19 (11.31)	24 (16.67)	43 (13.78)	-5.36	29 (9.15)	38 (13.06)	67 (11.02)	-3.91
Primary	60 (40.27)	42 (28.57)	102 (34.46)	11.70	84 (50.00)	48 (33.33)	132 (42.31)	16.67	144 (45.43)	90 (30.93)	234 (38.49)	14.50
Secondary	44 (29.53)	34 (23.13)	78 (26.35)	6.40	41 (24.40)	30 (20.83)	71 (22.76)	3.57	85 (26.81)	64 (21.99)	149 (24.51)	4.82
H.S	5 (3.36)	0	5 (1.69)	3.36	0 (0.00)	0 (0.00)	0 (0.00)	0.00	5 (1.58)	0 (0.00)	5 (0.82)	1.58
Grad. & Above	1 (0.67)	2 (1.36)	3 (1.01)	-0.69	7 (4.17)	2 (1.39)	9 (2.88)	2.78	8 (2.52)	4 (1.37)	12 (1.97)	1.15

Source: Field Survey (Oct. 2010 – March 2011)

Figures in the parentheses indicate the percentage of total population (excluding 0-6 age).

Note: Functionally literate are those who can sign only, Primary = Up to Class IV, Secondary = Up to Class X, Higher Secondary = Up to Class XII, Graduate & Above = Class 10+2 and above.

Mazdoor colony (8.11 percent) compared to Lichubagan colony (13.78 percent). From gender differential, it is also been found that the proportion of functionally literate female squatters was much higher than that of the males in both the colonies.

So far as the level of education is concerned, the squatters who attained the primary level of education was the highest (38.49 percent), followed by secondary level (24.51 percent), graduate and above (1.97 percent) and higher secondary level (0.82 percent) in the inner city. The proportions of female at all levels of education were significantly lower than the male counterpart in the inner city. Similar scenario exists in both the colonies i.e., majority of the squatters have attained the primary level of education, followed by secondary level, higher secondary and graduate level & above. The females are dominated by male counterpart at all levels of education in both the colonies. The squatters in the inner city of SMCA show a clear preference for primary level of education. Based on total number of squatters with various levels of education, significant difference is found between the colonies ($\chi^2=22.32, P < .001$).

5.5 Physical Capital of the Sample Households in the inner city Squatter Settlements of SMCA

In livelihood approach, physical capital includes land, housing, infrastructural facilities and own tools and equipment of the human being. Lack of tenure security, insufficient living area, and lack of access to social infrastructure are the acute problems of the urban poor particularly for the squatters or slum dwellers. So far as physical capital of the sample squatter household is concerned, it includes the character of land that owned by the households, housing characteristics including shelter deprivation, physical assets in terms of money value, infrastructural facilities like proper drainage, drinking water, proper sanitation, access to electricity and roads that aid in adopting suitable livelihoods to cope with the urban life.

5.5.1 Land Characteristics

With the rapid pace of urbanization, Siliguri gradually became an important trading centre in the North Eastern region and hence people are migrating from the rural poor areas of the neighboring states and districts in search of jobs.

Table (5.5.1): Land Characteristics of the Squatter Households in the Inner City

Squatter Settlements/ Land Characteristics		Mazdoor Colony	Lichubagan Colony	Inner City
Total Number of Households		60	60	120
Reason for choosing Squatter Settlements	High price of Urban Land	8 (13.33)	11 (18.33)	19 (15.83)
	Poor Economic Condition	33 (55.00)	36 (60.00)	69 (57.50)
	Both High Price of Land & Poor Eco. Condition	19 (31.67)	13 (21.67)	32 (26.67)
Status of Land	Railway	60 (100.00)	60 (100.00)	120 (100.00)
	Vested	0 (0.00)	0 (0.00)	0 (0.00)
Acquisition of Land	Illegal	60 (100.00)	60 (100.00)	120 (100.00)
Security of Land	With Holding Number	55 (91.67)	59 (98.33)	114 (95.00)
	No Security	5 (8.33)	1 (1.67)	6 (5.00)

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses are percentage of total households

The local government is not sufficiently well-off to accommodate these rural migrants and in result they get settled in the squatter settlements either in the inner city or out-skirt creating their own shelters with the deplorable living conditions.

Land characteristics of the respondents in the inner city squatter settlements are presented in Table (5.5.1), where, it is found that majority of the households were compelled to choose squatter settlements or slums as a residential place absolutely for poor economic condition, followed by both the high price of urban land and poor economic condition in both the colonies and in the inner city as a whole.

As mentioned in the literature that squatter settlements are those settlements which are occupied illegally or without any permission from the concerned authority. The study regarding status of land found that all the squatter households in both the colonies and in the inner city as a whole had built their houses illegally on railway land.

As far as the security of land of the squatters in SMCA is concerned, 95 percent of the households reported to have the holding numbers as security of land, given by the municipal corporation in the inner city, While in the colonies, the percentage of households with holding number was higher in Lichubagan colony (98.33 percent), as against 91.67 percent in Mazdoor colony. No households were there who possess any security of land like patta or deed in the inner city. The reason may be due to the problem of transferring land from railway department to the state government.

5.5.2 Housing Characteristics

The type of house used by the squatter households in the cities like SMCA is a primary indicator of well being. The house is one of the most important assets for the urban poor and it can be used to access other funds and opportunities like loans and credit (SEWA, 2002; Chen, 2000). Shelter for a human being not only protects his life but also help to grow socio-economically. Right to shelter includes sufficient living space, safe and good structure, clean surroundings etc. Therefore, right to shelter means right to a roof over the head of the people necessary to enable to live and develop as a human being (Iyer, 2006).

Table (5.5.2): Housing Characteristics of the of the Squatter Households in the Inner City

Characteristics of Housing/squatter settlements		Mazdoor Colony	Lichubagan Colony	Inner City
Total Number of Households		60	60	120
Ownership of House	Own	55 (91.67)	59 (98.33)	114 (95.00)
	Rented	5 (8.33)	1 (1.67)	6 (5.00)
Types of House	Kutchha	29 (48.33)	36 (60.00)	65 (54.17)
	Semi Pucca	27 (45.00)	23 (38.33)	50 (41.67)
	Pucca	4 (6.67)	1 (1.67)	5 (4.17)
Uses of House	Residential	58 (96.67)	57 (95.00)	115 (95.83)
	Mixed (R+C)*	2 (3.33)	3 (5.00)	5 (4.17)
Types of Roof	Concrete	4 (6.67)	1 (1.67)	5 (4.17)
	Asbestos	5 (8.33)	1 (1.67)	6 (5.00)
	Tin	40 (66.67)	53 (88.33)	93 (77.50)
	Plastic	11 (18.33)	5 (8.33)	16 (13.33)
Separate Kitchen	Yes	37 (61.67)	28 (46.67)	65 (54.17)
	No	23 (38.33)	32 (53.33)	55 (45.83)

Source: Field Survey (Oct. 2010 – March 2011). Figures in the parentheses indicate the percentage of total households, Note: "Kutchha" implies a structure of house having both roof and walls made of non pucca materials, "Semi Pucca" implies a structure of house either the walls or the roof, but not the both made of pucca materials and "Pucca" implies a structure of house having walls and roofs made off pucca materials, *Note: Mixed indicate both the Residential (R) and Commercial (C) use.

Table (5.5.2) illustrates the housing characteristics of the sample households in the inner city squatter settlements. About 95 percent of the squatter households in the inner city have their own house and a very negligible proportion of the households lived in rented quarters (5 percent). The world is experiencing a global crisis of housing crisis. About 1.6 billion people live in substandard housing (UN-HABITAT, 2005). The housing conditions in the squatter settlements were far from satisfactory in SMCA. The deplorable scenario exists in the sample areas where the majority of the squatter household in the inner city live in *kutchha* houses (54.17 percent), followed by semi *pucca* (41.67 percent) and *pucca* houses (4.17 percent). The households with

kutcha houses were significantly higher in Lichubagan colony (60 percent) compared to the Mazdoor colony (48.33 percent). In contrast, the households with semi *pucca* houses were far higher in Mazdoor colony (45 percent) when compared to Lichbagan colony (38.33 percent).

Usually, houses are used absolutely either for residential or mixed purposes (residential and commercial). From the study, it is seen that in the inner city, 95.83 percent of the households use their houses absolutely for residential purposes and a negligible proportion of the households (4.17 percent) use their houses for multiple purposes like petty trading, grocery shop etc.. The proportion of households with multiple uses of house was marginally higher in Lichubagan colony (5 percent) compared to the Mazdoor colony (3.33 percent).

The quality and durability of a house heavily depends on the materials that have been used for construction. In this context, it is found that majority of the houses of the squatter households were constructed with tin roof (77.50 percent), followed by plastic roof (13.33 percent), asbestos (5.00 percent) and concrete (4.17 percent) in the inner city. Between the colonies, the houses of households constructed with tin roof were far higher in Lichubagan colony (88.33 percent). In contrary, the houses of the households constructed with other than tin roofs were significantly higher in Mazdoor colony (33.83 percent).

Once again, the informal settlers in the cities suffer most from the poor environmental condition. Residential environment is one them reflected through the types of kitchen i.e. whether it is separated or not from the dwelling rooms. The sample study bears the evidence that 45.83 percent of households do not have any separate kitchen in the inner city squatter settlements, while the households without separate kitchen were significantly higher in Lichubagan colony (53.33 percent), compared to Mazdoor colony (38.33 percent).

5.5.3 Residential Crowding by Shelter Deprivation

People living in the cities of the developing world still experiencing high levels of overcrowding particularly in the squatter settlements. Residential crowding in cities like SMCA can also be examined through UN-HABITAT measure of shelter deprivation (more than three persons per room). The degree of shelter deprivation of the households has also been measured by the number of persons per room. For

example, 'one' shelter deprivation of the household indicates that four persons are sharing the same room; 'two' shelter deprivation of the household implies that five persons are sharing the common room and so on. As far as residential crowding is concerned, the sample study of the squatter settlements in SMCA presented in Table (5.5.3) found that the average number of room per households was 2.42 in the inner city as a whole, while it was significantly higher at 2.90 in Mazdoor colony compared to 1.93 in the peripheral city.

Table (5.5.3): Shelter Deprivation of the Households in the Inner City

Shelter Deprivation by Living Area/Squatter Settlements		Mazdoor Colony	Lichubagan Colony	Inner City
Total Number of Households		60	60	120
Average Number of Room per Household		2.9	1.93	2.42
Average Number of Person per Room		1.98	2.88	2.34
Degrees of Shelter Deprivation to the total shelter Deprivation of the Households	Households without Shelter Deprivation (Three and less than Persons /Room)	49 (81.67)	37 (61.67)	86 (71.67)
	One (Four Person/ Room)	2 (3.33)	11 (18.33)	13 (10.83)
	Two (Five Person/Room)	4 (6.67)	6 (10.00)	10 (8.33)
	Three (Six Person/Room)	0 (0.00)	4 (6.67)	4 (3.33)
	Four (Seven Person/Room)	2 (3.33)	0 (0.00)	2 (1.67)
	More than Four (More than Seven Person/Room)	3 (5.00)	2 (3.33)	5 (4.17)
	Two and more than two (Households with five and more than five Persons/ Room)	9 (15.00)	12 (20.00)	21 (17.50)
	Households with total Shelter Deprivation (More than three Person/Room)	11 (18.33)	23 (38.33)	34 (28.33)

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses indicate the percentage of total households Note: shelter deprivation by sufficient living area (three persons per room) calculated on the basis of UN-HABITAT (2006/07) measure.

However, the average number of persons per room provides the real scenario of crowding within households. With this respect, average number of person per room was 2.34 in the inner city. Crowding within households is much evident with the average number of person per room of 2.88 in lichubagan colony, as against 1.98 in Mazdoor colony. On the other hand, the study also found that 28.33 percent of the households had shelter deprivation (more than three persons sharing the same room) in the inner city, while between the colonies, the shelter deprivation was more than double in Lichubagan colony (38.33 percent) than that of the Mazdoor colony (18.33 percent), i.e., residential crowding was significantly high in Lichubagan as compared to Mazdoor colony. Based on total shelter deprivation of the households (more than three persons per room), significant difference is observed between the colonies ($F = 4.23$, $P < .05$). With regard to degree of shelter deprivation, it is evident that 21 percent of the households had 'two' and 'more than two' shelter deprivation with five and more than five members per room, in

the inner city. In the colonies, the household with 'two' and 'more than two' shelter deprivation (five and more than five persons/ room) was higher in Llichubagan colony (20.00 percent) than that of the Mazdoor colony (15.00 percent) implying that crowding within households in the Lichubagan colony is significantly high as compared to the Mazdoor colony.

5.5.4 Infrastructural Facilities: Approach Road, Waste Disposal, Drainage and Electricity

Next to housing characteristics, infrastructural facilities like approach road, waste disposal, drainage and electricity facility are important not for healthy living but also for ensuring non-polluted environment. From Table-5.5.4, it is found that more than 33 percent of the households avail kutcha approach road as against 66.67 percent pucca approach road within squatter settlements in the inner city. The households that avail kutcha approach road were higher in Mazdoor colony (38.33 percent) compared to the Lichubagan colony (28.33 percent).

Table (5.5.4): Approach Road, Solid Waste Disposal, Drainage and Electricity Facility in the Inner City

Infrastructure Facilities / Squatter Settlements		Mazdoor Colony	Lichubagan Colony	Inner City
Total Number of Households		60	60	120
Approach Road within Slums	Pucca	37 (61.67)	43 (71.67)	80 (66.67)
	Kutcha	23 (38.33)	17 (28.33)	40 (33.33)
Solid Waste Disposal	Public Bin	60 (100.0)	60 (100.0)	120 (100.0)
	Outside	0 (0.00)	0 (0.00)	0 (0.00)
Drainage facility	Surface Pucca	55 (91.67)	54 (90.00)	109 (90.83)
	Surface kutcha	0 (0.00)	0 (0.00)	0 (0.00)
	No Drainage Facility	5 (8.33)	6 (10.00)	11 (9.17)
Electricity facility	Own Connection	46 (76.67)	41 (68.33)	87 (72.50)
	Sub-Miter	1 (1.67)	1 (1.67)	2 (1.67)
	Rented	2 (3.33)	10 (16.67)	12 (10.00)
	Hhs with Electricity Connection	49 (81.67)	52 (86.67)	101(84.17)
	Hhs without Electricity Connection	11 (18.33)	8 (13.33)	19 (15.83)

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses indicate the percentage of total households.

Several studies have shown that in general, the households in the slums do not have any arrangement made either by public or private services for garbage collection and disposal. The households who do not have such services, resorted to open dumping of garbage in streets/ditches etc. The picture is quite different in the colonies and in the inner city as a whole, where the household with access to public dustbin for garbage disposal was 100 percent. With regard to drainage facility, it is observed that

surface pucca drainage facility was available for majority of the household percent in the inner city at 90.83 due to locational advantage. On the other hand, the households that avail surface pucca drainage facility were marginally higher in Mazdoor colony than that of the households in Lichubagan colony.

Electricity connection in the squatter settlements may be for household use, street light or both. The study examined that 84.17 percent of the squatter households had electricity connection and the rest was lacked this connection. Within colonies, the proportion of households with electricity connection was slightly higher in Lichubagan colony than that of the proportion in Mazdoor colony because in Mazdoor colony some of the households do not have proper housing structure for electricity connection by legal rules. Out of the total households having electricity connection, 72.50 percent had own connection, 1.67 percent had connection with sub-miter and 10 percent had rented connection in the inner city. In terms types of connection similar picture found in the colonies.

5.5.5 Sanitation, Drinking Water and Fuel Sources for Cooking

According to world development indicators 79 percent of the world's urban residents have access to proper sanitation. Health and sanitation is the initial criteria for good standard of living. Good hygiene is determined by some of the important physical amenities for example proper sanitation, safe drinking water, fuel sources for cooking etc., particularly for the squatters in the city. Table (5.5.5) shows that personal sanitation facility was available for 61.67 percent of the household in the inner city the remaining 38.33 percent use community sanitation.

Table (5.5.5): Sanitation, Sources of Drinking Water and Fuel Sources of the Squatter Households in the Inner City

Sanitary facility/ Drinking Water/ Fuel Sources/ Squatter Settlements		Mazdoor Colony	Lichubagan Colony	Inner City
Total Number of Households		60	60	120
Sanitation Facility	Personal Sanitation	45 (75.00)	29 (48.33)	74 (61.67)
	Corporation's Community Sanitation (near premises)	15 (25.00)	31 (51.67)	45 (38.33)
Drinking Water	Corporation's Stand Post (near the premises)	59 (98.33)	59 (98.33)	118 (98.33)
	Personal Tube well	1 (1.67)	1 (1.67)	2 (1.67)
Fuel Sources as Cooking Medium	Gas	15 (25.00)	31 (51.67)	46 (38.33)
	Wood	38 (63.33)	26 (43.33)	64 (53.33)
	Charcoal	0 (0.00)	0 (0.00)	0 (0.00)
	Kerosene	3 (5.00)	3 (5.00)	6 (5.00)
	Gas & Wood	4 (6.67)	0 (0.00)	4 (3.33)

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses indicate the percentage of total households

The percentage of the households having personal sanitation was significantly higher in Mazdoor colony compared to Lichubagan colony because lichubagan colony is more congested than Mazdoor colony in terms of living space of the households. In contrast, the households that use community sanitation was more than double in Lichubagan colony at 51.67 percent compared to 25 percent in Mazdoor colony. One of the significant findings is that no households were there in the inner city squatter settlements without any sanitation facility.

It has been mentioned earlier that 5 percent of the urban population does not have any access to safe drinking water. Among the sub-regions in the developing world, the highest percentage of urban population lacking in improved water facilities has been recorded by sub-Saharan Africa (17 percent), followed by South Asia and Latin America and the Caribbean (4 percent each) in 2010 (MDGs 2012). As per drinking water by its major sources of the sample squatters is concerned, more than 98 percent of the squatter households had drinking water facility with stand post near the premises supplied by municipal corporation and remaining 1.67 percent of the household had independent source of drinking water with personal tube well in the inner city.

The availability of a separate kitchen for the poor household living in congested slums is a matter of concern when the households are using solid fuel as a major source of cooking medium because smoke emission from solid fuels poses a serious health hazard. From sample study, it is seen that more than 50 percent of the household in the inner city use wood as a main fuel source for cooking, followed by LPG (38.33 percent), kerosene (5 percent) and both the LPG and wood (3.33 percent). Wood was the main source of cooking medium for majority of the household in Mazdoor colony (63.33 percent) as against 43.33 percent in Lichubagan colony. In contrast, 51.67 percent of the household use LPG as main a major source of cooking medium in Lichubagan colony as compared 25 percent in Mazdoor colony. When the sources of fuel for cocking is grouped into LPG and other traditional sources, it is to be found that 61.33 percent of the households in the inner city as a whole are unable to use LPG as a major fuel source for cocking medium due to economic burden in the inner city, while the percentage of households that use LPG as main fuel source for cooking was marginally higher in Lichubagan colony with respect to Mazdoor colony.

5.5.6 Utilisation of Public Health Services

The people of squatter settlements utilize both public and private medical facilities. Utilization of public health services of the sample squatter settlements has been shown in Table (5.5.6), where, it is found a substantial proportion of the households use government hospital for their treatment (56.67 percent), followed by government and private institutions (25.83 percent), community health centre (10.83 percent) and private medical institutions (6.67 percent). Similar scenario prevails in the colonies. By and large medical facility provided by the public institutions remains the major supporting services for the squatters in the inner city squatter settlements due to close proximity of the sub-divisional hospital and community health centre.

Table (5.5.6): Utilisation of Public Health Services of the Squatter Households in the Inner City

Public services/squatter settlements		Mazdoor Colony	Lichubagan Colony	Inner City
Total Number of Households		60	60	120
Institutions where family member go for Treatment	Govt. Hospital	40 (66.67)	28 (46.67)	68 (56.67)
	Private Medical Institution	2 (3.33)	6 (10.00)	8 (6.67)
	Community Health Centre	4 (6.67)	9 (15.00)	13 (10.83)
	Both Govt. & Private Medical Institution	14 (23.33)	17 (28.33)	31 (25.83)
Children in the age of 0-6 Years*		48 (13.95)	22 (6.59)	70 (10.32)
Delivery of Child (0-6 years of Age)	Institutional	22 (45.83)	10 (45.45)	32 (45.71)
	Non-Institutional	26 (54.17)	12 (54.55)	38 (54.29)
Frequency to visit health centers for treatment (any member of the family)	Once in a Week	6 (10.00)	5 (8.33)	11 (9.17)
	Once in a Month	38 (63.33)	21 (35.00)	59 (49.17)
	Once in six Month	16 (26.67)	34 (56.67)	50 (41.67)
	Once in a year	0 (0.00)	0 (0.00)	0 (0.00)

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses indicate the percentage of total households *Note: figure in parentheses of children in the age of 0-6 yrs represents the percentage of total population.

Table (5.5.6) also shows that the children with 0-6 years of age were 10.32 percent to the total population in the inner city. The percentage of children of 0-6 years was more than double in Mazdoor colony than that of the percentage in Lichubagan colony (6.59 percent). It has mentioned earlier that the average family size in both the squatter colonies and in the inner city was significantly high at about 6 indicates that the family planning measures however were not effective. Instead of having close proximity to the public health institutions, home deliveries are still taking place in the squatter settlements of SMCA. From the study it is observed that around 45 percent of the delivery was institutional, whereas more than fifty percent of the non-institutional delivery (around 54 percent) took place through untrained dais in all the squatter

colonies and in the inner city as a whole. The reasons behind delivery of baby at home were primarily due to customs and traditions of the family systems, monetary problems etc. On the other hand, about 46 percent of the delivery took place at public institutions especially in government hospital.

Living conditions in many of the urban slums are worse than those in the poorest rural areas of the country (World Bank, 1993). Living in slums with multidimensional poverty is a major cause of ill health. As defined by the World Health Organisation (2005), health is a “state of complete physical, mental and social well being”. Urban poverty, ill health, and living in slums are positively interlinked. In this study, the health condition of the slum dwellers has been examined through the frequency of visit to health centers for treatment immunization etc., Out of 120 households, 49.17 percent visit health centers once in a month, followed by once in six month (41.67 percent), and once in a weak (9.17 percent) in the inner city. Having wide variations in the frequency to visit health centers within colonies, it is also evident that the households who visit health centers once in a weak and month taken together was significantly lower in Lichubagan colony as compared to the Mazdoor colony indicating that the health condition of the slum dwellers in Lichubagan colony is better than that of the squatters in Mazdoor colony.

5.5.7 Value of the Physical Assets (Survey Period)

The physical assets mainly tools and equipments that have direct effect on well being of the poor, particularly among the squatters. Physical assets are economic resources which help the poor to meet basic needs, generate income and reduce exposure to risks.

Table (5.5.7) illustrates the value of physical assets in the inner city squatter settlements. The value of the physical assets of the squatter households in the inner city as a whole ranges from low as Rs.1400 to high as Rs.29350 indicates that some of the household possess very low level asset value and some possess high level of asset value. About 34 percent of the households that possess the higher value of the physical assets fall under the median class of Rs. 3000- Rs.4500 thousand, followed by above the median class (40.84 percent) and below the median class (25 percent).

Table (5.5.7): Value of the Physical Assets of the Squatter Households in the Inner City

Size class of the Value of Physical Assets (in Rs.) ↓ / Squatter Settlements →	Mazdoor Colony	Lichubagan Colony	Inner City
Below 1500	6 (10.00)	5 (8.33)	11 (9.17)
1500-2900	19 (31.67)	19 (31.67)	38 (31.67)
3000-4499	23 (38.33)	18 (30.00)	41 (34.17)
4500-5999	7 (11.67)	12 (20.00)	19 (15.83)
6000 & Above	5 (8.33)	6 (10.00)	11 (9.17)
Total Households →	60 (100.00)	60 (100.00)	120 (100.00)
Descriptive Statistic of Physical Assets (in Rs.)			
Minimum	1400	1500	1400
Maximum	29350	28600	29350
Mean	4963.33	5322.92	5143.13
SD	4148.85	4094.92	4733.74

Figures in the parentheses indicate the percentage of the total households, Note: Value of the Physical Assets excluding land and construction materials of the house has been calculated on the basis of NSSO measure. According to NSSO measure (48th round 1991-92, report no. 432, part -1), if an asset is disposed of by the way of sale, the sale price (during the survey period) will be considered as the value of the assets.

The households that possess the higher value of physical assets were slightly higher in Mazdoor colony as compared to the Lichubagan colony. The mean value of the physical assets among the households in the peripheral city as a whole was about Rs. 5143 with Standard Deviation (SD) of 4733.74. The differential in the value of physical assets of the households in terms of SD was significantly high in the inner city mainly due to high income differential. In the colonies, the average value of the physical assets of the household was far higher in Lichubagan Colony than that of the mean value of the Mazdoor colony, but the differential in the value of the physical assets of the households were much higher in Mazdoor colony as compared to the Lichubagan Colony primarily due to variations in income.

5.6 Economic Livelihood of the Sample Households in the Inner City Squatter Settlements of SMCA

5.6.1 Earning Status of the Households

Economic status of the households in general depends on the quality of jobs as well as the number of person engaged in working activities. Survey data depicted in Table (5.6.1) found that the squatter households that had single earning members was highest in the inner city (65.83 percent), followed by the households with more than one earning members (32.50 percent) and a very negligible proportion of households (1.67 percent) do not have any earning members due to old age or more number of

minors. The proportion of households with joint earning members was 2.5 times higher in Mazdoor colony compared to Lichubagan colony and thus the difference in single and joint earning members of the households was highly significant between the colonies ($\chi^2 = 11.04$, $P < .001$ respectively).

Table (5.6.1): Earning Status of the Households in the Inner City

Squatter Settlements /Earning Status	Total No. of Households	Single Earner	Joint Earner	No Work
Mazdoor Colony	60	31 (51.67)	28 (46.67)	1 (1.67)
Lichubagan Colony	60	48 (80.00)	11 (18.33)	1 (1.67)
Inner City	120	79 (65.83)	39 (32.50)	2 (1.67)

Source: Field Survey (Oct. 2010 – March 2011). Figures in the parentheses indicate percentage of total households

5.6.2 Employment and Work Participation Rate (WPR)

In the urban area, the growth rate of labour force absorption in the organized sector is generally lower than that of the population growth rate, which leads to inevitable growth of informal sector. In an urban set up, most of the squatters remain engaged in informal sector activities due to lack of skill and basic education. As a result, the work participation rate (WPR) among the slum dwellers is normally higher than the WPR in non-slum population and it also varies across caste and religions.

Table (5.6.2): Employment and Work Participation Rate (WPR) of the Squatters in the Inner City

Squatter Settlements/WPR	M	F	T	G. Gap
Mazdoor Colony	85 (48.02)	18 (10.78)	103 (29.94)	37.24
Lichu Bagan Colony	101 (57.06)	31(19.75)	132 (39.52)	37.32
Inner City	186 (52.54)	49 (15.12)	235 (34.66)	37.42

Source: Field Survey (Oct. 2010 – March 2011), Figures in parentheses indicate percentage of workers to total population (WPR)

The sample study found that the WPR among the squatters in the inner city as a whole was 34.66 percent with 52.54 percent male and 15.12 percent female. Between the colonies, the WPR in Lichubagan colony was overwhelmingly high at 39.52 percent compared to 29.94 percent in Mazdoor colony. In terms of gender, the female WPR was near around 2 times higher in Lichubagan colony (19.75 percent) than that of the female WPR in Mazdoor colony (10.78 percent) i.e. based on female employment, significant difference is found between the colonies ($\chi^2 = 3.45$, $P < .10$).

5.6.3 Employment by Sectors

Several studies have documented that lack of gainful employment and poverty the rural poor are migrating to the cities in search of better livelihoods. Due to their poor

economic condition and resource base, they are compelled to settle in the squatter settlements/slums in the cities like SMCA. The migrants in these settlements do not possess high skills or education in order to find employment in the formal sector and hence the informal sector remains the only means of economic livelihood for them.

Table (5.6.3): Employment in Formal and Informal Sectors of the Squatters in the Inner City

Sector & Activity Status	Mazdoor Colony			Lichubagan Colony			Inner City		
	M	F	P	M	F	P	M	F	P
Formal Sector Employment	16 (18.82)	1 (5.56)	17 (16.50)	9 (8.91)	5 (16.13)	14 (10.61)	25 (13.44)	6 (12.24)	31 (13.19)
Informal Sector Employment	69 (81.18)	17 (94.44)	86 (83.50)	92 (91.09)	26 (83.87)	118 (89.39)	161 (86.56)	43 (87.76)	204 (86.81)
Total Employment (All Sectors)	85 (100.0)	18 (100.0)	103 (100.0)	101 (100.0)	31 (100.0)	132 (100.0)	186 (100.0)	49 (100.0)	235 (100.0)
Total Informally Employed	83 (97.65)	18 (100.00)	101 (98.06)	98 (97.03)	29 (93.55)	127 (96.21)	181 (97.31)	47 (95.92)	228 (97.02)

Source: Field Survey (Oct. 2010 – March 2011), Figure in brackets Formal and Informal sector indicates percentage of total employment.

From the sample study depicted in Table (5.6.3), it is observed that out of total workers in the inner city squatter settlements as a whole, 86.81 percent of the workers were engaged in informal sector and the remaining 13.81 percent was in formal sector employment. The proportion of male workers in informal sector was about 6 times higher (86.56 percent) than that of the proportion in formal sector (13.44 percent). In contrast, proportion of female workers were engaged in informal sector was about 7 times higher (87.17 percent) than the proportion in formal sector (12.24 percent). The proportion of female workers to the total employment in the informal sector was higher than that of the male counterpart and it was just the opposite in formal sector employment.

Between the colonies, the percentage of informal sector employment was far higher in the Lichubagan colony, (89.39 percent) as compared to the Mazdoor colony (81.18 percent).

In terms gender, it is evident that the proportion of female employment in formal sector in Lichubagan colony was about 3 times higher than that of the Mazdoor colony because most of the female workers in that colony was permanent employee in corporation. In contrary, the proportion of female workers engaged in

informal sector employment was far higher in Mazdoor colony (94.44 percent) than that of the proportion in Lichubagan colony (83.87 percent).

It is also evident that 97.02 percent of the total workers were informally employed in the inner city, while, the proportion was marginally higher in Mazdoor colony at 98.06 percent compared to 96.21 percent in Lichubagan colony. In terms gender, the male workers who are informally employed dominated the females in the inner city. The only exception was the Lichubagan colony, where 100 percent of the female workers were informally employed.

5.6.4 Distribution of Employment by Activity Status

As far as the distribution of employment by activity status is concerned, the sample study show that there were 37 types of working activities in both the formal and informal sector taken together, for example labour in whole sale trade, sweeper, transport worker, rickshaw and van puller, hawker, construction worker, motor mechanic in garage, tailoring, cycle repairing, street vending, hotel worker, kabadiwala, waste picking, maid-servant, midwives etc. Working activities of the squatters are classified as permanent and casual employment in the formal sector and self, salaried and casual employment in the informal sector. As a whole, total working activities are classified as self, salaried (permanent in formal sector and salaried in informal sector taken together) and casual (both formal and informal taken together) employment categories.

Table-5.6.4 exhibits the distribution of formal sector employment by activity status and found that 77.42 percent of the squatters were engaged in casual employment (such as labour in FCI, Anganwari worker and Sweeper in Corporation) as against 22.58 percent in permanent employment (such as sweeper in corporation and railway department) in the inner city. The proportion of workers engaged in casual employment in the formal sector was significantly high in the Mazdoor colony than that of the proportion in Lichubagan colony because many of the workers are working in the, but the proportion of workers engaged in permanent employment was higher in Lichubagan colony.

In the informal sector, majority of the squatters in both the colonies and in the inner city as a whole were engaged in self employment, for example trading, food products, waste pickers, hawkers, motor mechanic, rickshaw and van puller,

street vending etc, followed by salaried employment such as worker in grocery shop, sweeper corporation, railway department, flats, anganwari workers, maid-servant, midwives, driver, security guard, motor mechanic, hotel worker, etc., and casual employment like construction worker, labour in whole sale trade, labour in transport etc. In terms of gender, the proportion of female workers engaged in self employment was significantly higher than that of the males in the inner city. In the colonies, the proportion of female self employed was two times higher in Mazdoor colony than that of the Lichubagan colony. On the other hand, the female workers who were engaged salaried employment (mainly sweeper and maid-servant) was three times higher in Lichubagan colony than that of the Mazdoor colony.

In the formal and informal sector taken together, majority of the workers were engaged in self employment (43.83 percent), followed by salaried (29.79 percent) and casual employment (26.38 percent) in the inner city. Similar characteristics are also found in both the colonies. With regard to salaried employment, Lichubagan colony dominated the Mazdoor colony and the scenario was opposite in case of casual employment. In terms of gender, the proportion of female worker was significantly higher in salaried employment than that of the male counterpart because many of the female workers were maid-servant, sweeper in corporation, flats and elsewhere in the inner city. Within colonies, the proportion of female self-employment was higher in Mazdoor colony because a large number of female workers were engaged in waste picking. In Lichubagan colony, a substantial number of females workers were maid-servant and in results the proportion of female salaried employment was significantly high than that of the proportion in other categories of employment.

Table (5.6.4): Distribution of Employment by Activity Status among the Squatters in the Inner City

Sector & Activity Status/Squatter settlement		Sector wise Activity Status in the Inner City Squatter Settlements								
		Mazdoor Colony			Lichubagan Colony			Inner City		
		M	F	P	M	F	P	M	F	P
Formal Sector	Permanent	2 (12.50)	0 (0.00)	2 (11.76)	3 (33.33)	2 (40.00)	5 (35.71)	5 (20.00)	2 (33.33)	7 (22.58)
	Casual	14 (87.50)	1 (100.0)	15 (88.24)	6 (66.67)	3 (60.00)	9 (64.29)	20 (80.00)	4 (66.67)	24 (77.42)
Informal Sector	Self Employed	35 (50.72)	12 (70.59)	47 (54.65)	46 (50.00)	10 (38.46)	56 (47.46)	81 (50.31)	22 (51.16)	103(50.49)
	Salaried	18 (26.09)	3 (17.65)	21 (24.42)	26 (28.26)	16 (61.54)	42 (35.59)	44 (27.33)	19 (44.19)	63 (30.88)
	Casual	16 (23.19)	2 (11.76)	18 (20.93)	20 (21.74)	0 (0.00)	20 (16.95)	36 (22.36)	2 (4.65)	38 (18.63)
All Sectors	Self Employed	35 (41.18)	12 (66.67)	47 (45.63)	46 (45.54)	10 (32.26)	56 (42.42)	81 (43.55)	22 (44.90)	103(43.83)
	Salaried	20 (23.53)	3 (16.67)	23 (22.33)	29 (28.71)	18 (58.06)	47 (35.61)	49 (26.34)	21 (42.86)	70 (29.79)
	Casual	30 (35.29)	3 (16.67)	33 (32.04)	26 (25.74)	3(9.68)	29 (21.97)	56 (30.11)	6 (12.24)	62(26.38)

Source: Field Survey (Oct. 2010 – March 2011), Figure in parentheses indicates the percentage total Employment by Sectors.

Note:

1. **Self-employed:** A person who operated their own farm or non-farm enterprises or engaged independently in a profession or trade on own account or with one or few partners.
 2. **Salaried employee:** A person who worked in others' farm or non-farm enterprises and in turn received salary on monthly basis, but not on the basis of daily or periodically.
 3. **Casual Worker:** A person who is casually engaged in others' farm or non-farm enterprises and in return received wages either daily or periodically
- Permanent indicate only Government Employee. Salaried in all sectors includes the permanent employee

5.6.5 Education in Employment by Activity Status

The level of education in employment among the squatters in the inner city is illustrated in Table (5.6.5), where it is found that 58.72 percent of the workers were literate, as against 41.28 percent illiterate (including 13.19 percent functionally literate). Of the workers, 34.47 percent have attained the primary level of education, followed by secondary level (22.13 percent), graduate and above (1.70 percent) and higher secondary level (0.43 percent) in the inner city.

So far as the level of education by activity status is concerned, the proportion of illiterate workers including functionally literate in the inner city was the highest in casual employment, followed by self and salaried employment. Of the total workers in self and casual employment, majority have attained the primary and secondary level of education taken together. The only exception is found in the salaried employment; while the proportion of the worker attained the graduate level of education was quite high in the inner city.

Table (5.6.5): Level of Education in Employment by Activity Status among the Squatters in the Inner City

Squatter Settlements// Level of Education by Activity Status in all Sectors		Illiterate		Literate			
		Illiterate	Functionally Literate	Primary	Secondary	H.S	Grad. & Above
Mazdoor Colony	Self Employed	17 (36.17)	3 (6.38)	10 (21.28)	16 (34.04)	0 (0.00)	1 (2.13)
	Salaried	3 (13.04)	1 (4.35)	10 (43.48)	8 (34.78)	1 (4.35)	0 (0.00)
	Casual	14 (42.42)	2 (6.06)	11 (33.33)	6 (18.18)	0 (0.00)	0 (0.00)
	Total	34 (33.01)	6 (5.83)	31 (30.10)	30 (29.13)	1 (0.97)	1 (0.97)
Lichubagan Colony	Self Employed	14 (24.14)	11 (18.97)	23 (39.66)	9 (15.52)	0 (0.00)	1 (1.72)
	Salaried	10 (21.28)	11 (23.40)	18 (38.30)	6 (12.77)	0 (0.00)	2 (4.26)
	Casual	8 (29.63)	3 (11.11)	9 (33.33)	7 (25.93)	0 (0.00)	0 (0.00)
	Total	32 (24.24)	25 (18.94)	50 (37.88)	22 (16.67)	0 (0.00)	3 (2.27)
Inner City	Self Employed	30 (29.13)	13 (12.62)	33 (32.04)	25 (24.27)	0 (0.00)	2 (1.94)
	Salaried	14 (20.00)	13 (18.57)	27 (38.57)	13 (18.57)	1 (1.43)	2 (2.86)
	Casual	22 (35.48)	5 (8.06)	21 (33.87)	14 (22.58)	0 (0.00)	0 (0.00)
	Total	66 (28.09)	31 (13.19)	81 (34.47)	52 (22.13)	1 (0.43)	4 (1.70)

Source: Field Survey (Oct. 2010 – March 2011), Figures in parentheses represent the percentage of total workers in different levels of education by activity status

Within colonies, 61.17 percent of the workers were literate, as against 38.83 percent illiterate workers (including 5.83 percent functionally literate) in Mazdoor colony, where a considerable number of the workers at about 59 percent have attained the primary and secondary level of education taken together, followed other levels of education. In Lichubagan colony, 56.82 percent of the workers were literate, as against 43.18 percent illiterate (including 18.94 percent functionally literate). Out of

all, 37.88 percent of the workers have attained the primary level of education, followed by 16.67 percent in secondary level and 2.27 percent in graduate level. Therefore, the study observed that majority of workers of the squatters have attained primary level of education in both the colonies and in the inner city as a whole, followed by secondary level, and a negligible proportion of the workers attained higher secondary and graduate level of education. Similar pattern of education in employment at various levels is also found in the colonies. Interestingly, the workers with graduate and above level of education were higher in Lichubagan colony as compared to the Mazdoor colony primarily due to positive aspiration and attitude of the parents towards education.

5.6.6 Level of Skills and Sources of Skill Acquisition

Skill and knowledge is one of the important human assets of the human being. It is known that the role of education and skills play an important role in accessing better employment opportunities. But, the fact is that most of the squatters or slum dwellers do not have higher education and skills to integrate themselves into the formal and informal urban labour market easily i.e. the slum dwellers have very low human capital base in terms of skill.

Table (5.6.6): Level and Sources of Acquiring Skill of the Workers in the Inner City Squatter Settlements

Squatter Settlements/ Sex/		Level of Skill		Sources of Acquiring Skill		
		Skilled	Unskilled	Learning by doing	Govt. Inst.	Private Inst.
Mazdoor Colony	M	39 (45.88)	46 (54.12)	31 (79.49)	4 (10.26)	4 (10.26)
	F	3 (16.67)	15 (83.33)	0 (0.00)	3 (100.0)	0 (0.00)
	P	42 (40.78)	61 (59.22)	31 (73.81)	7 (16.67)	4 (9.52)
Lichubagan Colony	M	31 (30.69)	70 (69.31)	24 (77.42)	0 (0.00)	7 (22.58)
	F	2 (6.45)	29 (93.55)	0 (0.00)	1 (50.00)	1 (50.00)
	P	33 (25.00)	99 (75.00)	24 (72.73)	1 (3.03)	8 (24.24)
Inner City	M	70 (37.63)	116 (62.37)	55 (78.57)	4 (5.71)	11 (15.71)
	F	5 (10.20)	44 (89.80)	0(0.00)	4 (80.00)	1 (20.00)
	P	75 (31.91)	160 (68.09)	55 (73.33)	8 (10.67)	12 (16.00)

Source: Field Survey (Oct. 2010 – March 2011), Figures in Parentheses indicate the Percentage to the total employment

The level of skill and the sources of acquiring skill for the employed squatters are shown in Table (5.6.6), where it is found that 31.91 percent of the total workers were skilled in the inner city. Within colonies, the proportion of skilled workers was extremely higher in Mazdoor colony (40.78 percent) with compared to the

Lichubagan colony (25 percent). In terms of gender, the percentage of female skilled workers was worse off than that of the male counterpart in both the colonies and the inner city i.e. based on the gender, the difference between skilled and unskilled workers was significantly high between the colonies ($\chi^2 = 18.88, P < .001$).

On the other hand, with regard to the sources of acquisition of skill of the workers, it is evident that 73.33 percent of the workers acquired their skill through learning by doing, 16 percent through private institution and 10.67 percent through govt. institution in the inner city. Same picture has also been seen in Lichubagan colony. But in the Mazdoor colony, the percentage of workers acquired their skill through govt. institution was significantly higher than that of private institution. It has already been mentioned that in all the colonies and the inner city as a whole, the percentage of female skilled workers was negligible than that of the male counterpart.

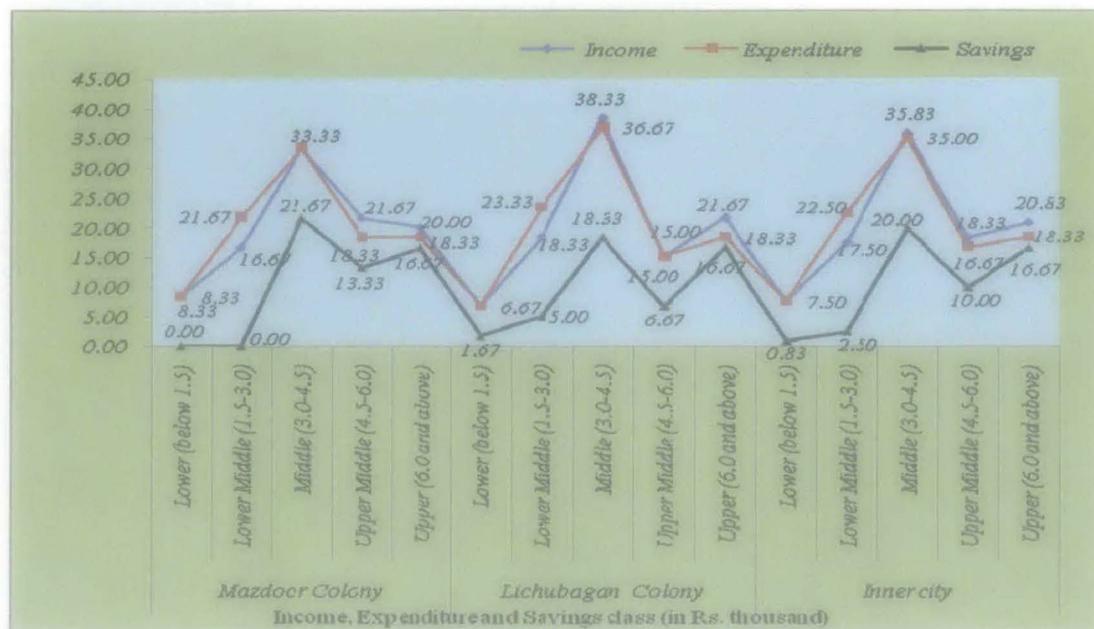
5.7 Income, Expenditure and Savings Profile of the Sample Squatter Households the Inner City

5.7.1 Distribution of Households by different Income, Expenditure and Savings Class

The squatters are the source of cheap labour force in the cities like SMCA. They are largely dependent on cash income to meet the basic needs and it directly comes from the informal sector activities. In these settlements, poverty is characterized by inadequate income for many of the squatters. Due to inadequate earnings they are often unable to meet the basic needs. An extension of their earnings leads to a better nutrition plan, improved health, better education and savings, i.e., well being or standard of living of the slums is ultimately determined by the level of income and the corresponding consumption and savings. In this context, the income, expenditure and savings pattern of the squatter households have been examined by different income classes shown in Figure (5.7.1), while a large number of the households at about 39 percent fall above the middle income class of Rs. 3000- Rs.4500 thousand in the inner city, followed by above middle income class (about 36 percent) and below the middle income class (25 percent). Within colonies, the proportion of households that falling below the middle income class was almost equal (25 percent), but the proportion of households falling above the middle income group was significantly high (about 42 percent) in Mazdoor colony compared to Lichubagan colony (about 37 percent) The

average income of the households in the inner city was Rs. 4682.45 with standard deviation of 3346.39.

Figure (5.7.1): Proportion of Squatter Household in Income, Expenditure and Savings in the Inner City



Source: Field Survey (Oct. 2010 – March 2011)

On the other hand, it is clear from Table 5.7.1 (Appendix C) that the mean income of the squatter households was higher in Lichubagan colony at about Rs. 4935 compared to the mean income of Rs. 4429 in the Mazdoor colony. But, the intra-household income differential in Lichubagan colony was about double (with SD of 4077.80) than that of the income differential in Mazdoor colony (with SD of 2414.09). The reasons behind high income differential in Lichubagan colony were primarily for disparities in income due to status of employment (permanent/casual) and irregular nature of work.

Expenditure patterns in different income class clearly shows that about 35 percent of the squatter households that spending Rs.3000-Rs.4500 thousand per month fall under middle income class in the inner city, while 35 percent of the households that spending above the middle class (Rs. 3000-Rs. 4500) as against 30 percent below the middle income class. Between the colonies, the proportion of households that spending below the median class was almost equal at about 30 percent, but the proportion of households who are spending above the median class was significantly higher in the Mazdoor colony at about 37 percent compared to 33

percent in the Lichubagan colony. With the mean expenditure of about Rs. 4471, the expenditure differential in terms of standard deviation was significantly high in the inner city. On the other hand, the mean expenditure was quite high in Lichubagan colony (Rs. 4719.55) than that of the mean expenditure in Mazdoor colony (Rs.4223) i.e. there was no significant difference in the mean values (ANOVA) between the colonies (Table-5.7.1, See Appendix C). The expenditure differential in terms of standard deviation was significantly high in Lichubagan colony compared to Mazdoor colony and such higher differential in expenditure was due to high differential in income.

In terms of savings, it is seen that 50 percent of total households had savings with the average savings of about Rs. 211 in inner city, while the percentage of households with savings was marginally higher at about 52 percent in Mazdoor colony compared to about 48 percent in Lichubagan colony. The monthly mean savings was about Rs. 206 in mazdoor colony as against Rs. 216 in Lichubagan colony. On the other hand, the savings differential in terms of standard deviation was much higher in Lichubagan colony compared to the saving differential in Mazdoor colony. The reason behind high differential of savings in Lichubagan colony was primarily due to high income differential. Savings in terms of income class, it is observed that 20 percent of the total households that had savings fall into the middle income class, 3.33 percent fall below middle income class and 26.67 percent fall above middle income class. Within colonies, the households having savings in both the middle income and above the middle income class was much higher in Mazdoor colony compared to Lichubagan colony. An interesting point should be noted that instead of having the level income and savings, the propensity to save is high among the squatter households particularly due to meet the unpredictable events like accidents, illness, natural calamities, festivals, death etc.

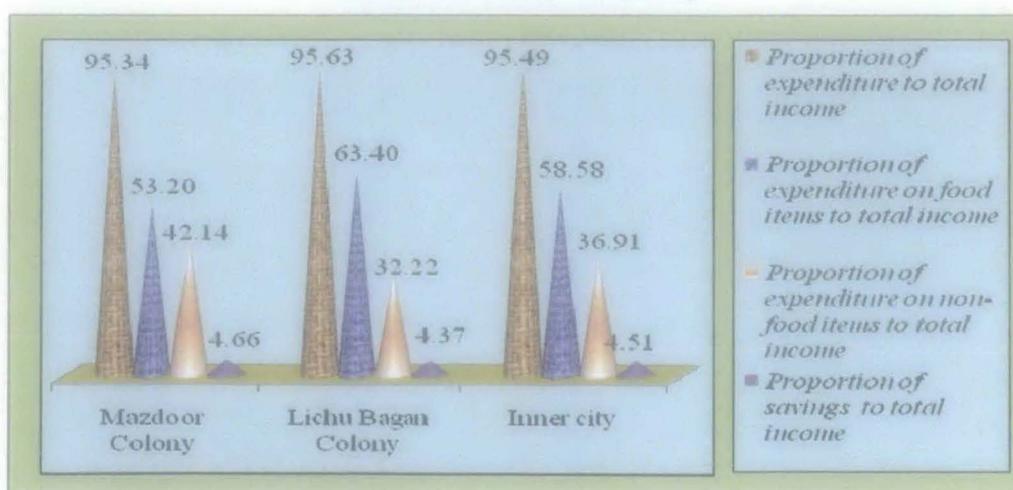
The sample study also found that the income and expenditure of the squatter households ranges from low as Rs. 400 to high as Rs.25500 and Rs.400 to Rs.23000 respectively in the inner city squatter settlements and thus the income and expenditure differentials among the households were significantly high. Therefore, it can reveal that in terms of income and expenditure not all the squatters are poor in the inner city.

5.7.2 Proportion of Income, Expenditure and Savings to total Income

Figure (5.7.2) illustrated the proportion expenditure and savings to the total income and found that the proportion of expenditure was more or less equal about 95 percent in both the colonies and in the inner city as a whole. Expenditure in terms of food and non-food items shows that more than fifty percent is spent on food items in both the colonies and in the inner city. The proportion of expenditure on food items was significantly high in Lichubagan colony at 63.40 percent compared to 53.20 percent on food items in Mazdoor colony. In contrast, the proportion of expenditure on non-food items was significantly higher in Mazdoor colony (42.14 percent) than that of the proportion in Lichubagan colony (32.22 percent) and it is fact that most of the households in Mazdoor colony spend more for the purpose of social rituals and obligations, gambling game like playing cards etc.

The savings pattern of the squatter households in both the colonies and in the inner city was very poor because after expenditure on necessary items for basic needs nothing is left for savings in most cases. Out of total income, the proportion of savings in all the squatter colonies and in the inner city was almost equal about 5 percent.

Figure (5.7.2): Proportion of Expenditure and Savings to total Income of the Squatter Households in the Inner City



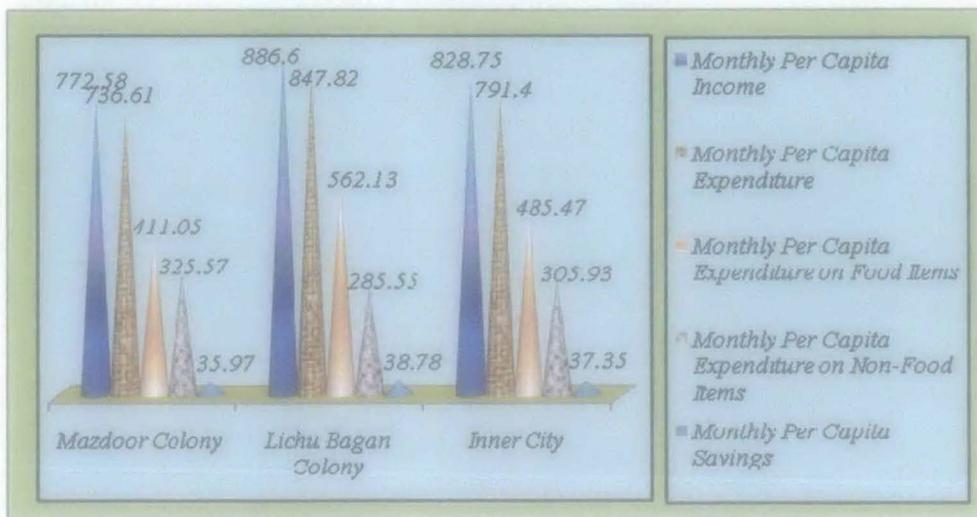
Source: Field Survey (Oct. 2010 – March 2011)

5.7.3 Monthly per Capita Income, Expenditure (Food and Non-Food Items) and Savings

Figure (5.7.3) shows the per capita income, expenditure and savings of the household. In general, the economic well being of the people especially who are living in slums

or squatter settlements is reflected through their per capita income, expenditure and savings. The monthly per capita monthly income of the squatter household was Rs. 828.75 in the inner city. Within colonies, the monthly per capita income was overwhelmingly higher in Lichubagan colony (Rs. 886.60) than that of the per capita income in Mazdoor colony (Rs.772.58). The monthly per capita expenditure was slightly lower than the monthly per capita income in both the colonies and in the inner city as a whole indicating that a negligible proportion of income of the households is saved to meet the unforeseen events.

Figure (5.7.3): Monthly per Capita Income, Expenditure and Savings Squatters in the Inner City



Source: Field Survey (Oct. 2010 – March 2011)

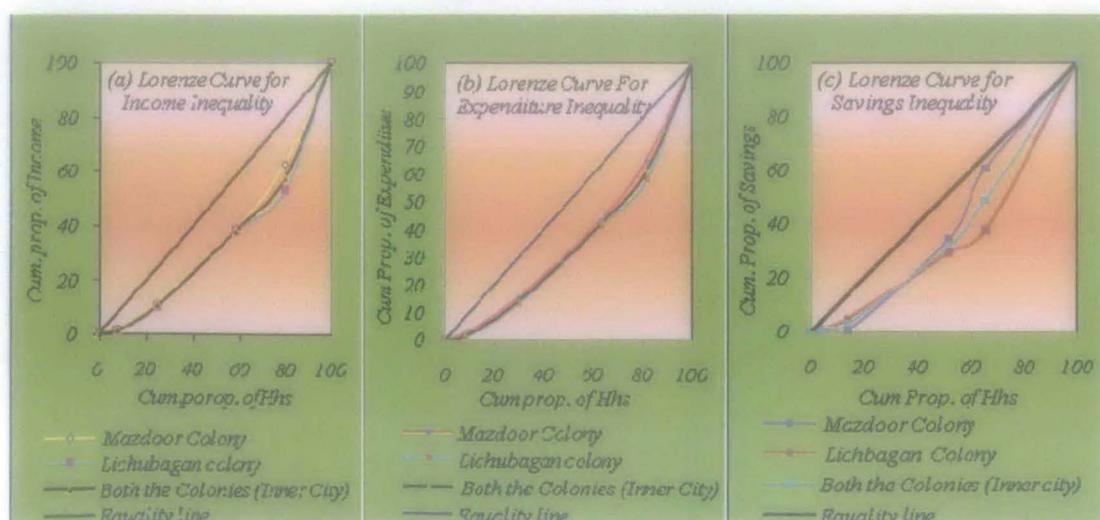
In terms of expenditure on food and non-food items, it is found that the monthly per capita expenditure on food items was much higher than that of the per capita expenditure on non-food items in both the colonies and in the inner city as a whole. The monthly per capita expenditure on food items was far higher in Lichubagan colony at Rs. 562.13, as against Rs. 411.05 in Mazdoor colony. The reason for higher per capita expenditure on non-food items in Mazdoor colony was primarily due to high expenses in social rituals and obligations, consumption of alcohol, gambling like playing cards etc. If the poverty line recommended by the planning commission for 2009-10 in terms of per capita consumption expenditure of Rs.859.50 in urban areas is considered, it is to be found from the sample study that all the squatter households in both the colonies and in the inner city squatter settlements are living below poverty line.

On the other hand, the pattern of savings of the squatter households is clear from monthly per capita savings. In the inner city squatter settlements as a whole the monthly per capita savings was only Rs. 37.35, while it was marginally higher in Lichubagan colony at Rs. 38.78, compared to Rs.35.97 in Mazdoor colony.

5.7.4 Inequalities in Income, Expenditure and Savings

A measure of inequality in income, consumption and savings of the squatter households is examined by Gini-coefficient that also been represented by Lorenz curve (Figure 5.7.4; (a), (b) and (c)). It is the ratio of the area between the Lorenz Curve and the line of equality and the whole area under the line of equality. From the study it is found that the Gini-coefficient in income, expenditure and savings was very low at 0.301, 0.300 and 0.205 respectively in the inner city. The value of the Gini-coefficients exhibits that there was no inequality in income and expenditure at all in the inner city and the inequality in savings was lower than that of the income and expenditure. Between the colonies, no significant inequality in income and expenditure is found with respect to Gini-coefficients (0.270 and 0.330 respectively), but significant inequality was observed in savings with Gini-coefficient of 0.089 and 0.302 respectively. The higher Gini-coefficient of savings indicates a higher propensity to save and the result is consistent with the fact that a large number of female workers in Lichubagal colony have savings through Self Help Groups (SHG) though the amount of loan was quite minimum.

Fig (5.7.4) Lorenz Curve in Income, Expenditure and Savings in the Inner City Squatter Settlements



Source: Field Survey (Oct. 2010 – March 2011)

5.7.5 Expenditure on Food and Non-Food Items

Descriptive analysis regarding expenditure on food and non-food items depicted in Table (5.7.2) found that the mean expenditure of total food items of the household in the inner city was Rs 2742.92. Among the food items, the average expenditure was higher in 'other food items' that includes fish, meat, fast food, fruits, drinks (about Rs.987), followed by food grains (about Rs.782), grocery (about Rs.556), vegetables (about Rs.285) and milk and milk products (about Rs.131). The mean expenditure on food items was significantly high at around Rs 3129 in Lichubagan colony as compared to Rs. 2357 in Mazdoor colony. Significant difference in the mean expenditure on food grains, grocery, vegetables and total food items is found between the colonies ($P < .05$, $P < .001$, $P < .05$ and $P < .05$ respectively).

Table (5.7.2): Descriptive Analysis of Expenditure on Food and Non-Food items of the Squatter Households in the Inner City

Food and Non-Food Items	Mazdoor Colony		Lichubagan Colony		Inner City		ANOVA (Mean difference)	
	Mean	SD	Mean	SD	Mean	SD	F statistic	Sig.
Food Grains	698.2	397.9	866.7	490.0	782.4	452.4	4.276	0.041
Grocery (Other Than Food Grains)	460.8	177.6	651.7	338.7	556.3	285.8	14.938	0
Milk & Milk Product	119.1	95.2	144.9	181.0	132.0	144.6	0.956	0.33
Vegetables	260.8	116.8	309.0	120.2	284.9	120.5	4.953	0.028
Other Food Items*	817.8	516.8	1156.9	1547.5	987.3	1161.4	2.593	0.11
Expenditure on Total Food Items	2356.7	1063.2	3129.2	2403.4	2742.9	1890.7	5.184	0.025
Medical	207.5	329.4	111.2	167.6	159.3	264.7	4.071	0.046
Education	188.9	301.6	290.4	493.4	239.6	410.3	1.849	0.176
Fuel items	405.4	210.8	353.0	249.1	379.2	231.3	1.545	0.216
Electricity	136.4	107.8	145.9	96.1	141.2	101.8	0.264	0.609
Mobile	78.9	110.2	85.6	123.8	82.2	116.8	0.1	0.752
Entertainment	162.4	125.6	208.2	265.0	185.3	207.8	1.463	0.229
Rent & Loan Install.	375.9	832.4	203.0	504.7	289.5	690.9	1.894	0.171
Other Non-Food Items*	311.9	383.8	193.2	179.8	252.5	304.3	4.705	0.032
Expenditure on Total Non-Food Items	1866.6	1444.0	1590.4	1403.1	1728.5	1424.5	1.129	0.29

Source: Field Survey (Oct. 2010 – March 2011), *Note: Other food items that includes fish, meat, fruits, fast food, drinks etc. and other non-food items that includes clothes, house repairing, transportation, rituals, gambling etc.

The expenditure differential was significantly high on total food items with the SD of 1891 in the inner city. Among the food items, the expenditure differential was much higher for 'other food items' that include fish, meat, fast food, fruits, drinks etc. in the inner city with SD of about 1161 possibly due to variation in income. The

expenditure differentials for almost all the food items were also very high primarily due to higher income in Lichubagan colony compared to the Mazdoor colony.

The mean expenditure on total non-food items was about Rs. 1728 in the inner city squatter settlements as whole, while it was far higher in Mazdoor colony at about Rs.1867 as against Rs.1590 in Lichubagan colony indicating that the households in Mazdoor colony spending more on non-food items. From ANOVA table, significant mean difference on medical expenses ($p < 0.05$) and other 'non-food items' that include clothes, house repairing, transportation, rituals, gambling etc., is seen within colonies ($P < .05$). The expenditure differential in almost all the non-food items was high in both the colonies and in the inner city as a whole, but it was significantly high on other 'non-food items' that includes clothes, house repairing, rituals, gambling etc., in Mazdoor colony compared to the Lichubagan colony. The sample study found that in the inner city as a whole, the expenditure differential for both the food and non-food items was significantly high at about 1890 and 1424 respectively, but it was relatively higher on total food items than that of the total non-food items possibly due to variation in income and corresponding expenditure to meet the necessary consumption food items of the households.

5.8 An Empirical Validation of the Engel's Law: Estimation of Marginal Propensity to Consume and Expenditure Elasticity in the Inner City

5.8.1 Methodology

To examine the expenditure pattern on different food and non-food items of the squatter households in the inner and peripheral city of SMC, the approach which has been adopted is to test the empirical validity of the Engel's Law. The Engel's law fundamentally means that after the subsistence level is overcome, the expenditure on food articles declines with the increase in total income or expenditure implies less than unit elasticity for food items. An extended version of the Engel's law also suggests that some of the non-food items have near the unit elasticity, whereas, some luxury items have more than unit elasticity.

Total expenditure has been regarded as one of the important variable in the expenditure on different food and non-food items. Explanation regarding share of expenditure can be made parametrically by estimating a functional equation relating to the expenditure on food and non-food items with respect to total expenditure and other demographic characteristics like family size. Some of the studies in this line are

Engel (1857), Hautthakker (1957), Ndanshau (1998-2001), Parpiev and Yusupov (2011), Safder et al (2012). There are some equally important determinants in the expenditure pattern of the households like age, education and family size. So far as consumption pattern of the squatters is concerned, family size is one of the most important determinants in the Engel equation.

In the present sample study, the expenditure on different food and non-food items has been considered as a function of total expenditure and family size in the Engel's equation. Total expenditure is a better classifying explanatory variable in Engel's function because it is more closely related to the permanent economic status than income. In other words, larger family size of the poor reduces the per capita expenditure of the family budget and thereby aggravates poverty in that household. In this context, Deaton and Paxson (1998) show that with an increase in family size remaining total expenditure constant, expenditure on food of the household falls. With regard to empirical validation of the Engel's law, expenditure data on different food and non-food items of the squatter households during the survey period (Oct. 2010 to March, 2011) has been used. Let us assume that the Engel's function is homogeneous of degree one with the following form,

$$Y_i = (X_1, X_2) \dots \dots \dots (1)$$

Y_i = Households Expenditure on i^{th} item

X_1 = Total Expenditure of the Household

X_2 = Family Size of the Household

Using Euler's theorem, we get

$$X_1 \frac{\partial Y_i}{\partial X_1} + X_2 \frac{\partial Y_i}{\partial X_2} = Y_i$$

$$\frac{X_1}{Y_i} \frac{\partial Y_i}{\partial X_1} + \frac{X_2}{Y_i} \frac{\partial Y_i}{\partial X_2} = 1$$

$$\epsilon_{x_1} + \epsilon_{x_2} = 1 \dots \dots \dots (2)$$

This equality holds good only for the Engel's function which is homogeneous of degree one and the homogeneity hypothesis reveals that there are no economies /diseconomies of scale (Prais and Houthakker, 1955). The presence of inequality of equation (2) is an indication of the presence of economies/diseconomies of scale. The

fact while the proportional increase in expenditure on a specific item decreases with respect to proportional increase in household size for a fixed level of total expenditure is known as economies of scale in household's consumption expenditure. The opposite is also true for diseconomies of scale.

The linear form of the Engel's curve equation has been fitted as

$$Y_i = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon_i$$

Where, Y_i = Household Expenditure on i^{th} item,

X_1 = Total expenditure of the household, the parameter β_1 measures the Marginal Propensity to Consume (MPC)

X_2 = Size of the household, the parameter β_2 measures the marginal increase in the expenditure on i^{th} item due to an addition of the family size

ε_i = Error term

Engel's equation in the log linear form fitted as,

$$\text{Log}Y_i = \alpha + \beta_1 \text{log}X_1 + \beta_2 \text{log}X_2 + \varepsilon_i$$

$$\frac{\partial Y_i}{\partial X_1} \left(\frac{X_1}{Y_i} \right) = \beta_1, \quad \frac{\partial Y_i}{\partial X_2} \left(\frac{X_2}{Y_i} \right) = \beta_2$$

Where, β_1 & β_2 are the estimates of elasticity of expenditure and family size.

5.8.2 Interpretation of the Results

In the model of multivariate regression, the inclusion of household family size along with total expenditure as independent variable in Engel curve equation is the treat of multicollinearity problem. The correlation coefficient between explanatory variables ranges from 0.480 to 0.570 in the inner city squatter settlements (Table 5.9.2i, Appendix-C). The problem of multicollinearity has also been checked by Variance Inflated Factor (VIF) and Condition Index (CI). As a rule of thumb, the VIF 5 or 10 and above indicates the multicollinearity problem (O'Brien, 2007). Similarly, the condition index over 15 also indicates a possible multicollinearity problem, but CI over 30 suggests a serious multicollinearity problem (Gujarati, 1995). The VIF and CI of total expenditure ranges from 1.30 to 1.48 and 3.53 to 4.10 respectively in the inner city squatter settlements of SMCA. Similarly, the VIF and CI of family size ranges from 1.30 to 1.48 and 4.58 to 5.52 respectively (Table 5.9.2 (ii), Appendix-C)

suggesting that the VIF and CI level is good and there is no problem of multicollinearity.

So far as the validation of Engel's law is concerned for food and non-food items, the marginal propensity to consume (MPC) is the extra unit that people consume with an additional unit of expenditure. The MPC in general ranges from 0 to 1, but it also varies with respect to the economic condition of the people, locality, test and preferences, etc. For example, the MPC and expenditure elasticity for food items may be greater than one for those households who are struggling to cope under poverty because with the increase in total expenditure they spend more on food items even by borrowing money to meet the necessary consumption needs. Table (5.8.1) shows the Marginal Propensities to Consume (MPC) of the households for 13 food and non-food items in the inner city squatter settlements. For each of the colonies and in the inner city, 14 regression equations based on Engel's law have been formed and the results obtained for almost the items were more or less statistically significant (Table 5.8.1). The regression results on MPC in the inner city squatter settlements depicted in Table (5.8.1) found that within food items, the MPC was highest on other food items that include fish, meat, fast food, fruits, drinks etc. (0.38), followed by, grocery items (0.07), food grains (0.06), milk and milk product (0.03) and vegetables (0.02). Thus, the MPC on food items as a whole is 0.56. Out of the given increase in consumption expenditure, 38 percent is spent on other food items, 7 percent on grocery, 6 percent on food grains, 3 percent on milk and milk products and 2 percent on vegetable. As a whole, 56 percent is spent on food items in the inner city. The MPC on different food items between the colonies shows that the MPC on grocery, Milk and milk products and other food items was higher in Lichubagan colony than the MPC of those items in Mazdoor colony (Table 5.8.1). As a whole, the MPC for food items in Lichubagan colony was nearly two times higher (0.62) than that of the MPC in Mazdoor colony (0.35), i.e. with the given increase in consumption expenditure, 62 percent spent on food items in Lichubagan colony, as against 35 percent in Mazdoor colony implying that with an extra unit of expenditure, the households in the Lichubagan colony consume less of food items and more of non-food items that include clothes, house repairing, transportation, rituals, gambling etc.

On the other hand, among the non-food items, the MPC was highest in rent & loan installment (0.12), followed by other non-food items that include clothes, house

repairing, transportation, rituals, gambling etc. (0.05), education (0.09), entertainment (0.05), medical and fuel items each (0.04 each), mobile (0.03) and electricity (0.02). i.e., the MPC on non-food items as a whole in the inner city came to 0.44 in the inner city. With one unit of extra expenditure, 12 percent spent on rent & loan installment, 9 percent on education, 6 percent on entertainment, 4 percent on medical and fuel items each, 3 percent on mobile and 2 percent on electricity. As a whole, 44 percent spent on non-food items in the inner city. Similarly, the MPC on total non-food items was significantly high in Mazdoor colony (0.65), as against the MPC in Lichubagan colony (0.38). Among all the non-food items, the MPC on medical, electricity, mobile, rent and loan installment, and other non-food items was significantly high in Mazdoor colony than that of the MPC of those items in Lichubagan colony. The interesting finding is that the MPC on non-food items that includes clothes, house repairing, transportation, rituals, and gambling etc. was about 3 times higher in Mazdoor colony than that of the MPC in Lichubagan Colony. As a whole, with an extra unit of expenditure, 65 percent spent on non-food items that include clothes, house repairing, transportation, rituals, gambling etc in Mazdoor colony, as against 38 percent in Lichubagan colony. This result of the present sample study has conformity with the study of Tiwari and Goel (2002) that the MPC is lower on food items than that of the MPC on non-food items.

To begin with, variations in household size may very well and have a larger effect on the expenditure of food and non-food items with respect to increase in total expenditure. Now, let us see what changes taken place in the expenditure on different food and non-food items due to one unit increase in family size holding other things constant. As family size increases with the given level of expenditure, the first priority obviously goes for obtaining enough food and then other quality food products which have high nutritional value. The study found that an addition in one unit family size increased the expenditure on some food and non-food items. In contrast, an increase in family size also curtailed the expenditure on some food and non-food items and the

Table (5.8.2): Estimation of Marginal Propensities to Consume (MPC) on Food and Non-Food Items in the Inner City Squatter Settlement

Squatter Settlements/ Food & non-food Items		Mazdoor Colony					Lichubagan Colony					Inner City				
		α	β_1	β_2	R ²	F statistic	α	β_1	β_2	R ²	F statistic	α	β_1	β_2	R ²	F statistic
Food Commodities	Total Food Items	463.75	0.35*** (11.31)	71.40*** (3.77)	0.807	118.92***	-29.33	0.62*** (41.56)	44.00* (2.23)	0.979	1360.14***	29.13	0.56*** (27.85)	35.09 (1.85)	0.903	544.60***
	Food Grains	28.79	0.06*** (5.20)	70.71*** (9.65)	0.793	109.43***	43.00	.05*** (4.76)	106.88*** (7.89)	0.768	94.56***	58.22	0.06*** (7.74)	80.26*** (10.92)	0.746	171.62***
	Grocery (other than food grains)	236.76	0.03** (3.44)	15.98** (2.87)	0.403	19.22***	223.31	.08*** (14.33)	10.02 (1.36)	0.856	169.81***	194.77	0.07*** (10.39)	8.26 (1.55)	0.662	114.70***
	Milk & Milk Product	-33.9	0.02*** (5.33)	12.29*** (5.50)	0.665	56.35***	-73.70	0.03*** (5.74)	14.36* (2.11)	0.570	37.84***	-59.33	0.03*** (8.64)	11.89 (3.94)	0.581	81.04***
	Vegetables	70.77	0.03*** (7.37)	8.76** (3.20)	0.665	56.68***	158.67	0.02*** (6.48)	9.48* (2.24)	0.609	47.03***	121.83	0.02*** (9.48)	9.53** (3.94)	0.614	93.24***
	Other Food Items	161.32	0.21** (10.11)	-36.34** (-2.94)	0.652	53.51***	-380.61	0.44*** (27.97)	-96.73*** (-4.63)	0.945	485.93***	-288.01	0.38*** (24.93)	-74.72*** (-5.22)	0.854	342.31***
Non-Food Commodities	Total Non-Food Items	-	0.65*** (20.88)	-71.40*** (-3.77)	0.895	243.44***	32.93	0.38*** (25.76)	-44.44* (-2.25)	0.938	445.97***	-27.48	0.44*** (21.65)	-35.22 (-1.86)	0.829	284.09***
	Medical	-23.66	0.06** (2.75)	-0.67 (-0.54)	0.145	4.82*	0.216	0.03*** (7.09)	-10.52 (-1.56)	0.51	29.71***	-1.78	0.04*** (4.44)	-0.37 (-0.48)	0.179	12.78***
	Education	-86.04	0.06** (3.38)	4.08 (0.38)	0.226	8.30**	-138.1	0.09*** (6.11)	-2.07 (-0.10)	0.488	27.18***	-137.00	0.09*** (7.93)	-1.22 (-0.12)	0.41	40.69***
	Fuel Items	187.79	0.02 (1.50)	25.16** (3.55)	0.313	12.97***	32.46	0.04*** (6.60)	21.52* (2.51)	0.641	50.93***	93.66	0.04*** (6.05)	22.91*** (4.23)	0.471	52.12***
	Electricity	25.66	0.03*** (4.76)	-1.30 (-0.36)	0.325	13.70***	48.92	0.01*** (3.93)	6.65 (1.54)	0.391	18.29***	50.4	0.02*** (6.09)	2.22 (0.82)	0.324	28.01***
	Mobile	-43.86	0.03*** (6.04)	-3.42 (-1.01)	0.419	20.54***	26.67	0.02*** (5.73)	-9.71 (-1.75)	0.389	18.12***	-5.08	0.03*** (7.89)	-4.35 (-1.46)	0.374	34.88***
	Entertainment	34.22	0.04*** (5.87)	-5.79 (-1.46)	0.393	18.46***	78.30	0.07*** (10.64)	-35.41 (-4.09)	0.676	59.49***	23.43	0.05*** (12.53)	-17.04*** (-3.94)	0.583	81.62***
	Rent & Loan Install.	-	0.29*** (7.75)	-81.43** (-3.58)	0.513	30.01***	-58.44	0.07** (3.56)	-10.97 (-4.30)	0.224	8.23**	-59.71	0.12*** (6.33)	-40.27 (-2.16)	0.260	20.58***
	Other Non- Food items	-	0.11*** (5.83)	0.49 (0.01)	0.440	22.41**	-43.04	0.04*** (6.81)	-3.95 (-0.55)	0.524	31.37***	-14.72	0.05*** (5.73)	7.26 (0.88)	0.303	25.37***

Note: Figures under brackets represent "t" Values, *** represents p < 0.001 ** represents p < 0.01 and * represents p < 0.05

resulting MPC for those items has been found to be negative and vice versa. In general, reduction in expenditure takes place especially for the non-food items.

The study examined that an increase in family size led to an increase in expenditure significantly on the various food items that includes food grains, grocery, milk and milk products, vegetables and the total food items excluding other non-food items (clothes, house repairing, transportation, rituals, gambling etc) that led to decrease in expenditure and thus the MPC has been found to be negative. The MPC with respect to most of the food items increased with the family size, because they are essential items in the diet of the squatter households in the inner city, while, the MPC decreased with the increase in family size only on other food items like fish, meat, fast food, fruits, drinks etc., indicates that after increasing expenditure on the necessary items to satisfy the required level, they cannot or spend less on these items. It is also found that an increase in family size lead to increase in expenditure for almost all the food items including total food items at different level of significance in both the colonies. In other words, one unit increase in family size curtailed the expenditure only on other food items in Mazdoor colony, and vegetables and other food items in Lichubagan colony and as a result the MPC for those items came to highly negative.

As mentioned above that the curtailment in expenditure takes place due to increase in family size especially on non-food items and thus MPC decreases with higher negative value. The sample study also shows that an increase in family size curtailed the expenditure on total non-food items and thus the MPC on total non-food items decreased significantly in both the colonies in the inner city as a whole. Among the non-food items, an increase in family size curtailed the expenditure on medical, education, mobile, entertainment and rent & loan installment the resulting MPC has been found to be negative in the inner city. The only exception was the fuel, electricity and other non-food items where an increase in family size increased the expenditure and the MPC for those items. Between the colonies, an increase in family size curtailed the expenditure of medical expenses, electricity, mobile, entertainment and rent and loan installment and thus the MPC also decreased which has been found to be negative for almost all the non-food items. But, the expenditure increased due to increase in family size in education, fuel items and other non-food items and thus the

MPC for these items came to positive in Mazdoor colony (Table-5.8.1). Similarly, in Lichubagan colony an increase in family size curtailed the expenditure for almost all the non-food items namely medical expenses, education, mobile, entertainment and rents & loan installment, & other non-food items and thus the resulting MPC of these commodities decreased. Among the non-food items, the expenditure increased only two items fuel and electricity with an increase in family size and as a result the MPC also increased. A similar study by Tiwari and Goel (2002) on the unorganized informal sector workers in the cities of Agra, Kanpur and Puri found a similar characteristics i.e., with an increase in one unit of family size increased the expenditure for most of the food items like food grains, oil, milk and milk products etc. that has been treated as essential commodities. In contrary, an increase in family size curtailed the expenditure on some non-food commodities like medical expenses, city transport, and other non-food items that has been viewed as non-essential items.

To sum, it is found that in all the squatter colonies and in the inner city as a whole, an increase in family size significantly increased the expenditure for total food items, as against the decrease in expenditure for total non-food items and thus the MPC increased for the food-items and decreased for non-food items. Among the food items, an increase in family size significantly increased the expenditure in food grains, grocery, milk and milk products, vegetables and thus the resulting MPC for these items came to highly positive, as against the curtailment of expenditure for other food items decreased the MPC in both the colonies and in the inner city. On the other hand, among the non-food items an increase in family size increased the expenditure on education, fuel items and other non-food items. In contrast, an increase in family size curtailed the expenditure on medical expenses, electricity, mobile, entertainment and rent & loan installment and thus the MPC decreased which has been found to be negative in both the colonies and in the inner city as a whole. However, such evidences suggests that the increase and curtailment in expenditure on some food /non-food items with respect to increase in family size holding total expenditure constant, may be due to diseconomies and economies of scale (Table 5.8.2)

Elasticity measures the sensitivity of one variable to another. Specifically, it is a number that tells us the percentage change in one variable due to one percent increase in another variable. The estimates of expenditure elasticities among the lower income groups particularly for the squatters or slum dwellers are no doubtly a helpful

exercise for family budgets in study of consumption behavior. For given food and non-food items, the immediate concern of a poor household is to survive and sustain at a minimum level of subsistence. When they are unable to meet the basic subsistence level, then the expenditure on those items that are basic necessities increases with the increase in total expenditure. In the present study, an attempt has been made to estimate expenditure elasticities of different food and non-food items in the inner city squatter settlements. The sign and magnitude of the expenditure elasticities helps to classify food and non-food items into essential and relative luxury items. The estimate of expenditure elasticity on different items reveals that the demand for food items less than unity (essential goods) confronts the well-known Engel's law. If the expenditure elasticity of any of the food and non-food items is positive and lies between zero and unity, then quantity demanded will increase by a smaller proportion than that of the proportion in total expenditure means that households do not spend much of any increase in total expenditure on that particular item and the items can be viewed as essential items. In contrast, if elasticity is greater than unity, then quantity demanded will increase by greater proportion with respect to proportion of total expenditure implies that quantity demanded is quite responsive to changes in total expenditure on that item and the item can be viewed as relative luxurious. If the commodity becomes inferior the expenditure elasticity will be negative. Consumption expenditure and the expenditure elasticity on different food and non-food items by its nature have been derived from the log linear model of Engel's equation and the results are shown in Table (5.8.2).

The present sample study found that the expenditure elasticity of total food items was less than unity (0.81), as against more than unit elasticity of non-food items (1.29) and thus total food items fall under necessary items and the total non-food items fall under relative luxury items in the inner city squatter settlements. In the former item, the quantity demanded increased by smaller percentage than that of the percentage of total expenditure suggest that squatter households do not spend much of any increase in total expenditure in this particular commodity and for the later item the quantity demanded increased by larger percentage than that of the total expenditure suggests that quantity demanded is quite responsive to changes in total expenditure.

Table (5.8.3): Estimation of Expenditure Elasticity on Food and Non-Food Items in the Inner City Squatter Settlements

Settlements/ Food & non-food Items		Mazdoodr Colony					Lichubagan Colony					Inner City				
		α	β_1	β_2	R ²	F statistic	α	β_1	β_2	R ²	F statistic	α	β_1	β_2	R ²	F statistic
Food Commodities	Total Food Items	1.89	0.67*** (11.52)	0.16** (3.01)	0.849	160.70***	0.27	0.92*** (26.67)	0.03 (0.67)	0.971	949.56***	0.93	0.81*** (21.58)	0.10* (2.56)	0.905	556.53***
	Food Grains	1.99	0.42*** (4.43)	0.59*** (6.84)	0.761	90.94***	1.96	0.49*** (6.54)	0.35** (3.67)	0.808	120.21***	2.13	0.43*** (6.85)	0.51*** (7.42)	0.751	176.25***
	Grocery (other than food grains)	3.59	0.25* (2.38)	0.27** (2.82)	0.402	19.20***	0.79	0.67*** (12.94)	0.04 (0.63)	0.891	231.96***	1.92	0.49*** (7.40)	0.17* (2.41)	0.598	86.93***
	Milk & Milk Product	-2.37	0.70** (3.46)	0.65** (3.49)	0.546	34.22***	-5.86	1.05*** (4.67)	1.00** (3.56)	0.731	77.52**	-4.90	0.98*** (6.54)	0.75*** (4.59)	0.648	107.86***
	Vegetable	.290	.58*** (6.63)	0.25** (3.08)	0.707	68.78***	0.662	0.59*** (9.12)	-0.08 (0.92)	0.814	124.32***	.640	0.56*** (10.08)	0.19** (3.12)	0.730	157.86***
	Other Food Items	-1.93	1.09*** (9.58)	-0.33** (-3.21)	0.653	53.62***	-5.67	1.55*** (14.51)	-0.34* (-2.54)	0.878	204.81***	-4.33	1.39*** (17.41)	-0.36*** (-4.13)	0.790	220.50***
Non-Food Commodities	Total Non-Food Items	-4.01	1.41*** (18.25)	-0.18* (-2.52)	0.894	240.79***	-2.73	1.20*** (15.79)	-0.06 (-0.62)	0.913	300.76***	-3.24	1.29*** (22.39)	-0.13 (-2.04)	0.844	444.04***
	Medical	-4.28	1.13*** (4.20)	-0.18 (-0.75)	0.299	12.14***	-5.62	1.28*** (6.00)	-0.49 (-1.82)	0.5	28.55***	-4.73	1.17*** (6.66)	-0.29 (-1.54)	0.357	32.48***
	Education	-9.43	1.30 (1.54)	0.96 (1.25)	0.163	5.55*	-3.77	0.57(0.73)	1.65 (1.67)	0.19	6.70**	-6.58	0.95 (1.70)	1.22* (2.04)	0.172	12.14***
	Fuel Items	1.37	0.43 (1.82)	0.60** (2.81)	0.35	15.35***	-1.03	0.75* (2.08)	0.18 (0.39)	0.206	7.38**	0.29	0.56*** (2.66)	0.44 (1.92)	0.238	18.25***
	Electricity	-8.04	1.49** (2.83)	-0.02 (-0.03)	0.192	6.77**	-1.58	0.75*** (5.34)	0.13 (0.72)	0.612	44.95	-4.15	1.03*** (3.90)	0.07 (0.24)	0.223	16.78***
	Mobile	-17.9	2.44** (3.66)	0.12 (0.20)	0.303	12.38***	-6.8	1.1 (1.59)	0.25 (0.29)	0.13	4.24*	-	1.59*** (3.40)	0.23 (0.41)	0.195	14.13***
	Entertainment	-7.31	1.49*** (4.73)	-0.16 (-0.57)	0.367	16.52***	-8.85	1.76*** (6.13)	-0.57 (-1.63)	0.526	31.67***	-7.93	1.60*** (7.84)	-0.32 (-1.44)	0.451	47.99***
	Rent & loan Install.	-	4.68*** (6.33)	-2.62*** (-3.88)	0.413	20.05***	-	1.83* (2.28)	-0.95 (-0.94)	0.109	3.50*	-	3.10*** (5.75)	-1.92*** (-3.29)	0.227	17.20***
	Other Non-Food items	-7.70	1.66*** (6.88)	-0.43 (-1.97)	0.504	28.96***	-6.35	1.38*** (4.41)	-0.15 (-0.38)	0.437	22.10***	-6.96	1.52*** (7.70)	-0.33 (-1.52)	0.437	45.45***

Note: Figures under brackets represent "t" Values, *** represents p < 0.001 ** represents p < 0.01 * represents p < 0.05

Among all items, the expenditure elasticity was less than unity for food grains (0.43), grocery (0.49), milk and milk products (0.98), vegetables (0.56), education (0.95) and fuel items (0.56) that fall under the category of essential items in the inner city. Whereas, the expenditure elasticity for other food items that includes fish, meat, fast food, fruits, drinks etc. (1.39), medical (1.17), electricity (1.03), mobile (1.59), entertainment (1.60), rent & loan installment (3.10) and other non-food items (1.52) was greater than unity that can be treated as relative luxurious which further supports the well-known Engel's law. The study supports the findings of Ndanshau (1998-2001) in Tanzania that the elasticity coefficients of the food related and the non-food items, for example, wood fuel, and clothes, etc., were less than unity; which implies that such items were necessities and elasticity coefficient for utensils were luxurious with greater than unit elasticity. Within food items, the expenditure elasticity of other food items that include fish, meat, fast food, fruits, drinks etc. are greater than unity implying that the increase in expenditure of these items which have high nutritional value increases is highly responsive compared to the total expenditure. This finding of the study is consistent with the study of Lahiri (1990) that meat, fish, poultry, and dairy products that fall under relative luxury with the expenditure elasticity of greater than unity for all urban households in Egypt indicates that expenditure on protein rich food products increases with an increase in income.

On the other hand, the higher proportion of expenditure elasticity on medical purposes indicating that the squatters are vulnerable to diseases and sicknesses that promptly increase their share of expenditure on medical services. It also signifies their positive attention towards health and hygiene. Between the colonies, the expenditure elasticity was less than unity for almost all the food items that fall under essential category excluding other food items that reflected the characteristics of relative luxury items. In contrast, almost all the non-food items in the colonies fall under relative luxury items excluding except fuel items that fall under necessary commodity.

So far as expenditure elasticity with respect to family size is concerned, it is observed that elasticity co-efficient of family size for most of the food items are less than unity but is positive in both the colonies and in the inner city as a whole indicating that food items are most important. In other words, for most of the non-food items such as medical expenses, entertainment, rent and loan installment and other non-food items that include clothes, house repairing, transportation, rituals,

gambling etc., and other food items like fish, meat, fast food, fruits, drinks etc., the elasticity with respect to the household size is negative in the inner city squatter settlements implying that an increase in the family size, holding total expenditure constant, makes the family poorer i.e., after increasing its expenditure on the necessary items to satisfy the required level, they cannot or spend less on other items that are less significant to them in terms of basic needs. A more or less similar pattern of elasticity co-efficient on food and non-food items with respect to family size is observed in both the colonies. Several studies namely Ali (1981) and Siddiqui (1982) also documented the similar characteristics of expenditure elasticities on the food and non-food items with respect to increase in family size.

A point to be noted that milk and milk products fall under the essential commodity group in Mazdoor colony, but these food items turned to be a relative luxury items in Lichubagan colony because the proportional increase in expenditure on such protein rich products are higher than that of the proportional increase in total expenditure. Similarly, education and electricity among non-food items fall under relatively luxurious items in Mazdoor and turned to be an essential items in Licubagan colony. The above analysis revealed that most of the food items with the elasticity of less than unity that support the Engel's law and can be viewed as essential or necessity for all the time. The expenditure elasticity for most of the non-food items found at higher than unity and fall under relative luxury items. The proportion of expenditure for all such items increased with respect to increase in total expenditure that aligned with Engel's law. Such expenditure pattern on food and non-food items of the squatter households living in the inner city indicates that as they come from below the subsistence level and thus allocate their increase in expenditure between food and the non-food items.

5.9 Financial Capital of the Sample Households in the Inner City Squatter Settlements of SMCA

Financial capital as one of the important livelihood assets that refers to the financial resources available to people like income generating activities savings, credits and loans, expenditures etc. The poor particularly the squatters or slum dwellers are always struggling to provide basic necessities to their families for survival in the cities like SMCA. Due to lack of financial capital they are unable to spend money for

unforeseen events/expenses. Therefore, financial capital plays an important role at the time of crisis and other purposes.

5.9.1 Indebtedness of the Households.

Both the formal and informal loans/credit has positive impacts to alleviate poverty among the urban poor by generating income, healthcare, education etc. In this regard, Wright (1999) observed that access to credit market help for setting up new economic activity that in turn lead to increase in income and employment opportunities and in results empowerment of the people. Pitt and Khandker (1998) documented that the poor households in Bangladesh have been able to improve their level of consumption by increasing income. Another study by Morduch (1998) found that microcredit facility allow the poor households to send their children to school and obtain better healthcare services and building assets. In addition to this, Simanowitz (2003) in India found that with increasing the quality of life, there is a strong evidence of shifting from irregular low paid daily labour to diversified sources of income like small businesses among the SHARE members (Society for Helping, Awakening Rural poor through Education).

Indebtedness of the people depends on several factors that reflect the socio economic condition of the community or a segment of the population. The income-expenditure pattern among the inner city squatter households in SMCA shows that the per capita expenditure is marginally lower than that of the per capita income (see Table-5.7.3) and it is expected the squatter households in the inner city were free from indebtedness. But in reality the sample study found that a large number of households were indebted either with formal, informal or with both the sources.

From table (5.9.1) it is observed that 45.83 percent of the households were indebted by any source in the inner city. The proportion of households with indebtedness was higher in Lichubagan colony than that of the proportion in Mazdoor colony because many of the female squatters have taken loans from SHGs in the Lichubagan colony, whereas no SHGs were there in Mazdoor Colony. So far as sources of loan/credit are concerned, 24.17 percent the households were indebted with the formal sources like SHG, PF, Bank, Bandhan, Private Financial Institution etc., in the inner city. The purpose of the loans was mostly for setting up new business, followed by wedding; health care and food consumption, expansion of business and

house construction in the inner city (Table-5.9.1). In the colonies, marginal variations were found in the purpose of loan/credit.

Table (5.9.1): Sources and Purpose of Indebtedness of the Squatter Households in the Inner City

Indebtedness by Sectors/ Squatter Settlements		Mazdoor Colony	Lichubagan Colony	Inner City
Total Number of Households		60	60	120
Sources of Loans	Formal Sources	12 (20.00)	17 (28.33)	29 (24.17)
	Informal Sources	12 (20.00)	9 (15.00)	21 (17.50)
	Both Formal & Informal Sources	2 (3.33)	3 (5.00)	5 (4.17)
	<i>Total Indebtedness of the Households</i>	<i>26 (43.33)</i>	<i>29 (48.33)</i>	<i>55 (45.83)</i>
Purpose of Loans	Set up new business	6 (23.08)	8 (27.59)	14 (25.45)
	Expansion of Business	4 (15.38)	5 (17.24)	9 (16.36)
	Health Care & Food Consumption	6 (23.08)	5 (17.24)	11 (20.00)
	Weeding/Rituals	7 (26.92)	8 (27.59)	15 (27.27)
	Education	0 (0.00)	0 (0.00)	0 (0.00)
	House Construction	3 (11.54)	3 (10.34)	6 (10.91)
<i>Total</i>		<i>26 (100.00)</i>	<i>29 (100.00)</i>	<i>55 (100.00)</i>

Source: Field Survey (Oct. 2010 – March 2011)

The percentage of households with formal loans was significantly higher at 28.33 percent in the Lichubagan colony as against 20 percent in Mazdoor colony. The reason behind greater access to formal loans in Lichubagan colony was primarily due to existence of SHGs. It is also seen that out of total households having loans/credit, about 31 percent had access to public institutional loan in the inner city, while it was around double in Mazdoor colony (30.76 percent) than that of the proportion in Lichubagan colony (17.24 percent), because a considerable number of casual workers in Mazdoor colony were employed in Food Corporation in India (FCI), where they enjoy the benefits of loan from provident fund and banks. The poor performance of public financial institutions like banks and co-operatives etc., to provide loans among squatters/slum dwellers was insecure land tenure, lack of collateral assets for mortgage and fear of repayment of loan on time. The households who have taken loans from informal sources like friends and neighbours, relatives, employer of the households, money lender etc., was lower at about 17 percent in both the colonies and in the inner city as a whole. It was marginally higher in Mazdoor colony at 20 percent compared to 15 percent in Lichubagan colony.

The indebtedness of the squatter households through the formal and informal sources taken together was 4.17 percent in the inner city. Between the colonies, the proportion was higher in Lichubagan colony at 48.33 percent, as against 43.33 percent in Mazdor colony. Most of the respondents admit that though the purpose of the loan was for setting up new business, house construction/repairing, weeding etc., but in reality a large amount of the loan has been spent on consumption purposes.

5.10 Quality of Life (QoL) Index of the Sample Households in the Inner City Squatter Settlements

The area of urban slums or squatter settlements is the place where the people struggle hard to make a living. They also tend to suffer most from the lack of basic amenities, illnesses and infectious diseases etc. In general, overcrowding, lack of drainage and food insecurity are among the factors causing ill health in these settlements. Thus, the growing challenge is to design scientific ways of measuring quality of life or wellbeing in social sciences particularly for the slum dwellers in the cities like SMCA. Before discussing the indicators involved in measuring quality of life index, it is necessary to know what quality of life does mean. As there is no universally accepted definition of quality of life in literature, so, many of the researchers, authors, organizations have tried to conceptualize the quality of life in different ways. Devid (1983) stated that "quality of life experienced by an urban household is a product of opportunities available for securing those resources that its members hold most dear for their own welfare". In general, the human wellbeing is examined in five important domains like education, health, living conditions, and economic situation as well as social bonding (social capital). It is "the notion of human welfare (well-being) measured by social indicators rather than by quantitative measures of income and production" (United Nations Glossary 2009). The objective or social indicators is based on quantitative statistics rather than on individual's subjective perceptions of their social environment. In contrast, subjective well-being is concerned with individual's subjective experience of their lives (Campbell et al, 1976). In literature, quality of life or well-being is not a new concept, but still there is no comprehensive definition of quality of life. But, as the quality of life is a product of socio-economic indicators, so, various studies have tried to develop the QoL index in different ways using either objective or social indicators or subjective indicators or by combining both, for example, Krishnan (2010) in his study focused on the development of a

socio-economic index to differentiate between disadvantaged and more privileged areas in Alberta. A similar study by Hemmasi (1995) examined the spatial variations in QoL indicators in North Dakota counties between 1980 and 1990. A study by Hickman (2011) was based on regional variations in QoL among the residents in the west and northwest areas of Austin. Another study by Ali et al (2010) in the different regions of Malaysia revealed that, instead of experiencing rapid growth and development, inequalities clearly exist in terms of Physical Quality of Life Index (PQLI). Rahman et al (2003) showed that various well-being measures are highly sensitive to the indicators of QOL that are used in the construction of comparative indices.

On the other hand, Smith (1973) in United States suggested seven sets of criteria for social well-being namely income, wealth employment, the living environment, health, education, social order, social belonging and, recreation and leisure. Out of various methods, the principal component model shows a clear regional difference in the inter-state variation in well-being in the United States. A similar study on QoL by Wilson (1969) in United States, selected nine of the eleven domestic national goals for factor analysis. On the other hand, Rashida (2009) examined the human well being considering four domains like education, health, living conditions and economic status in Pakistan.

5.10.1 Variables for Constructing Quality of Life Index

It is well known that the material welfare is determined by income, housing, education, health and hygiene and these parameters are crucial factors to determine the QoL of any community. Any attempt to measure the quality of life or well being for the squatters within their multidimensional living conditions requires a specific criterion. Therefore, a composite index of quality of life has been developed by integrating the socio-economic indicators of the slum dwellers in SMCA to understand their situation as well as to help the local government for policy making that can help them for better and sustainable living. After a preliminary review of the literature on QoL, the study focused on the primary domains for the empirical study of quality of life or well-being.

For the purpose of the present study 20 indicators have been chosen that reflect the general well being or quality of life at the household and community level.

The variables are selected on the basis of judgment under four broad categories namely demographic, physical, social and economic. For constructing the composite index of Quality of Life, the following variables have been considered.

1. Duration of Residence of the household (X1)
2. Family Size of the household (X2)
3. Number of Dependent Members in the households (X3)
4. Housing Conditions (X4)
5. Sanitation Facility (X5)
6. Electricity Facility (X6)
7. Drinking Water Facility (X7)
8. Drainage Facility (X8)
9. Shelter Deprivation (X9)
10. Number of Literates (X10)
11. Frequency of visits to Health Centre for Treatment (X11)
12. Institutional and Non-Institutional Delivery of Children (0-6 yrs of age) (X12)
13. Contribution of Money for Community Development Programme (X13)
15. Manual labour for Community Development Works (X15)
16. Participation in Community Meetings/Political Meetings and Rallies (X16)
17. Number of Workers (X17)
18. Family Income (X18)
19. Indebtedness of the Households (X19)
20. Value of Physical Assets (in Rs.) (X20)

Under the demographic set of indicators like duration of residence, family size and number of dependents in a family have important impact on the quality of life or well being. It is generally assumed that the older settlements where relatively older migrants reside, should be socio-economically more advanced or established compared to the new settlements where relatively the new migrants reside, because in

general, the role of social networking among the older migrants is stronger than that of the new migrants. The squatters are generally the low income groups that have higher family size compared to the non-slum population. With regard to the family size, the number of dependents has also an inverse affect on the quality of life of the slum dwellers.

Similarly, under the physical set of indicators the fundamental components of quality of life are housing, sanitation, electricity, drinking water, and drainage facility. Without appropriate shelter, and other mentioned basic needs, people cannot maintain their minimum level of living and cannot participate actively in society. Among the physical indicators, shelter for a human being not only protects his life but also helps to grow socio-economically.

On the other hand, a good quality of life is not just the one that fulfills the three basic needs *Roti, Kapra* and *Makan* but it should have good health services and education because at the household level, education not only play a significant role in accessing jobs but also plays a crucial role in the positive attitude and aspiration towards childrens education and awareness of the family members.

Community participation among the urban poor especially among the squatters is one of the fundamental indicators for well-being at the household or community level. Several studies revealed that informal networks and how people connect with each other are important that support social and economic development of the urban poor. In general, the squatter communities with strong social bonding and relationship face less social problems and more adaptable to the urban life.

Levels of income and wealth are the key determinants to make a community or household better or worse off. Economic well-being is determined not only by income but also by living costs and the household size. The higher the economic opportunities, the higher the possibility of income that in turn leads to higher standard of living, educational attainment and other positive aspects of life. The level of income of the squatter households also depends on the number of workers in a family. Therefore, the number of workers per household has also been taken into consideration for measuring economic well being of the household.

5.10.2 Methodology for Constructing Quality of Life Index

The construction of the quality of life index is based on the methodology adopted by Mohapatra and Das (1998). The data computation for the quality of life of the squatter households involved the simple statistical technique by comprising 20 indicators into a single composite index. An additive model has been used for the composite index and the variables converted to the scores based on ordinal preference, where the highest quality has been assigned for the highest score class i.e., higher the score, higher is the quality of life and vice-versa.

The model for the quality of life index is expressed as;

$$\text{Quality of life (QL) of the } i^{\text{th}} \text{ household (I}_i\text{)} = \sum_{ij}^n X^*_{ij}$$

Where, I_i represents the Index of Quality of life (QL) for i^{th} households.

X^*_{ij} is the value of the j^{th} variable of the i^{th} household, after converting X_{ij} to ordinal scores on the basis of scores assigned to class values.

X_{ij} represents ordinal data of the j^{th} variable for i^{th} households.

W_{ij} is the ordinal scores assigned to the j^{th} variable for the i^{th} household after converting X_{ij} to ordinal scores on the basis of scores assigned to the class values.

W_j is the mean of the ordinal scores (W_{ij}) for the j^{th} variable.

$$X^*_{ij} \text{ (normalized score with mean is equal to unity of the } j^{\text{th}} \text{ variable for } i^{\text{th}} \text{ household)} \\ = \frac{W_{ij}}{W_j}$$

The Quality of Life Index has further been classified into five classes like bad, poor, moderate, fair and good. The score assigned for converting the selected variables to an ordinal preference are shown in the following Table.

Table (5.10.1): Score Assigned for the selected variables to an Ordinal Preference

	Variables for Quality of Life by different Set of Categories		Score Assigned
	Demographic Indicators	1. Duration of Migration (X1)	(i) Below 15 years	0
(ii) 15-30 years			1
(iii) 30-45 years			2
(iv) 45-60 years			3
(v) 60 & above 60 years			4
2. Family Size of the Household (X2)		(i) 11 & above	0
		(ii) 9-11	1
		(iii) 6-9	2
		(iv) 3-6	3
		(v) Below 3	4
3. Number of Dependent members in the Households (X3)		(i) 8 & Above	0
		(ii) 6-8	1
		(iii) 4-6	2
		(iv) 2-4	3
		(v) Below 2	4
Physical Indicators	4. Housing Conditions (X4)	(i) Kutcha	0
		(ii) Semi Pucca	1
		(iii) Pucca	2
	5. Sanitation Facility (X5)	(i) No Latrine	0
		(ii) Community Latrine	1
		(iii) Personal Latrine	2
	6. Electricity Facility (X6)	(i) No Electricity	0
		(ii) Rented	1
		(iii) Sub Miter	2
		(iv) Own Connection	3
	7. Drinking Water Facility (X7)	(i) Personal Well	0
		(ii) Personal Tube well	1
		(iii) Corporation Community Tube well	2
		(iv) Corporation Stand Post	3
	8. Drainage Facility (X8)	(i) No Drainage	0
		(ii) Surface Kutcha	1
		(iii) Surface Pucca	2
		(i) More than Four (More than Seven Persons/Room)	0
(ii) Four (Seven Persons/Room)		1	
(iii) Three (Six Persons/Room)		2	
9. Shelter Deprivation by number of persons per room (X9)	(iv) Two (Five Persons/Room)	3	
	(v) One (Four Persons/ Room)	4	
	(vi) No Deprivation (three or less than three Persons/Room)	5	

Variables for Quality of Life by different Set of Categories			Score Assigned
Social Indicators	10. Number of Literates (X10)	(i) Below 2	0
		(ii) 2-4	1
		(iii) 4-6	2
		(iv) 6-8	3
		(v) 8 & above	4
	11. Frequency of visits to Health Centre for Treatment (X11)	(i) Once in a Week	0
		(ii) Once in a Month	1
		(iii) Once in Six Month	2
		(iv) Once in a Year	3
	12. Delivery of 0-6 age of Children (X12)	(i) Non-Institutional	0
		(ii) Institutional	1
	13. Contribution of Money for Community Development Programme (X13)	(i) Yes	1
		(ii) No	0
	14. Participation to Resolve Community Problems (X14)	(i) Yes	1
		(ii) No	0
	15. Participation in Community Development Works (X15)	(i) Yes	1
(ii) No		0	
16. Participation in Com. Meetings(X16)	(i) Yes	1	
	(ii) No	0	
Economic Indicators	17. Number of Workers (X17)	(i) Below 1	0
		(ii) 1-2	1
		(iii) 2-3	2
		(iv) 3-4	3
		(v) 4-5	4
		(vi) 5 & above	5
	18. Family Income (X18)	(i) Below 1500	0
		(ii) 1500-3000	1
		(ii) 3000-4500	2
		(iv) 4500-6000	3
		(v) 6000 & Above	4
	19. Indebtedness (X19) of the Households	(i) Yes	0
		(ii) No	1
	20. Value of Physical Assets (in Rs.) (X20)	(i) Below 2000	0
(ii) 2000-4000		1	
(iii) 4000-6000		2	
(iv) 6000-8000		3	
(v) 8000 & Above		4	

5.10.3 Interpretation of the Results

Taking 20 variables from the four broad set of indicators, a composite index of the quality of life has been constructed. The indices are grouped into five classes like bad, poor, moderate, fair and good indicates that the higher the indices, the higher the quality of life and vice versa. The composite index presented in Table (5.10.2) found that the composite index ranges from as low as 9.92 to as high as 32.71. A

considerable proportion of the households in the inner city squatter settlements had moderate quality of life (40 percent), followed by poor quality of life (28.33 percent), fair quality of life (18.33 percent), bad quality of life (12.50 percent) and the households with good quality of life was only 0.83 percent in terms of all socio-economic variables. Now, if the index of quality of life is further classified into three different categories as overall poor quality of life (bad and poor taken together) Moderate and overall fair quality of life (fair and good taken together), it is found that the overall poor quality of life of the households was marginally higher at 40.83 percent, as against 40 and 19.16 percent moderate and fair quality of life respectively in the inner city.

Table (5.10.2): Distribution of Quality of Life Index among the Squatter Households in the Inner City

Quality of Life	Score Class	Mazdoor Colony	Lichubagan Colony	Inner City
Bad	9.92-14.47	10 (16.67)	5 (8.33)	15 (12.50)
Poor	14.48-19.03	12 (20.00)	22 (36.67)	34 (28.33)
Moderate	19.04-23.59	23 (38.33)	25 (41.67)	48 (40.00)
Fair	23.60-28.15	15 (25.00)	7 (11.67)	22 (18.33)
Good	28.16-32.71	0 (0.00)	1 (1.67)	1 (0.83)
TOTAL		60 (100.00)	60 (100.00)	120 (100.00)

In the colonies, a considerable number of the households had moderate quality of life (38.33 percent), followed by fair quality of life (25 percent), poor quality of life (20 percent), bad quality of life (16.67 percent) and there were no households in Mazdoor colony with good quality of life. Altogether, about 37 percent of the households had overall poor quality of life, as against 25 percent with overall fair quality of life in Mazdoor colony.

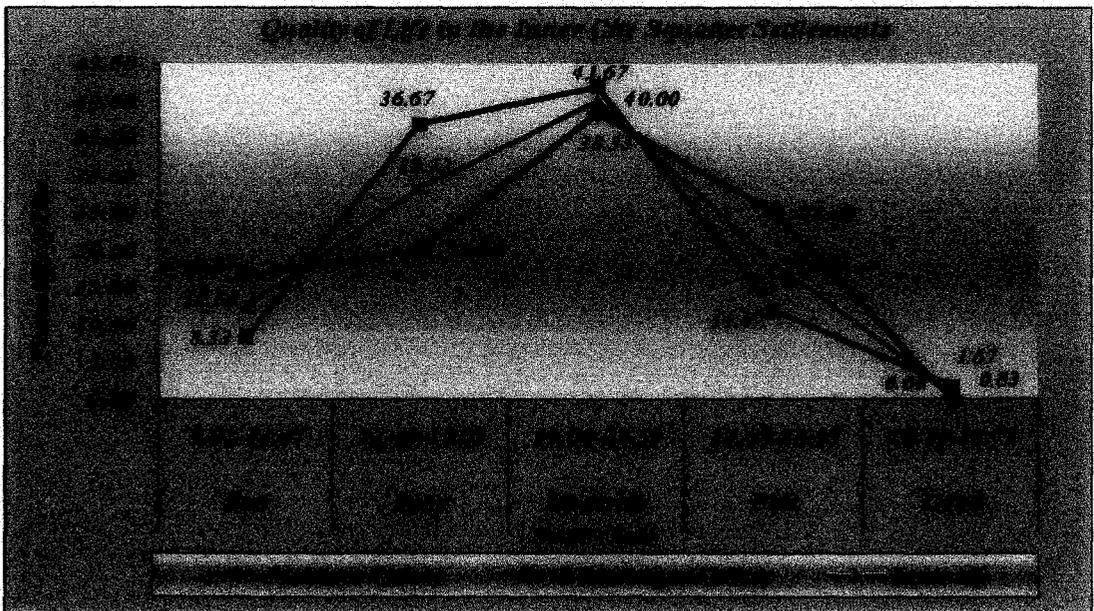
In Lichubagan colony, 41.67 percent of the households had bad quality of life, followed by poor quality (36.67 percent), fair quality (11.67 percent), bad quality (8.33 percent) and good quality of life (1.67 percent). About 45 percent of the households had overall poor quality of life, as against 13.34 percent with overall fair quality of life in Lichubagan colony.

In terms of bad quality of life of the household, Mazdoor colony was far ahead than the Lichubagan colony. Whereas, the households with poor and moderate quality of life were significantly higher in Lichubagan colony as compared to the Mazdoor colony. The percentage of households with fair quality of life was exceptionally high

in Lichubagan colony. As mentioned above that there were no households with good quality of life in Mazdoor colony, as against 1.67 percent in Lichubagan colony. To sum up, it is found that, the proportion of households with overall poor quality of life were significantly high in Lichubagan colony than that of the proportion in Mazdoor colony.

Figure (5.10.1) represents the quality of life for all the squatter colonies and the inner city squatter settlement as a whole. The graph that emerged from the score of the households between the squatter colonies in the inner city show that the locus of distribution of households after a certain points is relatively close to the Y axis in Lichubagan colony implying that the overall quality of life was poor. On the other hand, the locus of distribution of households after a certain point in the score classes is relatively away from y axis indicating overall better quality of life in Mazdoor colony.

Figure (5.10.1): Distribution of Squatter Households by Quality of Life Index in the Inner City



In order to examine the impact of economic variables like income and the value of physical assets on the quality of life of the squatter households, it is found that average level of income and the value of physical assets in the inner city squatter settlement were about Rs.4682 and Rs 5143 respectively. In the colonies, the average income and the value of physical assets were also higher in Lichubagan colony compared to the Mazdoor colony. But, the overall quality of life of the squatter

households in Mazdoor colony was relatively worse than that of the quality of life of the households in Lichubagan colony. Therefore, it could be pointed out that the overall quality of life does not necessarily depend on the economic variables like income, wealth or assets only, but also depend on other demographic, physical and social set of variables.

5.11: Conclusion

As in most cities of the developing world, the slums of SMCA are largely the consequence of rapid growth in urbanization and rural-urban migration. Majority of the older residents in the inner city squatter settlements of SMCA were Scheduled Caste (about 55 percent) migrants from the poor rural areas of BIMARU states, followed by neighbouring countries particularly from Bangladesh and Pakistan. About 78 percent of the squatter households had migrated for economic reasons as against 22 percent for non-economic reasons in the inner city. Among the economic push factors, about 51 percent of the migrants had moved due to non-availability of work in rural areas and the remaining due to acute poverty (about 13 percent) and wage differentials (about 36 percent). In terms of human capital, around 66 percent of the squatters were literate with the gender gap of 21.62 percentage points in the inner city, while the literacy rate and gender gap were far higher in Lichubagan colony as compared to Mazdoor colony. In these settlements, most of the squatters have their educational attainment till the primary education level. The squatters in SMCA are also disadvantaged with respect to security of land and quality housing that directly affect in access to basic services. Infrastructural facilities like drainage, water supply, sanitation, and access to electricity etc., were quite satisfactory in the inner city squatter settlements, as it is located in the heart of SMCA. Health services largely depended on public medical institutions in SMCA. Most of the squatters in SMCA also are facing problems in access to loans/credit from public institutions due to lack of tenure security. In terms of economic activities, informal sector remains the entry point and survival sector of the poor squatters in the inner city. In terms of economic characteristics like income, expenditure and savings, the study observed that all the squatter households are not poor. The expenditure pattern on food and non-food items found that the expenditure elasticity for most of the food items are found to be close to unity supporting the Engel's law that the food items are essential or necessity

commodities. As a whole, households with overall poor quality of life were marginally higher at 40.83 percent, as against 40 and 19.16 percent for moderate and fair quality of life respectively in the inner city. It is also found that, the proportion of households with overall poor quality of life (bad and poor taken together) were significantly higher in Lichubagan colony (45 percent) than that of the proportion in Mazdoor colony (37 percent).

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CHAPTER: VI

DEMOGRAPHIC CHARACTERISTICS AND SOCIO-ECONOMIC STATUS OF THE URBAN POOR IN THE PERIPHERAL CITY SQUATTER SETTLEMENTS

6.1 Introduction

With increasing urbanisation, there has been a rapid growth of informal settlements both within the inner-cities and in the outskirts of SMCA. Similar to Chapter V, the present chapter is a case study of peripheral city squatter settlements, where mostly the new migrants reside. The present chapter studied the socio-economic status of the squatters in the peripheral city of Siliguri Municipal Corporation Area (SMCA) under different aspects of livelihood strategy. The demographic composition in terms of duration of residence, sex ratio, family size, caste, religion and migratory characteristics has also been discussed in detail. The socio-economic characteristics of the sample squatters have also been discussed in terms of different livelihood assets. The economic livelihood in terms of income, expenditure and savings of the households has been interpreted graphically using descriptive statistics. Similar to Chapter-V, the Marginal Propensity to Consume (MPC) and expenditure elasticity on different food and non-food items has been estimated in the peripheral city. The quality of life of the squatters or slum dwellers has also been measured through an additive composite index considering four different sets of indicators that generally reflect the well being of the resident in the peripheral city.

6.2 Demographic and social Characteristics of the Households in the Peripheral City Squatter Settlements of SMCA

6.2.1 Population, Duration of Residence/Migration, Family Size and Sex Ratio

Using same sampling methodology, two notified squatter settlements from the peripheral city have also been selected for study, namely the Rajibnagar colony and the shivnagar Colony. From Rajibnagar colony, a fixed sample of 60 households constituting 297 squatters and from Shivnagar colony, a sample of 60 households with 239 squatters has been selected for the study. In the aggregate, the peripheral city study sample comprised of (both the colonies taken together) 120 households with

536 squatters. The average length of residence of the squatter households was about 10 years in both the colonies and in the peripheral city as a whole. Average family size of the Squatter households in the peripheral city was about 4 members in the peripheral city, while average family size was marginally higher in Rajibnagar colony compared to the Shivnagar colony. In terms of religions, the study also observed that, the average family size in the peripheral city was slightly higher among Hindu households, followed by Muslim and Christian. But, in terms of caste, the family size was much higher in general caste, followed by SC and ST.

Table (6.2.1): Population, Duration of Residence/Migration, Family Size and Sex Ratio in the Peripheral City

Squatter Settlements/ Population	Total Hhs	Total Population			Duration of Residence	Family Size of the Hhs	Sex Ratio
		M	F	P			
Rajibnagar Colony	60	142 (47.81)	155 (52.19)	297 (100.0)	10.08	5	1091
Shivnagar Colony	60	118 (49.37)	121 (50.63)	239 (100.0)	10.15	4	1025
Peripheral City	120	260 (48.51)	276 (51.49)	536(100.0)	10.12	4	1062

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses represent the percentage of total population

The sex ratio of the squatter households was about 1062 in the peripheral city as a whole, while it was significantly higher in Rajibnagar colony at 1092 than the sex ratio of 1025 in Shivnagar colony. In terms of caste, the higher sex ratio has been found among OBC households (1364), followed by SC (1120), and ST and general (1000 each) in the peripheral city. The sex ratio is also found to be higher in Hindu households (1098), followed by Christian (1000). Interestingly, the lower sex ratio was observed among the Muslim households (800) in the peripheral city. The higher sex ratio in the peripheral city accounted for more female headed households and high female birth rate.

6.2.2 Social Caste, Religion, Mother Language and Marital Status

So far as social caste is concerned, it is found from Table (6.2.2) a greater number of the squatters at 53.36 percent was general caste in the peripheral city, followed by SC (39.55 percent), OBC (4.85percent) and ST (2.24 percent) in the peripheral city. Within colonies, the percentage of general caste squatters was overwhelmingly higher

in Rajibnagar colony at about 59 percent compared to 47 percent in Shivnagar. The proportion of SC and ST squatters was also higher in Shivnagar colony than that of the proportions in Rajibnagar colony. The reason behind high concentration of SC and ST population in Shivnagar colony was primarily due to huge migration from predominantly SC and ST areas of Coochbehar and Jalpaiguri district. Based social caste, significant heterogeneity is observed between the colonies ($\chi^2 = 42.26, P < .001$)

In terms of religion, it is seen that a large number of the squatters at about 88 percent belong to Hindu community, followed by Muslim (10 percent) and Christian (2 percent) in the peripheral city. Both the colonies exhibited the similar scenario in the composition of religion of the squatters. The χ^2 test based on religion found a significant heterogeneity between the colonies ($\chi^2 = 8.42, P < .05$). Linguistically, the squatters have four different mother languages in the peripheral city, while the squatters with Bengali mother language was 61.75 percent, followed Hindi (29.85 percent), Nepali (7.65 percent) and Santali (0.75 percent) in the peripheral city. The proportion of squatters with Bengali mother language was significantly higher than that of the proportion in other than Bengali mother languages like Hindi, Nepali and Santali. On the other hand, 45.34 percent of the squatters were married with 46.92 percent male and 43.84 female married in the peripheral city. Between the colonies, the percentage of married squatters was slightly higher in Shivnagar colony at about 49 percent compared to 43 percent in the Rajibnagar colony. The percentage of abandoned lady and widow was only 1.45 and 4.71 percent respectively in the peripheral city.

6.2.3 Distribution of Squatters by Age groups and Dependency Ratio

Table (6.2.3) illustrates the distribution of squatters by different age group in the peripheral city, while a greater number of squatters was in the age group of 30-60 years (35.26 percent), followed by the age group of below 15 years (35.05 percent), the age group of 15-29 years (25.37 percent) and the age group of 65 and above (1.12 percent). The proportion of female squatters in almost all the age groups was much lower than that of the males. This is consistent with the fact that due to higher numbers of first generation migrants in the peripheral city, the proportion of squatters in the age group of 30-64 years was much higher.

Table (6.2.2): Social Caste, Religion, Mother Language and Marital Status of the Squatters in the Peripheral City

Squatter Settlements/Social Sharacters		Social Characteristics in the Peripheral Squatter Settlements								
		Rajibnagar Colony			Shivnagar Colony			Peripheral City		
		M	F	P	M	F	P	M	F	P
Social Caste	General	88 (61.97)	86 (55.48)	174 (58.59)	55 (46.61)	57 (47.11)	112 (46.86)	143 (55.00)	143 (51.81)	286 (53.36)
	SC	42 (29.58)	53 (34.19)	95 (31.99)	58 (49.15)	59 (48.76)	117 (48.95)	100 (38.46)	112 (40.58)	212 (39.55)
	ST	1 (0.70)	1 (0.65)	2 (0.67)	5 (4.24)	5 (4.13)	10 (4.18)	6 (2.31)	6 (2.17)	12 (2.24)
Religion	OBC	11 (7.75)	15 (9.68)	26 (8.75)	0 (0.00)	0 (0.00)	0 (0.00)	11 (4.23)	15 (5.43)	26 (4.85)
	Hindu	127 (89.44)	141 (90.97)	268 (90.24)	97 (82.20)	105 (86.78)	202 (84.52)	224 (86.15)	246(89.13)	470 (87.69)
	Muslim	14 (9.86)	13 (8.39)	27 (9.09)	16 (13.56)	11 (9.09)	27 (11.30)	30 (11.54)	24 (8.70)	54 (10.07)
	Christian	1 (0.70)	1 (0.65)	2 (0.67)	5 (4.24)	5 (4.13)	10 (4.18)	6 (2.31)	6 (2.17)	12 (2.24)
Mother Language	Bengali	85 (59.86)	96 (61.94)	181 (60.94)	79 (66.95)	71 (58.68)	150 (62.76)	164 (63.08)	167 (60.51)	331 (61.75)
	Hindi	49 (34.51)	49 (31.61)	98 (33.00)	27 (22.88)	35 (28.93)	62 (25.94)	76 (29.23)	84 (30.43)	160 (29.85)
	Nepali	7 (4.93)	9 (5.81)	16 (5.39)	11 (9.32)	14 (11.57)	25 (10.46)	18 (6.92)	23 (8.33)	41 (7.65)
	Santali	1 (0.70)	1 (0.67)	2 (0.67)	1 (0.85)	1 (0.83)	2 (0.84)	2 (0.77)	2 (0.72)	4 (0.75)
Marital Status	Married	63 (44.37)	64 (41.29)	127 (42.76)	59 (50.00)	57 (47.11)	116 (48.54)	122 (46.92)	121 (43.84)	243 (45.34)
	Abandoned lady*	0 (0.00)	3 (1.94)	3 (1.94)	0 (0.00)	1 (0.83)	1 (0.83)	0 (0.00)	4 (1.45)	4 (1.45)
	Widow*	0 (0.00)	7 (4.52)	7 (4.52)	0 (0.00)	6 (4.96)	6 (4.96)	0 (0.00)	13 (4.71)	13 (4.71)

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses indicate the percentage of total male, female and total population, *percentage of total females

Table (6.2.3): Distribution of Squatters by Age groups and Dependency Ratio in the Peripheral City

Age Group/ Dependency Ratio	Rajibnagar Colony			Shivnagar Colony			Peripheral City		
	M	F	P	M	F	P	M	F	P
Below 15	51 (35.92)	51 (32.90)	102 (34.34)	44 (37.29)	42 (34.71)	86 (35.98)	95 (36.54)	93 (33.70)	188 (35.05)
15--29	35 (24.65)	51 (32.90)	86 (28.96)	28 (23.73)	39 (32.23)	67 (28.03)	63 (24.23)	90 (32.61)	153 (28.54)
30-64	53 (37.32)	51 (32.90)	104 (35.02)	46 (38.98)	39 (32.23)	85 (35.56)	99 (38.08)	90 (32.61)	189 (35.26)
65 & Above	3 (2.11)	2 (1.29)	5 (1.68)	0 (0.00)	1 (0.83)	1 (0.42)	3 (1.15)	3 (1.09)	6 (1.12)
Child Dependency Ratio	57.95	50	53.68	59.46	53.85	56.58	58.64	51.67	54.97
Aged Dependency Ratio	3.41	1.96	2.63	0.00	1.28	0.66	1.85	1.67	1.75
Total Dependency Ratio	61.36	51.96	56.32	59.46	55.13	57.24	60.49	53.33	56.73

Source: Field Survey (Oct. 2010 – March 2011). Figures in parentheses indicate the percentage of total Squatters

The study also found that dependency ratio of the squatters as a whole was about 57 percent in the peripheral city. However, dependency ratio was marginally higher at 57.24 percent in Shivnagar colony compared to 56.32 percent in Rajibnagar colony. In both the colonies and in the peripheral city as a whole, male dependency ratio was far higher than that of the female counterpart. The child dependency ratio was about 55 percent in the peripheral city, while, it is 56.58 percent in Shivnagar colony as against 53.68 percent in Rajibnagar colony. In both the colonies, child male dependency ratio was significantly higher than that of the females. The study also observed that the aged dependency ratio for the aged was about 4 times higher in Rajibnagar colony than that of the aged dependency ratio for the aged in Shivnagar colony. In the aggregate, the aged dependency ratio was around 2 percent in the peripheral city. The notable point is that in both the colonies and in the peripheral city the male child and aged dependency ratio was significantly higher than that of the female dependency ratio.

6.3 Migration characteristics Households in the Peripheral City Squatter Settlements of SMCA

6.3.1 Migration by Generation & Reasons

The reasons behind migration is depicted in Table (6.3.1), where, it is found that the first generation migrants was 3.4 times higher than that of migrants belong to other than first generation in the peripheral city. In the colonies, first generation migrants were higher at around 79 percent in Rajibnagar colony, as against 75 percent in Shivnagar colony. In both the colonies and in the peripheral city as a whole, the female migrants in first generation were higher than that of the male counterpart. The χ^2 test shows that there was a significant difference between first and other than first generation male and female migrants between the colonies ($\chi^2 = 4.93$, $P < .05$).

In terms of reasons, most of the migration around 84 percent was due to economic reasons in the peripheral city squatter settlements. In these settlements, migration due to economic reason was far higher at about 86 percent in Shivnagar colony compared to about 81 percent in Rajibnagar colony. Female migration due to economic reasons was significantly lower than that of the males in both the colonies and in the inner city as a whole. Migration due to non-economic reasons has been classified into two broad categories; marriage and other than marriage. Among non-

Table (6.3.1): Migration by Generation & Reasons of the Squatters in the Peripheral City

Squatter Settlements	Sex	Migration by Generation			Reasons for Migration			
		Total Migrants	First Gen.	Other than First Gen.	Eco.	Non-Eco. (1+2)	1. Marriage*.	2. Other than Marriage*
Rajibnagar Colony	M	142	105 (73.94)	37 (26.06)	88 (83.81)	17 (16.19)	1 (5.88)	16 (94.12)
	F	155	129 (83.23)	26 (16.77)	101 (78.29)	28 (21.71)	24 (85.71)	4 (14.29)
	P	297	234 (78.79)	63 (21.21)	189 (80.77)	45 (19.23)	25 (55.56)	20 (11.11)
Shivnagar Colony	M	118	87 (73.73)	31 (26.27)	79 (90.80)	8 (9.20)	0 (0.00)	8 (100.0)
	F	121	92 (76.03)	29 (23.97)	79 (85.87)	13 (14.13)	13 (100.0)	0 (0.00)
	P	239	179 (74.90)	60 (25.10)	158 (88.27)	21 (11.73)	13 (61.90)	8 (38.10)
Peripheral City	M	260	192 (73.85)	68 (26.15)	167 (86.98)	25 (13.02)	1 (4.00)	24 (96.00)
	F	276	221 (80.07)	55 (19.93)	180 (81.45)	41 (18.55)	37 (90.24)	4 (9.76)
	P	536	413 (77.05)	123 (22.95)	347 (84.02)	66 (15.98)	38 (57.58)	28 (42.42)

Source: Field Survey (Oct. 2010 – March 2011)

Figures in the parentheses indicate the percentage of total migrants, *1 & *2 indicates the percentage of migrants in non-economic category.

economic reasons migration due to marriage was 57.58 percent, as against 42.42 percent due to other than marriage in the peripheral city. But, between the colonies migration due to marriage was notably higher in Shivnagar colony (61.90 percent) compared to Rajibnagar colony (55.56 percent). In contrast, migration due to other than marriage was more than 3 times higher in Rajibnagar colony as compared to Shivnagar colony.

6.3.2 Streams of Migration

The migration by different streams and the origin-destination of migratory movement have been discussed for the first generation only. The sample data shown in Table (6.3.2) found that the majority of the squatters in the peripheral city were inter-district migrants (63.44 percent), followed by inter-state (22.28 percent), intra-district (13.56 percent) and international (0.73 percent). Similar picture is also found in both the colonies.

The inter-district and the inter-state migrants were mostly from neighbouring districts namely Uttar Dinajpur, Dakshin Dinajpur, Jalpaiguri, Coochbihar and Malda and states like Bihar, Rajasthan and Uttar Pradesh. Intra-district migrants were mostly from small urban centers/towns and remote village areas within the district and a negligible proportion of migrants were from Bangladesh. The percentages of female migrants in almost all the streams were higher than that of the male counterpart in both the colonies and the peripheral city squatter settlement as a whole. The higher proportion of female migration was primarily due to nuptial reasons. Therefore, towards migration by different streams significant difference has been found between the colonies ($\chi^2 = 108.74, P < .001$).

Migratory movement among the squatters illustrated in Table (6.3.2), where it is found that the rural-urban migration was significantly higher than that of the urban-urban migration in all the colonies and in the peripheral city. About 81 percent of migration was from rural areas in the peripheral city. But, between the colonies rural-urban migration was marginally higher in Shivnagar colony (81.56 percent) compared to Rajibnagar colony (79.91 percent).

Table (6.3.2): Streams of Migration of the Squatters in the Peripheral City

Squatter Settlements/Sex		Total Migrants in First Gen.	Streams of Migration				Migratory Movement	
			Inter-State	Inter-Dist	Intra-Dist	International	Rural-Urban	Urban-Urban
Rajibnagar Colony	M	105	25 (23.81)	64 (60.95)	15 (14.29)	1 (0.95)	85 (80.95)	20 (19.05)
	F	129	35 (27.13)	73 (56.59)	19 (14.73)	2 (1.55)	102 (79.07)	27 (20.93)
	P	234	60 (25.64)	137 (58.55)	34 (14.53)	3 (1.28)	187 (79.91)	47 (20.09)
Shivnagar Colony	M	87	16 (18.39)	60 (68.97)	11 (12.64)	0 (0.00)	70 (80.46)	17 (19.54)
	F	92	16 (17.39)	65 (70.65)	11 (11.96)	0 (0.00)	76 (82.61)	16 (17.39)
	P	179	32 (17.88)	125 (69.83)	22 (12.29)	0 (0.00)	146 (81.56)	33 (18.44)
Peripheral City	M	192	41 (21.35)	124 (64.58)	26 (13.54)	1(0.52)	155 (80.73)	37 (19.27)
	F	221	51 (23.08)	138 (62.44)	30 (13.57)	2 (0.90)	178 (80.54)	43 (19.46)
	P	413	92 (22.28)	262 (63.44)	56 (13.56)	3 (0.73)	333 (80.63)	80 (19.37)

Source: Field Survey (Oct. 2010 – March 2011)

Figures in the parentheses indicate the percentage of total migrants in first generation.

6.3.3 Push and Pull Factors of Migration of the Squatter Households

Migration inflow to the cities from neighboring states, districts, within districts and outside the country is mainly due to better economic prospects along with some non-economic factors. From Table (6.3.3), it is found that around 85 percent of the households who were relatively the new settlers migrated due to economic reasons, as against 15 percent for non-economic reasons in the peripheral city. Migration due to economic reasons was higher at 88.33 percent in Shivnagar colony, as compared to about 81.67 percent in Rajibnagar colony. Among the economic push factors, a large number of household migrated due to unemployment or non-availability of work at the origin (66.67 percent), followed by income differentials (26.47 percent), and acute poverty (6.86 percent). The study revealed that unemployment or non-availability of work was the critical push factor for migration compared to other push factors like income differentials and acute poverty in both the colonies and in the peripheral city as a whole. The notable point is that migration due to poverty was about 6 times higher in Rajibnagar colony than that of the Shivnagar colony.

Table (6.3.3): Push and Pull Factors of Migration among the Squatter Households in the Peripheral City

Purpose and Factors of Migration		Rajibnagar Colony	Shivnagar Colony	Peripheral City
Hhs & Purpose of Migration	Total Hhs in first Gen.	60	60	120
	Economic	49 (81.67)	53 (88.33)	102 (85.00)
	Non-Economic	11 (18.33)	7 (11.67)	18 (15.00)
Eco. Push Factor	Unemployment/Non-availability of Work	34(69.39)	34 (64.15)	68 (66.67)
	Acute Poverty	6 (12.24)	1 (1.89)	7 (6.86)
	Income Differential	9 (18.37)	18 (33.96)	27 (26.47)
Eco. Pull Factor	Greater Employment Opportunity	40 (81.63)	35 (66.04)	75 (73.53)
	High Wage Rate	9 (18.37)	18 (33.96)	27 (26.47)
Non-Eco. Push Factor	Partition of India 1947	0 (0.00)	0 (0.00)	0 (0.00)
	War of Bangladesh for Independence in 1971	2 (18.18)	0 (0.00)	2 (11.11)
	Ethnic Violence	1 (9.09)	0 (0.00)	1 (5.56)
	Family Conflict	6 (54.55)	5 (71.43)	11 (61.11)
	Ecological displacement	2 (18.18)	2 (28.57)	4 (22.22)
Non-Eco. Pull Factor	Social Safety/Security	3 (27.27)	0 (0.00)	3 (16.67)
	Better Future	8 (72.73)	7 (100.0)	15 (83.33)

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses indicate the percentage of total households

In reality, economic push and pull factors are often complementary to each other. In the peripheral city, around 74 percent of the households had migrated due to greater employment opportunities and 26 percent for higher wage rates that acts as a complementary to the economic push factors. Similar picture has also been observed

in both the colonies, but the percentage of households that had migrated due to greater employment opportunities was significantly higher in Rajibnagar Colony (81.63 percent) compared to in Shivnagar colony (66.04 percent).

Among the non-economic push factors depicted in Table (6.3.3), it is observed that a greater number of the households in the peripheral city have migrated due to family conflict (61.11 percent), followed by ecological displacement like floods, soil erosion, droughts (22.22 percent), war of Bangladesh for independence in 1971 (11.11 percent) and ethnic violence (5.56 percent). As mentioned above that economic and non-economic push and pull factors are complimentary to each other. Hence, given the non-economic push factors, about 83 percent of the household in the peripheral city migrated for a better future and 17 percent for social safety/security in the peripheral city as non-economic pull factors. In contrast, among the non-economic pull factors, the highest percentage of households in both the colonies migrated to ensure a better future, followed by social safety/security against the migration due to non-economic push factors.

6.4 Human Capital Formation of the Squatters in the Peripheral City of SMCA

In the context of development, one cannot achieve economic well-being or poverty alleviate with a low human capital base. Various studies supported the existence of a positive relationship between human capital and income generation. Low human capital base in general is the root cause of socio-economic backwardness. Thus, in order to assess the human capital base of the slum population, literacy rates and level of education are taken as indicators of the above

6.4.1 Literacy Rate (Excluding 0-6 Age)

Table (6.4.1) clearly shows that around 74 percent of the squatter were literate with the gender gap of 9.70 percentage points in the peripheral city. It is observed that the literacy rate was higher in Shivnagar colony (75.12 percent) as compared to the literacy rate in Rajibnagar colony (72.28 percent). The gender gap was also higher in Rajibnagar colony (11.50 percentage points) than that of the gender gap in Shivnagar colony (7.08 percentage points) indicates that the female literacy rate was notably higher in shivnagar colony than that of the female literacy rate in Rajibnagar colony.

Table (6.4.1): Literacy Rate (Excluding 0-6 Age) of the Squatters in the Peripheral City

Squatter Settlements/ Literacy Rate	M	F	P	G. Gap
Rajibnagar Colony	98 (78.40)	95 (66.90)	193 (72.28)	11.5
Shivnagar Colony	84 (78.50)	70 (71.43)	154 (75.12)	7.08
Peripheral City	182 (78.45)	165 (68.75)	347 (73.52)	9.7

Source: Field Survey (Oct. 2010 – March 2011). Figures in parentheses represent the literacy rate.

6.4.2 Level of Education (Excluding 0-6 Age)

Table (6.4.2) illustrated the level of education of the slum dwellers in the peripheral city. In the peripheral city, about 17 percent of the squatters were illiterate with significantly higher female illiteracy rate (22.08 percent) than the male literacy rate (12.07 percent) in the peripheral city. For the individual colonies, illiteracy was much higher in Rajibnagar colony (20.60 percent) as compared to Shivnagar colony (12.68 percent) with the gender gap of -11.66 and -6.98 percentage points respectively implying that the female illiteracy were far higher than that of the male counterpart.

On the other hand, around 9 percent of the total squatters were functionally literate (who can only sign) with the gender gap of 0.31 percentage points in the peripheral city. The proportion of functionally literate was much lower in Rajibnagar colony (7.12 percent) as compared to Shivnagar colony (12.20 percent). In both the colonies the proportion of male and female functionally literate was almost equal.

In the peripheral city as a whole, a large number of squatters/slum dwellers attained the secondary level of education (35.17 percent), followed by primary level (33.26 percent), higher secondary (3.60 percent) and graduate and above (1.48 percent). In terms of gender gap, the proportion of female who attained the secondary and primary levels of education was lower than that of the males. In contrast, the proportion of female squatters who attained the higher secondary and graduate and above level was marginally higher than that of the males in the peripheral city. The proportion of squatters that attained the primary level of education was the highest, followed by secondary level, higher secondary and graduate & above. It is also evident that the proportion of squatters who attained the secondary level of education

Table (6.4.2): Level of Education (Excluding 0-6 Age) of the Squatters in the Peripheral City

Level of Education/ Squatter Settlements	Rajibnagar Colony				Shivnagar Colony				Peripheral City			
	M	F	P	G.gap	M	F	P	G.gap	M	F	P	G.gap
Illiterate	18 (14.40)	37 (26.06)	55 (20.60)	-11.66	10 (9.35)	16 (16.33)	26 (12.68)	-6.98	28 (12.07)	53 (22.08)	81 (17.16)	-10.01
Functionally Literate	9 (7.20)	10 (7.04)	19 (7.12)	0.16	13 (12.15)	12 (12.24)	25 (12.20)	-0.09	22 (9.48)	22 (9.17)	44 (9.32)	0.31
Primary	46 (36.80)	43 (30.28)	89 (33.33)	6.52	33 (30.84)	35 (35.71)	68 (33.17)	-4.87	79 (34.05)	78 (32.50)	157 (33.26)	1.55
Secondary	49 (39.20)	43 (30.28)	92 (34.46)	8.92	43 (40.19)	31 (31.63)	74 (36.10)	8.56	92 (39.66)	74 (30.83)	166 (35.17)	8.83
H.S	1 (0.80)	7 (4.93)	8 (3.00)	-4.13	7 (6.54)	2 (2.04)	9 (4.39)	4.50	8 (3.45)	9 (3.75)	17 (3.60)	-0.30
Grad. & Above	2 (1.60)	2 (1.41)	4 (1.50)	0.19	1 (0.93)	2 (2.04)	3 (1.46)	-1.11	3 (1.29)	4 (1.67)	7 (1.48)	-0.38

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses indicate the percentage of total population,

was much higher in Shivnagar colony (36.10 percent) as compared to Rajibnagar colony (34.46 percent). Finally, based on gender, for squatters with various levels of education, there was a significantly heterogeneity between the colonies ($\chi^2=22.32$, $P < .001$).

6.5 Physical Capital of the Sample Households in the Peripheral City Squatter Settlements of SMCA

In livelihood approach, physical capital includes housing, land, infrastructural facilities and own tools and equipment of the human being. In this chapter physical capital of the slum dwellers includes the land owned by the household, housing characteristics including shelter deprivation, physical assets in terms of money value, the infrastructural facilities like poor drainage, drinking water, proper sanitation, electricity, and access to roads etc., factors that aid in adopting suitable livelihoods to cope with the urban life.

6.5.1 Land Characteristics

So far the characteristics of land that are occupied by the squatter households in the peripheral city if illustrated in Table (6.5.1), where majority of the household chooses squatter settlements as a residential place due to their poor economic condition (58.33 percent), followed by both high price of urban land and poor economic conditions (23.33 percent) and high price of urban land (18.33 percent). The same scenario has also prevails in both the colonies.

Table (6.5.1): Land Characteristics of the Squatter Households in the Peripheral City

Land Characteristics / Squatter Settlements		Rajibnagar Colony	Shivnagar Colony	Peripheral City
Total Number of Households		60	60	120
Reason for Choosing Squatter Settlements	High price of Urban Land	9 (15.00)	13 (21.67)	22 (18.33)
	Poor Economic Condition	34 (56.67)	36 (60.00)	70 (58.33)
	High Price of Land & Poor Eco. Condition	17 (28.33)	11 (18.33)	28 (23.33)
Status of Land	Railway	25 (41.67)	0 (0.00)	25 (20.83)
	Vested	35 (58.33)	60 (100.00)	95 (79.17)
Acquisition of Land	Illegal	60 (100.00)	60 (100.00)	120 (100.00)
Security of Land	With Holding Number	46 (76.67)	57 (95.00)	103 (85.83)
	No Security	14 (23.33)	3 (5.00)	17 (14.17)

Source: Field Survey (Oct. 2010 – March 2011). Figures in the parentheses indicate the percentage of total households

Regarding status of land, almost 80 percent of the total households in the peripheral city had built their houses illegally on vested land, as against 20.83 percent on railway land. As far as security of land is concerned, more than 80 percent of the reported household have holding numbers as a security of land, given by the Municipal Corporation while the remaining households do not have any security of land in the peripheral city. Maximum number of households with holding number was found in Shivnagar colony (95 percent) as compared to Rajibnagar colony (76.67 percent).

6.5.2 Housing Characteristics

Table (6.5.2) illustrates the housing characteristics of the households living in the peripheral city squatter settlements, where around 94 percent of the households have their own house and a very negligible proportion at around 6 percent was lived in rented quarters. The housing condition in the squatter settlements in SMC was also far from satisfactory. The majority of the household live in *kutchha* houses (50.83 percent) followed by semi *pucca* houses (45.83 percent) and *pucca* houses (3.33 percent) in the peripheral city. The households with *kutchha* houses were far higher in Rajibnagar colony (55 percent) compared to Shivnagar colony (around 46.67 percent). The households with semi *pucca* houses were almost equal and no households were there with *pucca* houses in Rajibnagar colony, as against 6.67 percent household with *pucca* houses in Shivnagar colony.

Table (6.5.2): Housing Characteristics of the Squatter Households in the Peripheral City

Characteristics of Housing/squatter settlements		Rajibnagar Colony	Shivnagar Colony	Peripheral City
Total Number of Households		60	60	120
Ownership of House	Own	55 (91.67)	58 (96.67)	113 (94.17)
	Rented	5 (8.33)	2 (3.33)	7 (5.83)
Types of House	Kutchha	33 (55.00)	28 (46.67)	61 (50.83)
	Semi Pucca	27 (45.00)	28 (46.67)	55 (45.83)
	Pucca	0 (0.00)	4 (6.67)	4 (3.33)
Uses of House	Residential	56 (93.33)	59 (98.33)	115 (95.8)
	Mixed (R+C)	4 (6.67)	1 (1.67)	5 (4.17)
Types of Roof	Concrete	0 (0.00)	3 (5.00)	3 (2.50)
	Asbestos	0 (0.00)	0 (0.00)	0 (0.00)
	Tin	58 (96.67)	57 (95.00)	115 (95.83)
	Plastic	2 (3.33)	0 (0.00)	2 (1.67)
Separate Kitchen	Yes	39 (65.00)	30 (50.00)	69 (57.50)
	No	21 (35.00)	30 (50.00)	51 (42.50)

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses indicate the percentage of total households,

From the sample study, it is also found that majority of the squatter households in the peripheral city use their houses absolutely for residential purposes (95.80 percent) and a negligible proportion of the households use their house both for residential and commercial purposes (4.17 percent). Proportion of households with the multiple uses of house was far higher in Rajibnagar colony at 6.67 percent compared to 1.67 percent in Shivnagar colony.

The quality of house depends on the roof of the house and it has been classified in to four categories. The survey data shows that majority of the houses in the peripheral city were constructed with tin roof (95.83 percent), followed by concrete roof (2.50 percent), and plastic roof (1.67 percent). On the other hand, the houses other than tin roof were marginally higher in Rajibnagar colony than that of the Shivnagar colony. In contrast, no houses were constructed with plastic roof in Shivnagar colony, as against 3.33 percent in Rajibnagar colony. The study also bears evidence that 57.50 percent of the households have separate kitchen in the peripheral city, while, 35 percent households don't have any separate kitchen in Rajibnagar colony, as against 50 percent in Shivnagar colony. Thus, the living conditions of the sample households are not conducive enough to promote a high quality of life.

6.5.3 Residential Crowding by Shelter Deprivation

As far as shelter deprivation by living area depicted in Table (5.5.3) is concerned, the present sample study found that the average number of room per households was 2.09 in the peripheral city as a whole, while it was significantly high at 2.32 in Rajibnagar colony compared to 1.87 in Shivnagar colony. In general, the average number of persons per room provides the real scenario of crowding within households. In both the colonies and in the peripheral city as a whole, average number of persons per room was almost equal at about 2. Residential crowding between the colonies is not evident in terms of average number of person per room. On the other hand, it is evident that 21.67 percent of the households had shelter deprivation with more than three persons per room in the peripheral city. Total shelter deprivation of the households was far higher at 26.67 percent in Rajibnagar colony as compared to 16.67 percent in Shivnagar colony i.e. in terms of shelter deprivation of the households, significant difference is found between the colonies ($\chi^2 = 4.23, P < .05$).

In terms of degree of shelter deprivation, it is found that 11.67 percent of the households in the peripheral city had 'two' and 'more than two' shelter deprivation with five and more than five persons per room. Within colonies, 'two' and 'more than two' shelter deprivation of the household with five and more than five members per room was more than double in Rajibnagar colony as compared to the Shivnagar colony. The households with less shelter deprivation imply the availability of space with lower family size.

Table (6.5.3): Shelter Deprivation of the Squatter Households in the Peripheral City

Shelter Deprivation by Living Area/ Squatter Settlements		Rajibnagar Colony	Shivnagar Colony	Peripheral City
Total Number of Households		60	60	120
Average Number of Room Per Household		2.32	1.87	2.09
Average Number of Person Per Room		2.14	2.15	2.14
Degree of Shelter Deprivation to the total Household with Shelter Deprivation	Households with no Shelter Deprivation (Three and less than three Persons /Room)	44 (73.33)	51 (85.00)	95 (79.17)
	One (Four Persons/ Room)	7 (11.67)	4 (6.67)	11 (9.17)
	Two (Five Persons/Room)	4 (6.67)	3 (5.00)	7 (5.83)
	Three (Six Persons/Room)	4 (6.67)	2 (3.33)	6 (5.00)
	Four (Seven Persons/Room)	1 (1.67)	0 (0.00)	1(0.83)
	More than Four (More than Seven Persons/Room)	0 (0.00)	0 (0.00)	0 (0.00)
	Two and more than two (Households with five and more than five Persons/ Room)	9 (15.00)	5 (8.33)	14 (11.67)
	Households with total Shelter Deprivation (More than three Persons/Room)	16 (26.67)	9 (15.00)	25 (20.83)

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses indicate the percentage of total households Note: shelter deprivation by sufficient living area (three persons per room) calculated on the basis of UN-HABITAT (2006/07) measure.

6.5.4 Infrastructural Facilities Approach Road, Waste Disposal, Drainage and Electricity

The households with access to different infrastructural facilities is shown in Table (6.5.4), where it is found that only 62.50 percent of the households avail kutcha approach road, as against 37.50 percent of the households avail pucca approach road within the slums in the peripheral city. Between the colonies, the percentage of households who avail kutcha approach road was significantly high at 76.67 percent in Shivnagar colony as against 48.33 percent in Shivnagar colony.

In general, various studies have shown that the squatter households do not have any arrangements made either by public or private services for garbage collection and disposal. Household that do not have such services resorted to open dumping of garbage in the streets/ditches etc. But the picture was quite different in the peripheral city squatter settlements in SMCA, while 78.33 percent of the households have access to the corporation's dustbin for garbage disposal and remaining 21.67 percent don not have such facility, keep their garbage in the nearby open space/streets etc.

Table (6.5.4): Infrastructural facilities like Road, Waste Disposal, Drainage and Electricity of the Squatter Households in the Peripheral City

Infrastructure Facilities of the Households/ Squatter settlement		Rajibnagar Colony	Shivnagar Colony	Peripheral City
Approach Road in Squatters	Total No. of Households	60	60	120
	Pucca	31 (51.67)	14 (23.33)	45 (37.50)
	Kutchra	29 (48.33)	46 (76.67)	75 (62.50)
Solid Waste Disposal	Public bin	45 (75.00)	49 (81.67)	94 (78.33)
	Outside	15 (25.00)	11 (18.33)	26 (21.67)
Drainage Facility	Surface Pucca	28 (46.67)	14 (23.33)	43 (35.00)
	Surface Kutchra	0 (0.00)	0 (0.00)	0 (0.00)
	No Drainage	32 (53.33)	46 (76.67)	78 (65.00)
Electricity Facility	With Own Connection	43 (71.67)	38 (63.33)	81 (67.50)
	With Sub-Miter	0 (0.00)	4 (6.67)	4 (3.33)
	Rented	5 (8.33)	2 (3.33)	7 (5.83)
	Households With Electricity Connection	48 (80.00)	44 (73.33)	92 (76.67)
	Households without Electricity	12 (20.00)	16 (26.67)	28 (23.33)

Source: Field Survey (Oct. 2010 – March 2011). Figures in the parentheses indicate the percentage of total households

In terms of drainage facility, the study found that 65 percent of the squatter households do not have any drainage facility in the peripheral city. On the other hand, the percentage of household without proper drainage facility was significantly higher in Shivnagar colony at around 77 percent, as compared to 53 percent in Rajibnagar colony.

The households with access to electricity facility and the types of connection have been presented in Table (6.5.4). Around 77 percent of the households in the peripheral city have electricity connection and the remaining 23 percent of the households lacked electricity connection in the peripheral city. But the percentage of household with electricity connection was higher in Rajibnagar colony at about 80 percent as compared to about 73 percent in Shivnagar colony. In terms of the types of electricity connection, it is seen that maximum numbers of the households have their own connection in all the colonies and in the peripheral city as a whole.

6.5.5 Sanitation, Drinking Water and Fuel Sources for Cooking

Table (6.5.5) illustrated the basic amenities available to the squatter households in the peripheral city. The sample data found that about 91 percent of the households have personal toilets and remaining 9 percent households lacked in proper sanitation. The household with personal sanitation was significantly higher in Shivnagar colony (98.33 percent) as compared to Rajibnagar colony (83.33 percent).

Table (6.5.5): Sanitation, Drinking Water and Fuel Source of the Households in the Peripheral City

Squatter Settlement /Latrine Facility/Drinking Water/Cooking Medium /		Rajibnagar Colony	Shivnagar Colony	Peripheral City
Total Number of Households		60	60	120
Sanitation Facility	Personal Sanitation	50 (83.33)	59 (98.33)	109 (90.83)
	Community Sanitation	0 (0.00)	0 (0.00)	0 (0.00)
	No Sanitation	10 (16.67)	1 (1.67)	11 (9.17)
Drinking Water	Corporation's Stand Post	0 (0.00)	0 (0.00)	0 (0.00)
	Corporation's Com. Tube well	11 (18.33)	0 (0.00)	11 (9.17)
	Personal Tube well	49 (81.67)	27 (45.00)	76 (63.33)
	Personal Well	0 (0.00)	33 (55.00)	33 (27.50)
Fuel Sources as Cooking Medium	Gas	20 (33.33)	34 (56.67)	54 (45.00)
	Wood	35 (58.33)	25 (41.67)	60 (50.00)
	Charcoal	1 (1.67)	0 (0.00)	1 (0.83)
	Kerosene	1 (1.67)	1 (1.67)	2 (1.67)
	Gas & Wood	3 (5.00)	0 (0.00)	3 (2.50)

Source: Field Survey (Oct. 2010 – March 2011). Figures in the parentheses indicate the percentage of total households

In terms of different sources of drinking water, majority of the households in the peripheral city have independent source of drinking water with personal tubewells (63.33 percent), followed by personal wells (27.50 percent) and corporation's community tubewells (9.17 percent). The household with independent source of drinking water was significantly higher than that of the household who availed the facility of corporation's drinking water supply.

In terms of fuel sources as cooking medium, it is found that 50 percent of the squatter households in the peripheral city use wood as a main fuel source, followed by LPG (45 percent), both LPG and wood (2.50 percent) kerosene (1.67 percent) and charcoal (0.83 percent). Instead of having wide differences among the different sources of fuel used by the households, 58.33 percent use wood as against 33.33 percent LPG as a main fuel source in Rajibnagar colony. In contrast, 41.67 percent use wood as against 56.67 percent LPG in Shivnagar colony. If the fuel source of the households is grouped into LPG and other than LPG (commercial and traditional solid

fuel), then it is to be found that majority of the squatter households at about 50 percent can not avail LPG as fuel source in the peripheral city. Other than LPG as the main fuel source was for 41.67 percent of the households in Rajibnagar colony, as against 43.33 percent in Shivnagar colony, implying limited capability of the slum dwellers to access commercial fuel.

6.5.6 Utilisation of Public Health Services

The squatters utilize both the public and private medical facilities depending on their socio-economic conditions. Utilization of public health services depicted in Table (6.5.6) found that in the peripheral city, majority of the households goes to both private and government institutions for treatment (34.17 percent), followed by community health centre (26.67 percent), govt. hospital (24.17 percent) and private health institutions (15 percent). On the other hand, wide differences were observed among the households in terms of the utilization of medical services by government and private institution between the colonies. As a whole, by and large medical facility provided by the both the private and public sectors in the peripheral city squatter settlements remain the major supporting services for the squatters or slum dwellers.

Table (6.5.6): Utilisation of Public Health Services of the Households in the Peripheral City

Utilisation of Public Services / Squatter Settlement		Rajibnagar Colony	Shivnaga Colony	Peripheral City
Total Number of Households		60	60	120
Medical Institutions, where family members goes for Treatment	Government Hospital	25 (41.67)	4 (6.67)	29 (24.17)
	Private Medical Institution	11 (18.33)	7 (11.67)	18 (15.00)
	Community Health Centre	4 (6.67)	28 (46.67)	32 (26.67)
	Both Govt. & Private Medical Institution	20 (33.33)	21 (35.00)	41 (34.17)
Children in the age of 0-6 years* (live birth)		30 (11.54)	34 (12.32)	64 (11.94)
Delivery of Child (0-6 years of Age)	Institutional	15 (50.00)	24 (70.58)	39 (60.94)
	Non-Institutional	15 (50.00)	10 (29.41)	25 (39.06)
Frequency to visit health centers for treatment (any member of the family)	Once in a Week	1 (1.67)	1 (1.67)	2 (1.66)
	Once in a Month	22 (36.67)	25 (41.67)	47 (39.17)
	Once in six Month	33 (55.00)	27 (45.00)	60 (50.00)
	Once in a year	4 (6.67)	7 (11.67)	11 (9.17)

Source: Field Survey (Oct. 2010 – March 2011). Figures in the parentheses indicate the percentage of total households.

So far as the delivery of children (0-6 yrs of age live birth) is concerned, it is observed that 60.94 percent was institutional as against 39.06 percent non-institutional delivery in the peripheral city. Within colonies, non-institutional delivery through untrained persons

was significantly high in Rajibnagar colony (50 percent) as against 29.41 percent in Shivnagar colony.

Health is one of the most important human assets to ensure higher quality of life or well being, particularly for the urban households living in squatter settlements and it can be realized from the frequency of visit of the squatter households to health centers for treatment. The study found that the frequency to visit health centres for treatment once in six months was high in all the colonies and in the peripheral city as a whole, followed by once in a month, once in a year and once in a week. It is normally assumed that the higher the frequency to visit health centers for treatment, the higher the suffering from any kind of disease.

6.5.7 Value of the Physical Assets (Survey Period)

Table (6.5.7) illustrates the value of physical assets of the squatter households living in the peripheral city. The sample data shows that some of the households possess very low level of asset value and some of them possess relatively very high level of assets value. The value of physical assets ranges from as low as Rs. 1600 to as high as Rs. 1.6 lakh in the peripheral city. On the other hand, the value of the physical assets by different class values, 32.50 percent of the households that possess the higher value of physical assets falling in the median class of Rs.3000-4499, 37.50 percent households falling above the median class and 30 percent of the households are falling below the median class. The mean value of physical assets among the households in the peripheral city was Rs. 11647.94 with SD of 15462.94. The differential in the value of the physical assets was significantly high in the peripheral city as a whole.

Between the colonies, the percentage of households that possess the value of physical assets worth Rs. 6000 and above was about double in Shivnagar colony as compared to Rajibnagar colony. The percentage of households that possesses the value of physical assets above the median class was far higher in Shivnagar colony (41.67 percent) with compared to Rajibnagar colony (33.33 percent). In contrast, the household below the median class was far higher in Rajibnagar colony (36.66 percent) compared to in Shivnagar colony (23.34 percent).

Table (6.5.7): Value of the Physical Assets (Survey Period) of the Squatter Households in the peripheral city

Size class of the Value of Physical Assets (in Rs.) ↓ / Squatter Settlements →	Rajibnagar Colony	Shivnagar Colony	Peripheral City
Below 1500	2 (3.33)	1 (1.67)	3 (2.50)
1500-3000	20 (33.33)	13 (21.67)	33 (27.50)
3000-4500	18 (30.00)	21 (35.00)	39 (32.50)
4500-6000	11 (18.33)	7 (11.67)	18 (15.00)
6000 & Above	9 (15.00)	18 (30.00)	27 (22.50)
Total	60 (100.00)	60 (100.00)	120 (100.00)
Descriptive Statistic of the households in the value of their Physical Assets			
Minimum	1600	1700	1700
Maximum	79000	156100	156100
Mean	6679.17	16615.42	11647.29
Standard Deviation (SD)	9931.93	32802.16	15462.94

Source: Field Survey (Oct. 2010 – March 2011). Figures in the parentheses indicate the percentage of the total households,

The mean value of the physical assets and SD were about 2.5 and 3 times higher in Shivnagar colony as compared to the Rajibnagar colony. Therefore, it can be pointed out that not all the squatter households are poor in terms of the value of the physical assets.

6.6 Economic Livelihood of the Squatter Households in the Peripheral City of SMCA

6.6.1 Earning Status of the Households

With regard to the earning status of the squatter households in the peripheral city (Table 6.6.1), it is found that the households with single earners was 38.33 percent as against 60.83 percent joint earner households and a negligible proportion of the households do not have any earning members either due to old age or more number of minors. Whereas, between the colonies in the peripheral city, households with joint earners was 65 percent in Shivnagar colony as against 56.67 percent in Rajibnagar colony i.e., the difference between the joint and single earner households was significant between the colonies ($\chi^2=11.04, P < .001$ respectively).

Table (6.6.1): Earning Status of the Households in the peripheral city

Squatter Settlements	No. of Households	Single Earner	Joint Earner	No Work
Rajibnagar Colony	60	26 (43.33)	34 (56.67)	0 (0.00)
Shivnagar Colony	60	20 (33.33)	39 (65.00)	1 (1.67)
Peripheral City	120	46 (38.33)	73 (60.83)	1 (0.83)

Source: Field Survey (Oct. 2010 – March 2011). Figures in the parentheses indicate the percentage of total households.

6.6.2 Work Participation Rate (WPR)

Table (6.6.2) illustrates the Work Participation Rate of the squatters in the peripheral city. As mentioned earlier that the squatters living in the peripheral city areas are relatively the new migrants and in general with regard to duration of residence the possibility of getting works is also relatively low. But the study found that the WPR in the peripheral city as a whole was 34.33 percent with 55 percent male and 14.86 percent female. The WPR was 35.69 percent which was higher in Rajibnagar colony as against the WPR of 32.64 percent in Shivnagar colony. In terms of gender, the female WPR was also significantly higher in Rajibnagar colony (17.42 percent) compared to the Shivnagar colony (11.57 percent).

Table (6.6.2): Work Participation Rate (WPR) among the Squatters in the Peripheral City

Squatter Settlements	M	F	P	G. Gap
Rajibnagar Colony	79 (55.63)	27 (17.42)	106 (35.69)	38.21
Shivnagar Colony	64 (54.24)	14 (11.57)	78 (32.64)	42.67
Peripheral City	143 (55.00)	41 (14.86)	184 (34.33)	40.14

Source: Field Survey (Oct. 2010 – March 2011). Figures in Parentheses indicate the Work Participation Rate (WPR)

6.6.3 Employment by Sectors

Table (6.6.3) illustrates the distribution of employment by sectors, where 92.93 percent of the squatters were engaged in informal sector employment, as against 7.07 percent in the formal sector in the peripheral city. Out of total male and female employment in the peripheral city, the percentage of male workers in informal sector was 92.31 percent, as against 7.69 percent in formal sector.

Table (6.6.3): Employment in Formal and Informal Sector of the Squatters in the Peripheral City

Sector & Activity Status/	Rajibnagar Colony			Shivnagar Colony			Peripheral City		
	M	F	P	M	F	P	M	F	P
Formal Sector Employment	0.00	0.00	0.00	11 (17.19)	2 (14.29)	13 (16.67)	11 (7.69)	2 (4.88)	13 (7.07)
Informal Sector Employment	79 (100.0)	27 (100.0)	106 (100.0)	53 (82.81)	12 (85.71)	65 (83.33)	132 (92.31)	39 (95.12)	171 (92.93)
Total Employment (Formal & Informal)	79 (100.0)	27 (100.0)	106 (100.0)	64 (100.0)	14 (100.0)	78 (100.0)	143 (100.0)	41 (100.0)	184 (100.0)
Total Informally Employed	79 (100.0)	27 (100.0)	106 (100.0)	63 (98.44)	13 (92.86)	76 (97.44)	142 (99.30)	40 (97.56)	182 (98.91)

Source: Field Survey (Oct. 2010 – March 2011). Figure in brackets indicates percentage of total employment

The percentage of female workers in informal sector was much higher than the males at 95.12 percent compared to 4.88 percent in formal sector. The sample study accounted for higher proportion of female workers than that of the males in the informal sector employment, but it was just the opposite in case of formal sector employment. All the workers in Rajibnagar colony were engaged in informal sector, as against 83.33 percent in Shivnagar colony. The study also found that the proportion of female workers engaged in informal sector was significantly higher in Rajibnagar colony (100 percent) than that of the proportion in Shivnagar colony (85.71 percent).

As a whole, 98.91 percent workers constituting 99.30 percent male and 97.56 percent female was informally employed in the peripheral city. But between the colonies, almost all the workers were informally employed. It was 100 percent in Rajibnagar and 97.44 percent in Shivnagar colony.

6.6.4 Employment by Activity Status

The distribution of formal sector employment by activity status depicted in Table (6.6.4) shows that 84.62 percent of the squatters in the peripheral city were engaged in casual employment as against 15.38 percent in permanent employment. Interestingly no formal sector workers were there in Rajibnagar colony.

Table (6.6.4): Employment by Activity Status of the Squatters in the Peripheral City

Sector & Employment by Activity Status		Rajibnagar Colony			Shivnagar Colony			Peripheral City		
		M	F	P	M	F	P	M	F	P
Formal Sector	Permanent	(0.00)	(0.00)	(0.00)	1 (9.09)	1 (50.00)	2 (15.38)	1 (9.09)	1 (50.00)	2 (15.38)
	Casual	(0.00)	(0.00)	(0.00)	10 (90.91)	1 (50.00)	11 (84.62)	10 (90.91)	1 (50.00)	11 (84.62)
Informal Sector	Self Employed	33 (41.77)	9 (33.33)	42 (39.62)	20 (37.74)	6 (50.00)	26 (40.00)	53 (40.15)	15 (38.46)	68 (39.77)
	Salaried	18 (22.78)	8 (29.63)	26 (24.53)	18 (33.96)	1 (8.33)	19 (29.23)	36 (27.27)	9 (23.08)	45 (26.32)
	Casual	28 (35.44)	10 (37.04)	38 (35.85)	15 (28.30)	5 (41.67)	20 (30.77)	43 (32.58)	15 (38.46)	58 (33.92)
All Sectors	Self Employed	33 (41.77)	9 (33.33)	42 (39.62)	20 (31.25)	6 (42.86)	26 (33.33)	53 (37.06)	15 (36.59)	68 (36.96)
	Salaried	18 (22.78)	8 (29.63)	26 (24.53)	19 (29.69)	2 (14.29)	21 (26.92)	37 (25.87)	10 (24.39)	47 (25.54)
	Casual	28 (35.44)	10 (37.04)	38 (35.85)	25 (39.06)	6 (42.86)	31 (39.74)	53 (37.06)	16 (39.02)	69 (37.50)

Source: Field Survey (Oct. 2010 – March 2011), Figure in parentheses indicates the percentage total Employment by Sectors and as a whole

On the other hand, the distribution of informal sector employment by activity status shows that maximum number of the workers in the peripheral city squatter settlements were engaged in self employment that includes trading and business like street vending, food products, waste pickers, hawkers, electrician, rickshaw and van puller, cycle repairing, kabadiwala etc., (39.77 percent), followed by casual employment that includes construction worker, labour in whole sale trade, labour in transport etc (33.92 percent) and salaried employment worker in grocery shop, sweeper in corporation, railway department and flats, Anganwari workers, maid-servant, midwives, driver, security guard, motor mechanic, hotel worker, etc (26.32 percent). Within colonies, almost similar picture is observed in informal sector employment by activity status. In terms of gender, the proportion of female self and casual employment was significantly higher than that of the males in Shivnagar colony. But, the proportion of female salaried and casual employment was far higher than that of the male counterpart in Rajibnagar colony.

With regard to the formal and informal sector employment as a whole, majority of the workers in the peripheral were engaged in casual employment (36.96 percent), followed by self (29.79 percent) and salaried employment (25.54 percent). On the other hand, the proportion of casual employed dominated the salaried and self employment in both the colonies. The proportions of workers engaged in casual and salaried employment were marginally higher in Shivnagar colony than that of the proportions in Rajibnagar colony. But the proportion workers engaged in self-employment was far higher in Rajibnagar colony. In terms of gender, the proportion of female workers by activity status was quite higher in casual employment than that of the male counterparts in both the colonies and the peripheral city. The proportion of female salaried employment was slightly higher than that of the male counterpart in Rajibnagar colony.

6.6.5 Education in Employment by Activity Status

The level of education in employment among the squatters in the peripheral city is illustrated in Table (6.6.5). According to census definition, 58.70 percent of the workers were literate, as against 41.30 percent illiterate (including 16.85 percent functionally literate) in the peripheral city. On the other hand, majority of the workers in the peripheral city have attained the secondary level of education (31.52 percent),

followed by primary (21.20 percent), higher secondary (3.80 percent) and graduate and above level (2.17 percent). It is interesting to note that among the workers by activity status with different level of education, the proportion of illiterate workers including functionally literates was the highest in casual employment, followed by self and salaried employment in the peripheral city.

Table (6.6.5): Education in Employment of the Squatters by Activity Status in the Peripheral City

Squatter Settlements// Level of Education by Activity Status in all Sectors		Illiterate		Literate			
		Illiterate	Functionally Literate	Primary	Secondary	H.S	Grad. & Above
Rajibnagar Colony	Self Employed	8 (20.51)	4 (10.26)	9 (23.08)	15 (38.46)	2 (5.130)	1 (2.56)
	Salaried	7 (29.17)	2 (8.33)	4 (16.67)	10 (41.67)	0 (0.00)	1 (4.17)
	Casual	18 (47.37)	5 (13.16)	9 (23.68)	6 (15.79)	0 (0.00)	0 (0.00)
	Total	33 (32.67)	11 (10.89)	22 (21.78)	31 (30.69)	2 (1.98)	2 (1.98)
Shivnagar Colony	Self Employed	3 (10.34)	9 (31.03)	2 (6.90)	13 (44.83)	2 (6.90)	0 (0.00)
	Salaried	2 (8.70)	2 (8.70)	7 (30.43)	8 (34.78)	2 (8.70)	2 (8.70)
	Casual	7 (22.58)	9 (29.03)	8 (25.81)	6 (19.35)	1 (3.23)	0 (0.00)
	Total	12 (14.46)	20 (24.10)	17 (20.48)	27 (32.53)	5 (6.02)	2 (2.41)
Peripheral City	Self Employed	11 (16.18)	13 (19.12)	11 (16.18)	28 (41.18)	4 (5.88)	1 (1.47)
	Salaried	9 (19.15)	4 (8.51)	11 (23.40)	18 (38.30)	2 (4.26)	3 (6.38)
	Casual	25 (36.23)	14 (20.29)	17 (24.64)	12 (17.39)	1 (1.45)	0 (0.00)
	Total	45 (24.46)	31 (16.85)	39 (21.20)	58 (31.52)	7 (3.80)	4 (2.17)

Source: Field Survey (Oct. 2010 – March 2011), Figures in parentheses represent the percentage of total workers in different levels of education by activity status

Again, the proportion of literate workers was higher in Shivnagar colony at 61.45 percent, as against 56.44 percent in Rajibnagar colony. By activity status, the proportion of literate workers was highest in self employment, followed by salaried and casual employment in Rajibnagar colony, and in Shivnagar colony, the proportion of literate workers was significantly high in salaried employment than that of the proportion of casual and self employment. Though, by activity status, most of the workers in both the colonies were educated with primary and secondary levels of education, but the workers with higher level of education like graduate and above was significantly high in Shivnagar colony as compared to the Rajibnagar colony.

6.6.6 Level of Skills and Sources of Skill Acquisition of the Workers.

Table (6.6.6) shows the level of skill and the sources of acquiring skill among the workers living in squatter settlements in the peripheral city, while around 44 percent was skilled, as against of 56 percent of the unskilled workers. The proportion of

skilled workers was significantly higher in Shivnagar colony (46.15 percent) than that of the proportion in Rajibnagar colony (42.45 percent).

Table (6.6.6): Level and Sources of Skill Acquisition Skill of the Workers in the Peripheral City

Squatter Settlements/ Sex/level of skill & sources		Level of Skill		Sources of Accruing Skill		
		Skilled	Unskilled	Learning by doing	Govt. Inst.	Private Inst.
Rajibnagar Colony	M	40 (50.63)	39 (49.37)	32 (80.00)	0 (0.00)	8 (20.00)
	F	5 (18.52)	22 (81.48)	2 (40.00)	0 (0.00)	3 (60.00)
	P	45 (42.45)	61 (57.55)	34 (75.56)	0 (0.00)	11 (24.44)
Shivnagar Colony	M	30 (46.88)	34 (53.13)	28 (93.33)	1 (3.33)	1 (3.33)
	F	6 (42.86)	8 (57.14)	1 (16.67)	1(16.67)	4 (66.67)
	P	36 (46.15)	42 (53.85)	29 (80.56)	2 (5.56)	5 (13.89)
Peripheral city	M	70 (48.95)	73 (51.05)	60 (85.71)	1 (1.43)	9 (12.86)
	F	11 (26.83)	30 (73.17)	3 (27.27)	1 (9.09)	7 (63.64)
	P	81 (44.02)	103 (55.98)	63 (77.78)	2 (2.47)	16 (19.75)

Source: Field Survey (Oct. 2010 – March 2011), .Figures in parentheses indicate the percentage of total employment.

The condition of female skilled workers was worse than that of the male counterpart in both the colonies and in the peripheral city as a whole. Based on gender, the difference between skill and unskilled workers was significantly high between the colonies ($\chi^2 = 18.88$, $P < .001$). In terms of different sources of acquiring skill, majority of the skilled workers acquired their skill through learning by doing, followed by private institutions and government institutions in both the colonies and in the peripheral city. While between the colonies, the percentage of workers who had acquired their skill through learning by doing and government institutions were far higher in Shivnagar colony than that of the proportions in Rajibnagar colony.

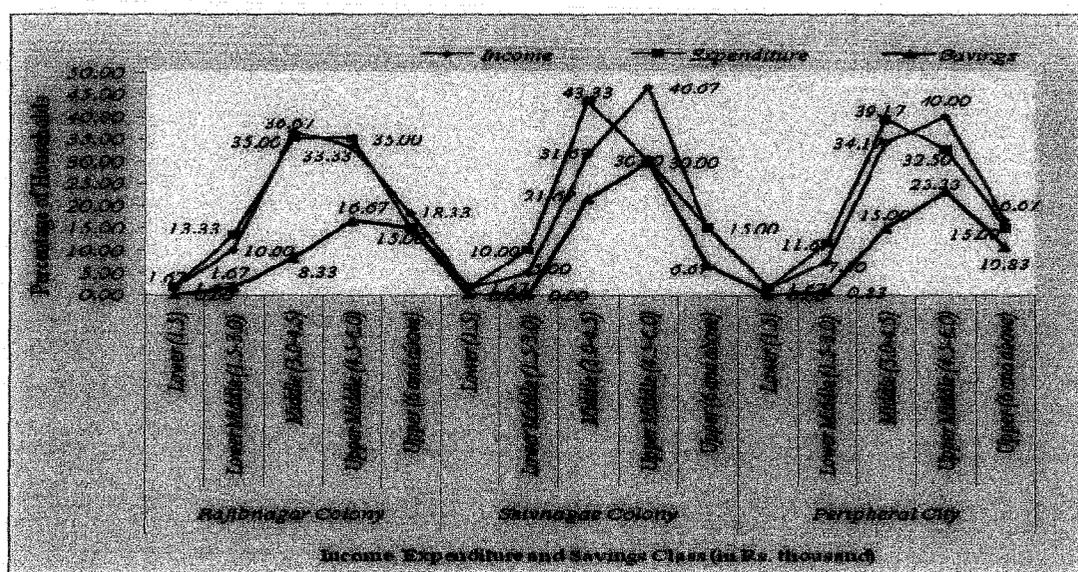
6.7 Income, Expenditure and Savings Profile of the Squatter Households in the Peripheral City of SMCA

6.7.1 Distribution of Households by different Income, Expenditure and Savings Class

The level of monthly income of the squatter households has been categorized into five classes. The households in the lower income group earning below Rs.1500, households in the lower middle income earning Rs.1500-Rs.3000, middle income class earning in the range of Rs. 3000-Rs.4500, upper middle income group earning Rs. 4500-Rs.6000 thousand and the households earning in the range of Rs.6000 and above per month falling under the upper income class. Figure (6.7.1) illustrates the

distribution of income, expenditure and savings pattern of the squatter households living in the peripheral city, where it is found that maximum number of the households at about 40 percent fall into the upper middle income class, followed by the middle income class (34.17 percent), upper income class (16.67 percent) lower middle income class (7.50 percent) and a very negligible proportion of the households about 2 percent falling in the lower income class. The Average monthly income of the household was about Rs 4684 with Standard Deviation of Rs.2065 i.e., the income differential among the household was significantly high in the peripheral city squatter settlements (Table-6.7.1).

Figure (6.7.1): Distribution Pattern of Income, Expenditure and Savings among the Households in the Peripheral City



Source: Field Survey (Oct. 2010 – March 2011)

Among the various income classes, the proportion of income of the households in almost all the classes was marginally higher in Rajibnagar colony than that of the proportions in the Shivnagar colony. In terms of average monthly earning of the households, no significant difference is observed between the colonies. But the income differential was slightly higher in Rajibnagar colony as compared to the Shivnagar colony. In terms of income classes, it is seen that some of the households in the peripheral city squatter settlements/slums are poor and some of them are economically well-off. This finding of the study is consistent with the statements of UN-HABITAT that not all the poor are living in the slums nor all the slum dwellers are poor.

So far as the expenditure by income class is concerned, it is observed that 43.33 percent of the households that are spending Rs.3000-Rs.4500 fall under the middle income class, 45 percent fall above the middle income class and 11.67 percent fall below the middle income class. Within colonies, the proportion of households that spending below the median class was marginally higher at 15 percent in Rajibnagar colony compared to 12 percent in Shivnagar colony. On the other hand, the proportion of households that spending above the median class was equal at 45 percent in both the colonies. The mean expenditure was around Rs. 4488 with SD of 1932 in the peripheral city, while the average expenditure of the households in Rajibnagar colony was marginally higher at about Rs. 4516.00 with SD of 2004 as compared to the mean expenditure of Rs. 4460.90 with SD of 1873.47 in Shivnagar Colony. No significant mean difference exists but the expenditure differential in terms of SD was marginally in Rajibnagar colony compared to Shivnagar colony (Table-6.7.1).

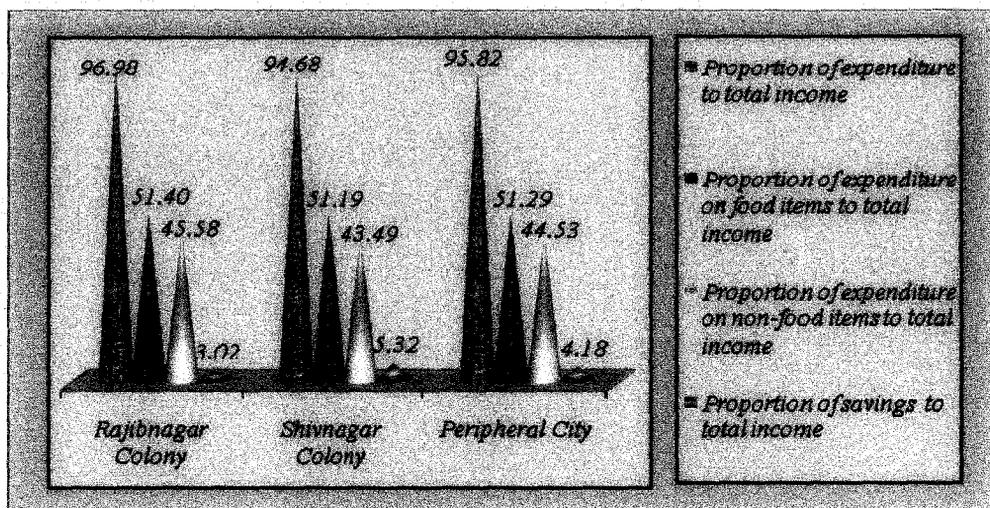
For the income classes, it is again found that 50 percent of the households had savings mostly with LIC, followed by banks and private financial institutions in the peripheral city. But, within colonies, households with savings were significantly higher at about 58 percent in Shivnagar colony as against 42 percent in Rajibnagar colony (Table 6.7.1, Appendix-D)

Savings in terms of income class show that only about 15 percent of the total households that had savings fall into the middle income class, about 1 percent fall below middle income class and 34 percent fall above middle income class. Within colonies, the households that has savings in the middle income class was more than 3 times higher in Rajibnagar colony compared to Shivnagar colony. Interestingly, below the middle income class no households with saving were there in Rajibnagar colony, as against about 2 percent in Shivnagar colony. On the other hand, the proportion of households having savings above the middle income class was far higher in Rajibnagar colony (36.67 percent) compared to colony Shivnagar (31.67 percent). The mean monthly savings of the households was about Rs. 196 in the peripheral city, while between the colonies, no significant difference is observed in the mean value of savings, but the differential in savings was higher in Shivnagar colony, as compared to the Rajibnagar colony.

6.7.2 Proportion of Expenditure and Savings to total Income

From the Figure (6.7.1), it is found that the proportion of expenditure to total income was about 95 percent among the squatter household in all the colonies and in the peripheral city as a whole. Regarding total expenditure on food and non-food items, more than 50 percent of the income spent on food items in all the colonies and peripheral city as a whole.

Figure (6.7.2): Proportion of Expenditure and Savings to total Income of the Households in the Peripheral City



Source: Field Survey (Oct. 2010 – March 2011)

On the other hand, the proportion of expenditure of the households on food items was around 51 percent, as against 45 percent on non-food items in the peripheral city. In each of the colonies, the proportion expenditure on food items was more or less equal about 51 percent, but it was slightly higher due to high burden of indebtedness in Rajibnagar colony (45.58 percent), as against 43.49 percent in Shivnagar colony. The savings pattern of the household by income classes in the peripheral city squatter settlements was very poor. It was about 4 percent in the peripheral city, but, the proportion of savings of the households was about 2 times higher in Shivnagar colony than that of the proportion in Rajibnagar colony.

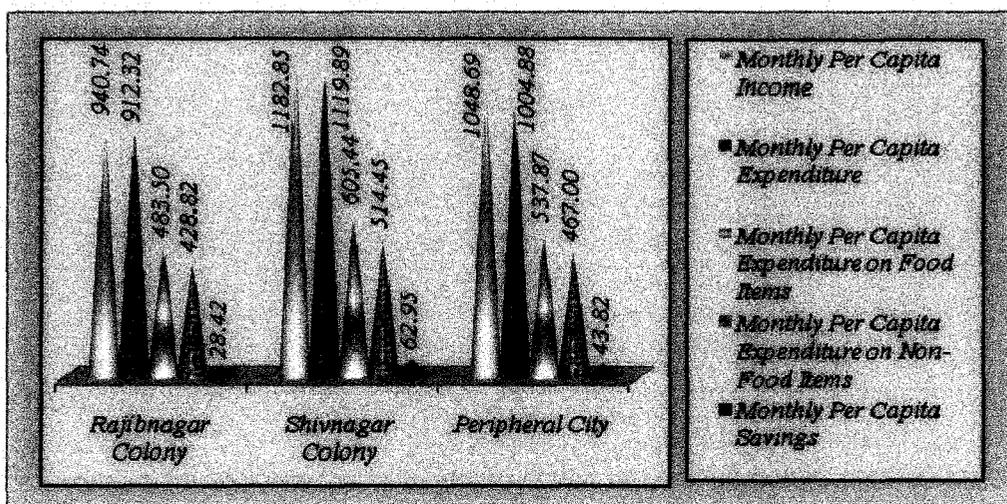
6.7.3 Monthly Per Capita Income, Expenditure and Savings

It is quite clear from the Table (6.7.3) that the monthly per capita monthly income of the squatters was around Rs. 1049 in the peripheral city. The monthly per capita

income of the households was much higher in Shivnagar colony (Rs. 1182.85) than that of the per capita income of the households in Rajibnagar colony (Rs.940.74).

The sample study found that the monthly per capita expenditure of the squatters was slightly lower than that of the monthly per capita income in all the squatter colonies and in the peripheral city.

Figure (6.7.3): Per Capita Income, Expenditure and Savings of the Squatters in the Peripheral City



Source: Field Survey (Oct. 2010 – March 2011)

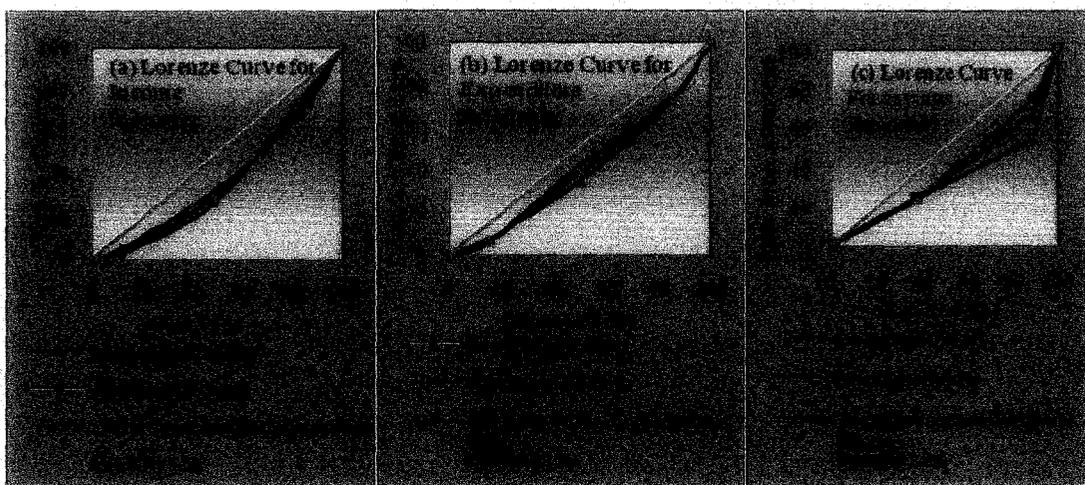
On the other hand, the monthly per capita expenditure on food items was significantly higher as compared to the per capita expenditure on non-food items in the peripheral city. Among the colonies, the monthly per capita expenditure on food and non-food items was quite high at Rs. 605.44 and Rs.514.45 respectively in Shivnagar colony, as against the per capita expenditure of Rs. 483.50 and Rs. 428.82 respectively in Rajibnagar colony. The reason behind high per capita expenditure on non-food items in Shivnagar colony was primarily due to high indebtedness of the households.

The poor level of savings has also been reflected in the monthly per capita savings of the households and it is found that the monthly per capita savings was Rs. 43.82 in the peripheral city and between the colonies monthly per capita savings of the squatter households was about 2 times higher in Shivnagar colony than that of the per capita savings in Rajibnagar colony.

6.7.4 Inequality in Income, Expenditure and Savings

From the sample study, a measure of inequality in terms of income, expenditure and savings have been shown by the Lorenze curve as in Figures -6.7.4; (a), (b) and (c). The income and expenditure inequalities in the peripheral city squatters were very low and more or less equal with the Gini-Coefficient 0.195 and 0.194 respectively. But the inequality of savings with Gini-coefficient of 0.139 in peripheral city was much lower than that of the income and expenditure inequalities.

Figure (6.7.4): Lorenz Curve of Income (a), Expenditure (b) and Savings (c) in the Peripheral City



Source: Field Survey (Oct. 2010 – March 2011)

The inequality in income and expenditure was quite high in Rajibnagar colony (with Gini-coefficient 0.213 and 0.211 respectively) as compared to the Shivnagar colony (with Gini-coefficient 0.175 and 0.176 respectively). Inequality in savings was very low in both the colonies, but it was much lower in Rajibnagar colony with Gini-coefficient of 0.077, as against the Gini-coefficient of 0.208 in Shivnagar colony. The higher the Gini-coefficient of savings, the higher is the propensity to save possibly due to higher level of income and low expenditure.

6.7.5 Expenditure on Food and Non-Food Items

Descriptive statistics regarding food and non-food items depicted in Table (6.7.2) show that the average expenditure of the households on total food items was about Rs 2402.50 in the peripheral city, while, it was marginally higher in Shivnagar colony (about Rs.2412) compared Rajibnagar colony (about Rs.2393). No significant difference is found in the mean expenditure of total food items between the colonies.

Table (6.7.5): Descriptive Analysis of Expenditure on Food and Non-Food items in the Peripheral City

Food and Non-Food Items/Squatter Settlements	Rajibnagar Colony		Shivnagar Colony		Peripheral City		ANOVA (Mean Difference)	
	Mean	SD	Mean	SD	Mean	SD	F Statistic	Sig.
Food Grains	773.33	323.05	620.00	258.94	696.67	301.52	8.23	0.005
Grocery (Other Than Food Grains)	496.67	188.63	561.67	143.9	529.17	170.22	4.5	0.036
Milk & Milk Product	134.05	101.07	151.67	101.66	142.86	101.33	0.91	0.343
Vegetables	297.5	97.17	324.17	74.49	310.83	87.25	2.85	0.094
Other Food Items*	691.78	455.7	754.17	603.96	722.98	533.66	0.41	0.524
Total Food Items	2393.33	966.89	2411.67	988.06	2402.5	973.46	0.01	0.918
Medical	79.82	105.2	71.27	76.4	75.54	91.65	0.26	0.612
Education	311.62	399.62	214.74	289.68	263.18	350.92	2.31	0.131
Fuel items	401.63	131.98	407.84	131.1	404.73	131.02	0.07	0.797
Electricity	117.08	79.66	150.82	104.47	133.95	94.04	3.96	0.049
Mobile	70.28	71.14	88.49	75.94	79.38	73.84	1.84	0.178
Entertainment	160.77	151.37	165	106.68	162.88	130.41	0.03	0.86
Rent & Loan Install.	651.07	944.24	625.99	733.77	638.53	842.11	0.03	0.871
Other Non-Food Items*	330.4	231.92	325.1	418.22	327.75	336.74	0.01	0.932
Total Non-Food Items	2122.67	1285.24	2049.25	1103.07	2085.96	1193.15	0.11	0.738

Source: Field Survey (Oct. 2010 – March 2011), *Note: Other food items that include fish, meat, fruits, fast food, drinks etc. and other non-food items that include clothes, house repairing, transportation, rituals, gambling etc.

Among the different food items, the mean expenditure was higher in other food items like fish, meat, fruits, fast food, drinks etc., followed by food grains, grocery, vegetables and milk and milk products. The expenditure differential was significantly high for almost all the food items especially for the other food items in the peripheral city. On the other hand, between the colonies significant difference is found in the mean expenditure of food grains and grocery ($P < .01$ and $P < 0.05$ respectively). Similarly, wide variations have also been found in the expenditure differential on various food items.

In terms of non-food expenditures, it is seen that the mean expenditure on total non-food items was around Rs. 2086 in the peripheral city, while, it was marginally higher in Rajibnagar colony (around Rs.2123) as compared to Shivnagar colony (Rs.2049). Among the various non-food items, the mean expenditure was higher on rent and loan installment, followed by fuel items, other non-food items that include clothes, house repairing, transportation, rituals, gambling etc., education, entertainment, mobile and medical expenses in the peripheral city. Within colonies, wide variations

have also been observed in the mean expenditure of different food items, but no significant difference is seen for the non-food items excluding electricity that was significant at 5 percent level ($P < 0.05$). The expenditure differentials were also significantly high for all the non-food items especially for rent & loan installment, other non-food and education in both the colonies and in the peripheral city. The study also found that the expenditure differential in both the food and non-food items as a whole was very high in the peripheral city, but the expenditure differential was significantly high on non-food items as compared to the food items because in this settlements the households spend more especially for repayment of loans and other non-food items like clothes, house repairing, transportation, rituals, gambling etc with the variations in income.

6.8 An Empirical Validation of the Engel's Law: Estimation of Marginal Propensity to Consume and Expenditure Elasticity in the Peripheral City (Table 6.8.1.)

The results following the same methodology adopted as mentioned in Chapter (V) with regard to the Engel's law. The values of the correlation co-efficient, Variance Inflated Factor (VIF) and Condition Index (CI) of the explanatory variables (total expenditure and family size) used for Engel's equation in the peripheral city squatter settlements suggests that there is no problem of multicollinearity (See Appendix-D Table 6.8 (i) & (ii)). The empirical study found that the MPC among the different food items was significantly high for other food items that include fish, meat, fruits, fast food, drinks etc. liquor, soft drinks, fruits etc (0.23), followed by food grains, grocery (0.07), vegetables (0.03) and milk and milk product (0.02), in the peripheral city. As a whole, the MPC on total food items stood at 0.42. Therefore, it is observed that out of the given increase in expenditure, 23 percent spent on other food items includes, 7 percent spent for each food grains and grocery, 3 percent spent on vegetables and 2 percent on milk and milk products and as a whole 42 percent is spent on food items in the peripheral city (Table-6.8.1). The study observed that due to one unit increase in expenditure, the MPC for other food items was significantly high. Within colonies, the MPC for almost all the food items was much higher in Rajibnagar colony as compared to the MPC of those items in Shivnagar colony (see Table-6.8.1). The only exception was the MPC on other food items that was notably lower in Rajibnagar colony. As a whole, the MPC on food items was significantly higher in Shivnagar

colony (0.45) than that of the MPC in Rajibnagar colony (0.39) i.e. with the given increase in consumption expenditure, 45 percent is spent on food items in Shivnagar colony and 39 percent in Rajibnagar colony.

On the other hand, the MPC among different non-food items was highest on rent & loan installment (0.27), followed by other non-food items such as clothes, house repairing, transportation, rituals, gambling etc (0.12), education (0.06), entertainment (0.04), electricity (0.03), medical and fuel items (0.02 each) and as a whole the MPC on total non-food items came to 0.44 in the peripheral city i.e. with the given increase in expenditure, 27 percent spent on rent & loan installment, 12 percent on other non-food items, 6 percent on education, 4 percent on entertainment, 3 percent on electricity and 2 percent on medical and fuel items each and as a whole 44 percent is spent on total non-food items. Between the colonies, wide variations in the MPC on different non-food items were observed. But, the MPC on total non-food items was far higher in Rajibnagar colony (0.62) as compared to the MPC of non-food item in Shivnagar colony (0.55). Therefore, it is observed that with the given increase in consumption expenditure, 62 percent is spent on total non-food items in Rajibnagar colony and 55 percent in Shivnagar colony.

Now, let us see, what changes took place in the expenditure on different food and non-food items due to an increase in family size of the household. Among the different food-items, an increase in family size led to an increase in expenditure on food grains, milk and milk products, other food items and total food items in the peripheral city. Between the colonies, an increase in family size also increased the expenditure for food gains, milk and milk products, other food items and total food as a whole in Rajibnagar colony as against food grains, grocery, milk and milk products, vegetables, and total food items in Shivnagar colony and thus the MPC is found to be highly positive.

Table (6.8.1): Estimation of Marginal Propensities to Consume on Food and Non-Food Items in the Peripheral City

Settlements/ Food & non-food Items		Rajibnagar Colony					Shivnagar Colony					Peripheral city				
		α	β_1	β_2	R ²	F statistic	α	β_1	β_2	R ²	F statistic	α	β_1	β_2	R ²	F statistic
Food Commodities	Total Food Items	321.43	0.39*** (10.92)	67.66*** (1.92)	0.741	81.70***	244.6	0.45*** (12.88)	35.66*** (0.88)	0.783	102.68***	312.5	0.42*** (16.91)	46.58 (1.83)	0.756	181.61***
	Food Grains	-19.37	0.09*** (7.42)	81.78*** (7.06)	0.750	85.37***	-67.05	0.06*** (7.70)	104.15*** (11.37)	0.84	149.46***	-58.40	0.07*** (10.05)	95.78*** (12.84)	0.783	210.72***
	Grocery (other than food grains)	185.62	0.07*** (7.96)	-2.23 (-0.25)	0.561	36.39***	318.49	0.05*** (6.78)	1.37 (0.15)	0.49	27.35***	265.6	0.07*** (10.45)	-5.85 (-0.92)	0.505	59.75***
	Milk & Milk Product	-31.34	0.03*** (4.27)	10.96 (1.90)	0.367	16.54***	18.36	0.01 (1.16)	24.57** (3.09)	0.219	7.98**	1.18	0.02*** (3.92)	13.85** (2.97)	0.246	19.08***
	Vegetable	146.01	0.03*** (6.48)	0.56 (0.11)	0.467	25.01***	172.45	0.03*** (8.85)	4.21 (1.07)	0.640	50.77***	166.69	0.03** (10.33)	-0.36 (-0.11)	0.513	61.57***
	Other Food Items	40.52	0.17*** (7.43)	-23.40 (-1.02)	0.509	29.57***	-	0.30*** (13.18)	-98.63*** (-3.73)	0.755	87.91***	-62.61	0.23*** (13.60)	-56.85** (-3.25)	0.617	94.41***
Non-Food Commodities	Total Non-Food Items	-	0.62*** (17.47)	-67.66 (-1.92)	0.854	166.22***	-244.6	0.55*** (15.50)	-35.66 (-0.88)	0.826	134.99***	-312	0.58*** (23.42)	-46.58 (-1.83)	0.838	302.21***
	Medical	53.36	0.01 (1.66)	-5.80 (-0.79)	0.046	1.39	-23.42	0.03*** (7.58)	-11.20* (-2.35)	0.504	28.93***	13.87	0.02*** (4.80)	-7.04 (-1.56)	0.165	11.55***
	Education	-	0.11*** (4.54)	-8.82 (-0.37)	0.287	11.45***	-238.8	0.02 (0.88)	96.19*** (4.63)	0.342	14.82***	-202	0.06*** (4.10)	38.59* (2.36)	0.227	17.23***
	Fuel Items	252.74	0.03** (3.14)	5.83 (0.69)	0.198	7.05**	283.87	0.01 (1.05)	19.98 (1.82)	0.108	3.45*	272.3	0.02** (3.08)	10.19 (1.58)	0.134	9.06***
	Electricity	29.55	0.03*** (7.14)	-9.30* (-2.25)	0.474	25.67***	2.21	0.03*** (4.11)	6.35 (0.82)	0.293	11.81***	26.19	0.03*** (7.49)	-5.70 (-1.40)	0.333	29.18***
	Mobile	1.29	0.02*** (4.38)	-3.58 (-0.82)	0.261	10.05***	-9.36	0.02*** (4.41)	0.37 (0.07)	0.287	11.49***	1.31	0.02*** (6.39)	-3.45 (-1.03)	0.269	21.50***
	Entertainment	-32.83	0.05*** (6.42)	-8.70 (-1.07)	0.433	21.76***	27.78	0.02** (3.28)	8.08 (0.97)	0.225	8.27**	-3.68	0.04*** (7.07)	-2.01 (-0.35)	0.324	28.02***
	Rent & loan Install.	-	0.30*** (5.68)	-20.32 (-0.38)	0.398	18.07***	-	0.23*** (4.87)	-73.70 (-1.35)	0.296	11.99***	-	0.27*** (7.50)	-35.32 (-0.99)	0.339	30.05***
	Other Non-Food items	-	0.07*** (4.57)	-16.98 (-1.19)	0.272	10.64***	-	0.19*** (9.23)	-81.76** (-3.50)	0.599	42.62***	-30.08	0.12*** (9.07)	-41.16** (-3.01)	0.413	41.19***

Note: Figures under brackets show "t" Values, *** represents p < 0.001 ** represents p < 0.01 and * represents p < 0.05

It has already been mentioned that an increase in one unit of family size may decrease the expenditure on food and non-food items and the resulting MPC for those items are found to be negative. Among the different food items, one unit increase in family size curtailed the expenditure on grocery, vegetables and other non-food items and thus the MPC for those items has been found to be negative. On the other hand, within colonies, an increase in family size curtailed the expenditure on grocery and other food items in Rajibnagar colony and other food items in Shivnagar colony. The MPC for these items has been found to be the negative in both the colonies.

The study also shows that an increase in family size further curtailed the expenditure on total non-food items, where the MPC came with negative value in both the colonies and in the peripheral city as whole. But, for non-food items, an increase in family size increased the expenditure on education and fuel items in the peripheral city, fuel items in Rajibnagar colony and education, fuel items, electricity, mobile, and entertainment in Shivnagar colony. The resulting MPC for these non-food items in both the colonies and in the peripheral city also increased. On the other hand, among the various non-food items an increase in family size curtailed the expenditure on medical expenses, electricity, mobile, entertainment, rent and loan installment and other non-food items and thus the MPC for those items has been found to be highly negative in the peripheral city. But between the colonies, the MPC for all the items decreased excluding fuel item in Rajibnagar colony. In Shivnagar colony, the MPC on medical expenses, rent and loan installment and other non-food items decreased with respect to increase in family size.

To sum, it is found that among all the squatter colonies and in the peripheral city as a whole, an increase in family size increased the expenditure significantly on some food and non-food items and the resulting MPC for all those commodities that has been found to be positive. In contrast, within food and non-food items, an increase in family size curtailed the expenditure on some non-food items. As mentioned earlier that such increase and decrease in expenditure on some food /non-food items with respect to increase in family size may be due to diseconomies and economies of scale.

The nature of the commodities has been classified on the basis of sign and magnitude of the elasticity depicted in Table (6.8.2), where it is evident that the expenditure elasticity of total food items was less than unity fall under the essential

Table (6.8.2): Estimation of Expenditure Elasticity on Food and Non-Food Items in the Peripheral City

Settlements/ Food & non-food Items		Rajibnagar Colony					Shivnagar Colony					Peripheral city				
		α	β_1	β_2	R ²	F statistic	α	β_1	β_2	R ²	F statistic	α	β_1	β_2	R ²	F statistic
Food Commodities	Total Food Items	1.33	0.75*** (12.07)	0.12 (1.88)	0.805	117.9 ***	-0.83	1.03*** (43.11)	-0.01 (-0.11)	0.973	1020.41 ***	-	0.10*** (43.84)	0.001 (0.02)	0.949	1083.16 ***
	Food Grains	0.55	0.65*** (7.94)	0.39*** (4.84)	0.751	86.09 ***	-2.40	0.98*** (37.32)	0.47*** (7.02)	0.969	879.59 ***	-	0.94*** (32.15)	0.41*** (7.43)	0.923	703.70 ***
	Grocery (other than food grains)	1.06	0.62*** (8.09)	-0.03 (-0.04)	0.599	42.57 ***	-1.87	1.01***	(-0.17*)	0.948	523.08 ***	-	0.97*** (31.94)	-0.20** (-3.48)	0.902	539.65 ***
	Milk & Milk Product	10.21	1.64*** (5.22)	0.66* (2.12)	0.508	29.45 ***	-2.40	0.78*** (10.14)	0.50* (2.54)	0.707	68.64 ***	-	0.87*** (8.94)	0.62** (3.35)	0.517	62.71 ***
	Vegetable	0.242	0.65*** (8.68)	-0.03 (-0.43)	0.632	48.88***	-1.93	0.94*** (36.24)	-0.151* (-2.26)	0.961	698.07***	-	0.91*** (34.93)	-0.17** (-3.37)	0.917	649.37***
	Other Food Items	-1.81	1.01*** (6.64)	-0.17 (-1.13)	0.474	25.66***	-2.49	1.12*** (21.38)	-0.31* (-2.31)	0.893	237.94***	-	1.10*** (22.33)	-0.25** (-2.74)	0.818	262.12***
Non-Food Commodities	Total Non-Food Items	-2.96	1.28*** (17.04)	-0.14 (-1.93)	0.862	177.43 ***	-	0.98*** (33.71)	0.003 (0.05)	0.956	625.09 ***	-	1.01*** (37.08)	-0.01 (-0.26)	0.929	771.14 ***
	Medical	-0.48	0.57 (1.86)	-0.21 (-0.69)	0.059	1.78	-2.43	0.80*** (12.50)	-0.19 (-1.16)	0.742	81.83 ***	-	0.78*** (9.37)	-0.24 (-1.56)	0.436	45.29 ***
	Education	-5.08	0.61 (0.74)	2.76** (3.36)	0.257	9.87 ***	-5.40	0.30 (0.99)	4.23*** (5.48)	0.398	18.84 ***	-	0.35 (1.23)	3.77*** (7.13)	0.359	32.79 ***
	Fuel Items	2.99	0.35** (3.43)	0.04 (0.40)	0.242	9.11 ***	-1.84	0.96*** (20.07)	-0.14 (-1.13)	0.888	214.57 ***	-	0.89*** (20.64)	-0.151 (-1.87)	0.795	277.39 ***
	Electricity	-2.09	0.86*** (6.51)	-0.30* (-2.27)	0.436	22.00 ***	-2.42	0.88*** (13.74)	-0.08 (-0.49)	0.781	101.75 ***	-	0.89*** (16.69)	-2.23* (-2.40)	0.712	144.96 ***
	Mobile	-8.78	1.51* (2.17)	(-0.43) (-0.62)	0.082	2.54	-2.77	0.76** (3.67)	0.19 (0.36)	0.217	7.92 **	-	0.85*** (3.98)	-0.16 (-0.39)	0.126	8.41 ***
	Entertainment	-2.84	1.00*** (5.33)	-0.42* (-2.28)	0.335	14.36 ***	-2.18	0.87*** (12.82)	-0.11 (-0.61)	0.755	87.95 ***	-	0.89*** (14.19)	-0.26* (-2.17)	0.641	104.40 ***
	Rent & loan Install.	-	2.77* (2.46)	0.92 (0.82)	0.175	6.03**	-3.81	1.09* (2.63)	-1.10 (-1.04)	0.109	3.50*	-	1.23** (3.16)	0.17 (0.23)	0.098	5.95**
	Other non food items	-4.91	1.34*** (7.18)	-4.44* (-2.37)	0.487	27.04***	-2.39	0.96*** (15.30)	-0.09 (-0.54)	0.816	126.06***	-	1.01*** (16.51)	-0.18 (-1.53)	0.713	145.31***

Note: Figures under brackets show "t" Values, *** represents $p < 0.001$ ** represents $p < 0.01$ and * represents $p < 0.05$

commodity group in the peripheral city. Between the colonies, total food item as a whole was essential items in Rajibnagar colony, but, surprisingly it was relative luxury in Shivnagar colony implies that the poor households are consuming more to meet their desired level of food items and as a result the proportional increase in food items is greater than the proportional increase in total expenditure.

From Table (6.10.2) it is also found that the expenditure elasticity was less than or near unity for almost all the food items that fall under the essential commodity groups excluding other food-food items that include fish, meat, fruits, fast food, drinks etc. fall under relative luxury items with greater than unit elasticity in the peripheral city. The expenditure elasticity for almost all the food items among the squatters were greater than unity falling under the essential commodity group, except milk and milk products and other food items that fall under the category of relative luxury in Rajibnagar colony. Similarly, grocery, other food items fall under luxury commodity items in Shivnagar colony.

On the other hand, total non-food items with greater than unit elasticity fall under relative luxury items in the Rajibnagar colony and in the peripheral city as a whole. The only exception was Shivnagar colony, while total non-food items fall under essential category with the expenditure elasticity of less than unity. Among the different non-food items, the expenditure elasticity for medical expenses, education, fuel items, electricity, mobile expenses and entertainment were less than unity and fall under the essential items. In contrast, the expenditure elasticity was greater than unity for rent and installment and other non-food items that shows the characteristics of relative luxury items in the peripheral city. High expenditure elasticity (greater than unity) under relative luxury items supports the well-known Engel's law.

In both the colonies, it is evident that the non-food items like medical expenses, education, fuel items and electricity fall under the essential items. On the other hand, mobile, entertainment, rent and loan installments and other non-food items fall under relative luxury items commodity in Rajibnagar colony. Interestingly, the expenditure elasticity for almost all the non-food items were less than unity fall under the essential categories excluding rent and loan installment that fall under the category of relative luxury with greater than unit elasticity in Shivnagar colony.

The elasticity with respect to family size for the food items like grocery, vegetables, other food items and non-food items like medical expenses, fuel, electricity, mobile, entertainment and other non-food items in the peripheral city were negative implies that with an increase in the family size, holding total expenditure and other things constant, the households spend less on these commodities. A more or less similar pattern of elasticity with respect to family size is observed in both the colonies.

The study revealed that the expenditure elasticity for the food items as a whole in the peripheral city has been found to be less than unity supporting the Engel's law implies that the food items is an essential or necessity for all the time. The expenditure elasticity for some of the non-food items found greater than unity fall under luxuries commodities. The proportion of expenditure on all such commodity items increased due to increase in total expenditure and aligned with Engel's law. Such consumption behavior of the migrant squatter households in the peripheral city indicates that they allocate their increase in expenditure between food and the non-food items as they come from below the subsistence level of living.

6.9 Financial Capital of the Sample Households in the Peripheral City Squatter Settlements of SMCA

6.9.1 Indebtedness of the Households

Indebtedness of the people depends on several factors and is a reflection of the socio economic condition of the community or segment of population. It is expected that if the per capita expenditure is lower than that of the per capita income, then the households will be free from indebtedness. But, in reality the sample study shows that a large number of the squatter households are living with high indebtedness either with formal, informal or with both the sources. Out of 120 sample households in the peripheral city, the proportion of households with indebtedness was about 57 percent. Between the colonies, the proportion of indebtedness was marginally higher at about 58 percent in Rajibnagar colony as against 55 percent in Shivnagar colony (Table-6.9.1).

Table (6.9.1): Indebtedness of the Squatter Households in the Peripheral City

Indebtedness by Sectors/ Squatter Settlements		Rajibnagar Colony	Shivnagar Colony	Peripheral City
Total Number of Households		60	60	120
Sources of Loans/Credit	Formal Sources	27 (45.00)	28 (46.67)	55 (45.83)
	Informal Sources	4 (6.67)	1 (1.67)	5 (4.17)
	Both the Formal & Informal Sources	4 (6.67)	4 (6.67)	8 (6.67)
	Total Indebtedness of the Households	35 (58.33)	33 (55.00)	68 (56.67)
Purpose of Loans/Credit	Set up new business	15 (42.86)	27 (81.82)	42 (61.76)
	Expansion of Business	4 (11.43)	2 (6.06)	6 (8.82)
	Health Care & Food Consumption	3 (8.57)	0 (0.00)	3 (4.41)
	Weeding/Rituals	3 (8.57)	2 (6.06)	5 (7.35)
	Education	0 (0.00)	0 (0.00)	0 (0.00)
	House Construction	10 (28.57)	2 (6.06)	12 (17.65)
	Total	35 (100.00)	33 (100.00)	68 (100.00)

Source: Field Survey (Oct. 2010 – March 2011).

In terms of different sources of loans, maximum number of households in both the colonies and in the peripheral city have taken loans from formal sources (like SHG, PF, Bank, Bandhan, Private Financial Institution etc.), followed by both formal and informal sources and informal sources (money lender, friends and relatives, neighbours etc) for the purpose of setting up of new business, house construction, expansion of business, wedding, health care and food consumption, etc. The study found that there were no households who accessed in public institutional loans in both the colonies and in the peripheral city. The study also evidenced that the reasons behind the lack of public institutional loans were mainly due to insecure land tenure, lack of collateral assets for mortgage and fear of repayment of loans on time. Between the colonies, the percentage of households having formal loans was slightly higher at about 47 percent in Shivnagar colony as compared to 45 percent in Rajibnagar colony, whereas wide differences were seen among the households accessing informal sources of loans. An interesting point was noted that none of the households taken loans for the purpose of children's education in the colonies and in the peripheral city as a whole.

6.10 Quality of Life Index of the Squatter Households in the Peripheral City of SMCA

6.10.1 Interpretation of the Results

The composite index based on quality of life among the squatter households in the peripheral city shown in Table (6.10.1) is obtained using the same methodology adopted in Chapter (V). From the empirical study, it is found that a greater number of

the households in the peripheral city had poor quality of life (36.67 percent), followed by the household with moderate (35.83 percent), fair (14.17 percent), bad (10 percent) and the households with good quality of life was only 3.33 percent in terms of all socio-economic variables. Classifying the quality of life index further into three categories as overall poor (bad and poor taken together), moderate and overall fair (fair and good taken together), it is found that majority of the households at 46.67 percent had overall poor quality of life, followed by moderate (35.83) and overall fair quality of life (17.50 percent) in the peripheral city. Within colonies, a considerable number of the household had moderate quality of life in Rajibnagar colony (41.67 percent), followed by poor (36.67 percent), fair (11.67 percent), bad (8.33 percent) and good quality of life (1.67 percent) i.e. as a whole 45 percent of the households leads to overall poor quality of life, as against 13.34 percent of the households with overall fair quality of life.

The proportion of household with poor quality of life was higher in Shivanagar colony (36.67 percent, followed by moderate (30 percent), fair (16.67 percent), and bad (11.67 percent)

Table (6.10.1) Distribution of Quality of Life Index among the Squatter Households in the Inner City

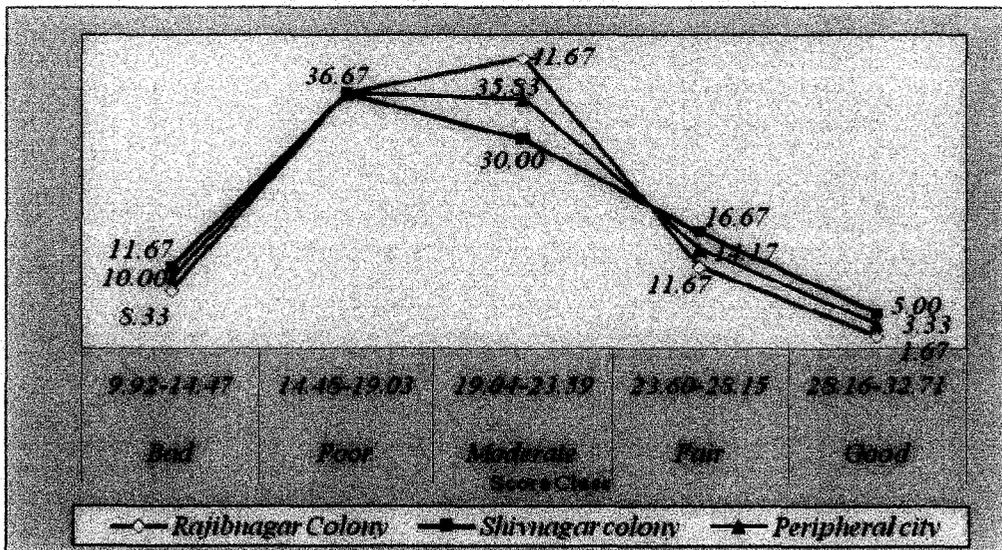
QOL	Score Class	Rajibnagar Colony	Shivanagar Colony	Peripheral City
Bad	9.92-14.47	5 (8.33)	7 (11.67)	12 (10.00)
Poor	14.48-19.03	22 (36.67)	22 (36.67)	44 (36.67)
Moderate	19.04-23.59	25 (41.67)	18 (30.00)	43 (35.83)
Fair	23.60-28.15	7 (11.67)	10 (16.67)	17 (14.17)
Good	28.16-32.71	1 (1.67)	3 (5.00)	4 (3.33)
TOTAL		60 (100.00)	60 (100.00)	120 (100.00)

and good quality of life (5 percent). As a whole, about 48 percent of the households had overall poor quality of life, as against 21.67 percent with overall fair quality of life. Instead of having wide variations, the percentage of households with bad quality of life was significantly higher in Shivanagar colony as compared to the Rajibnagar colony. In contrast, the percentage of households with good quality of life was about 3 times higher in Shivanagar colony as compared to Rajibnagar colony. Similarly, the percentage of households with fair quality of life was significantly high in Shivanagar colony, as compared to Rajibnagar colony (See Table.6.10.1). The number of households with poor quality of life was equal at about 37 percent in both the colonies.

Figure (6.10.1) represents the quality of life for all the squatter colonies and the peripheral city squatter settlement as a whole. The graph that emerged from the index of quality of life is interesting. In the colonies, it is clear that the locus of distribution of households of the score classes is relatively close to the Y axis in Shivnagar colony representing the overall poor quality of life. At the same time, the locus of distribution of households is relatively away from the y axis representing the overall better quality of life.

Now, focusing the reasons behind the overall poor and fair quality of life of the households, it is found that instead of having higher levels of income and the value of physical assets of the households in Shivnagar colony, the overall poor quality of life was far lower in Shivnagar colony as compared to the Rajibnagar colony. Therefore, the study on quality of life in the peripheral city squatter settlements also supported the fact that overall better quality of life not necessarily depends on the level of income but the demographic, physical and social set of variables are also crucial factor for leading good quality of life.

Figure (6.10.1): Distribution of Squatter Households by Quality of Life Index in the Peripheral City



The fact is that in each of the squatter colonies, some of the households have been able to improve their economic well being but their overall living condition in terms of duration of residence, family size, education, health and sanitation, infrastructural facilities and community involvement are not at the desired level.

6.11: Conclusion

The sample peripheral city squatter settlements are located in the outer boundaries of the SMCA, where relatively the new migrants reside. The squatters in these settlements are mostly from the neighbouring rural districts and states. A large number of them moved to SMCA for economic reasons with economic push and pull factors playing a crucial role, though some non-economic factors were also responsible. In terms of caste, religion, marital status, the squatters belong to heterogeneous groups. So far as human capital is concerned, the levels of education were better in the peripheral city compared to the inner city, but the problem was much acute in the provision of basic services and infrastructure, compared to the inner city. The squatters in the peripheral city were mostly involved in informal activities, where a greater number of workers were engaged in self-employment followed by casual and salaried employment. With regard to value of the physical assets, level of income, expenditure and savings, the sample study observed that some squatter households are very poor and some have achieved relatively high economic well-being. Insecure land tenure, lack of collateral assets for mortgage and fear of repayment defaults, were the main constraints in access to public institutional loans/credit. The expenditure pattern based on the validation of Engel's Law on food and non-food items in the peripheral city show almost similar results as of the inner city. Classifying the quality of life index further into three categories as overall poor (bad and poor taken together), moderate and overall fair (fair and good taken together), it is found that majority of the households at 46.67 percent had overall poor quality of life, followed by moderate (35.83) and overall fair quality of life (17.50 percent) in the peripheral city. The colonies taken together, 45 percent of the households is leading overall poor (bad and poor taken together) quality of life, as against 13.34 percent with fair (fair and good taken together) quality of life.

CHAPTER: VII

MIGRATION, LIVELIHOOD OPPORTUNITIES AND THE INFORMAL SECTOR IN THE CONTEXT OF INFORMAL SETTLEMENTS UNDER SILIGURI MUNICIPAL CORPORATION: A SYNTHESIS OF THE EXPERIENCES OF THE URBAN POOR

7.1 Introduction

Finally, a synthesis of the experience between the inner and peripheral city squatter settlements of SMCA is attempted in this section. In the context of demographic, social characteristics, migration, livelihood opportunities including economic activities, a comparison has been made between the squatters of inner and peripheral city. The findings of the sample study between the settlements have also been compared with various research studies along with the slum statistics of the state and the country as a whole, as well as metropolitan cities in India.

7.2 Demographic and Social Characteristics of the Sample Inner and Peripheral City Squatter Settlements of SMCA under Study

7.2.1 Population, Duration of Residence, Family Size, and Sex Ratio

The sample inner city squatter settlement of SMCA was bigger in size with 678 squatters (constituting 52.31 percent male and 47.79 percent female), as against 536 squatters (with 48.51 percent male and 51.49 percent female) in the peripheral city. Simultaneously, the average family size of the former was higher at about 6 members compared to 4 members in the latter. The sex ratio in the inner city was 915, significantly lower than that of the sex ratio of 1054 in the peripheral city. The sample study also found that the average family size of the household was significantly higher in the inner city than that of the average family size of the million plus cities like Delhi, Kolkata, Mumbai (about 5) and Chennai (about 4) (NFHS-3, 2005-06). The sex ratio of the squatters in both squatter settlements of SMCA was not only significantly higher than that of the sex ratios of the million plus cities like greater Mumbai (770), Delhi (780), Kolkata (805), but also higher than the sex ratio of the state (854) and the country as a whole (876) (NIUA, 2008). The higher sex ratio in the peripheral city was due to higher migration of more females.

The sample study observed that the average family size was much higher in Muslim households. In terms of castes, the family size was higher in General Caste, followed by Scheduled Caste, Scheduled Tribe and Other Backward Class in both inner and peripheral settlements. The high average family size in terms of religion and caste indicates high birth rate in those communities.

7.2.2 Social Characteristics

So far as social caste is concerned, majority of the squatters in the inner city squatter settlement were SC (54.72 percent), followed by general caste (42.04 percent) and OBC (3.24 percent). In contrast, a greater number of squatters in the peripheral city belongs to general caste (53.36 percent), followed by SC (39.55 percent), OBC (4.85percent) and ST (2.24 percent). In terms of social castes, the squatters were highly heterogeneous between the cities ($\chi^2 = 39.63$, $P < .001$). The proportion of SC/ST squatters in the sample study of both the inner and peripheral cities in SMCA was significantly higher than that of the proportion of SC/ST in India (17.4 and 2.4 percent respectively) and the state (13.8 and 1.2 percent respectively), (Census 2001, Slums of India, Vol.1). On the other hand, a study by NFHS-3 (2005-06) on the eight Indian cities evidenced that the proportion of SC/ST/OBC was highest in the census slums of Chennai (97 percent, including 61 percent OBC), followed by Delhi (57.3 percent, including 19.2 percent OBC), Mumbai (28.5 percent, including 15.6 percent OBC) and Kolkata (16.6 percent including 2.6 percent OBC). The present study of the inner and peripheral city squatter settlements also show that the proportion of slum dwellers belongs to SC/ST/OBC were significantly higher in SMCA as compared to the proportion of SC/ST/OBC in the metropolitan cities like Kolkata and greater Mumbai.

The sample study also found that the majority of the squatters in the inner and peripheral city were Hindus, followed by Muslims and a very negligible proportion of the squatters were Christians living in the peripheral city only i.e., the squatters were significantly heterogeneous in terms of religion between the settlements ($\chi^2 = 75.66$, $P < .001$). The inner city was dominated by squatters with Hindi mother language (70.80 percent) and in contrast peripheral city dominated by Bengali as their mother tongue (61.75 percent). The squatters in terms of mother language were also heterogeneous between the cities ($\chi^2 = 128.99$, $P < .001$). Together, around 45 percent of the squatters were married in both the inner and peripheral city. The proportion of

male and females married, abandoned and widows in the peripheral city were marginally higher than that of the proportions in the inner city.

7.2.3 Distribution of Squatters by Age Groups and Dependency Ratio

The study found that the proportion of children below 15 of years in the inner city was 1.4 times higher in the than that of the proportion in the peripheral city indicating the higher fertility rate in the inner city as compared to the peripheral city. On the other hand, the proportion of young (economically active group) squatters in the age group of 15-29 years was significantly higher due to high natural growth and in migration into the inner city squatter settlements, as compared to the peripheral city. On the other hand, the percentage of aged squatters (65 & above) in the inner city was about 7 times higher than that of the peripheral city, due to longer duration of residence. The percentage of female squatters in almost all the age groups in the inner city was also higher than that of the male counterpart.

A high dependency ratio exerts economic pressure on the household and thereby reduces well being of the squatter. In the sample study, paradoxically, the dependency ratio was significantly higher in peripheral city (56.73 percent) as compared to the inner city (49.45 percent) in spite of higher proportions of minor and older dependents in the inner city. In terms of gender, the male dependency ratio was far higher about 60 percent in the peripheral city, as against 45.68 percent in the inner city. In terms of religion, the higher the Muslim squatters, the higher was the dependency ratio, but the correlation was not significant. The correlation was positively significant between dependency ratio and the number of Hindu squatters at 5 percent level ($r^2 = 0.197$) in the peripheral city (Table 6 (a), Appendix-D)

7.3 Migration Characteristics of the Households in the Inner and Peripheral City Squatter Settlements of SMCA

7.3.1: Migration by Generation and Reasons

Migration is one of the most important components in the demographic profile of SMCA. In terms length of residence, the inner city squatter households were about 4 times older about 39 years) than the households in the peripheral city (10 years). The migrant household in first generation was around 84 percent in the inner city, as against 100 percent in the peripheral city. In contrast, the migrant households in other than first generation was about 16 percent in the inner city, but it was nil in the peripheral city. Most of the migrant households in the inner city squatter settlements

were from the poor BIMARU states, followed by international migrants particularly from Bangladesh and Pakistan. On the other hand, majority of migrant households in the peripheral city were from poor neighboring districts (namely Coochbehar, Jalpaiguri, Uttar and Dakshin Dinajpur and Malda). The study also observed a positive correlation between the migration of Muslim households and length of residence at 5 percent level ($r^2=0.196$) in the inner city, but in the peripheral city the correlation between them was positive but not significant. In both the inner and peripheral city, over 86 percent of the migrant households were male headed. The sample study conformed to the finding of the study by Mitra (1994) where it has been shown that urbanization is not only the outcome of huge inflow of rural population, but the natural growth is also an important reason.

In terms of gender, the first generation female migrants in both the cities are significantly higher than that of the males due to more female in migration. On the other hand, female migrants in other than first generation were more than double in the inner city (49.38 percent), as against the peripheral city as a whole (19.93 percent) probably due to high female birth rate. Thus, based on the above male and female migration in first and other than first generation, significant heterogeneity has been found between the cities ($\chi^2 = 225.89$, $P < .001$ respectively).

So far as the reasons behind migration is concerned, the study shows that the migration due to economic reason was almost double in peripheral city (84.02 percent) compared to the inner city (48.45 percent). Between settlements, female migration owing to non-economic reason (nuptiality) was about 4 times higher in the inner city as compared to the peripheral city i.e., based on male and female migration due to economic and non-economic reasons, significant difference is found between the settlements ($\chi^2 = 172.23$, $P < .001$). The reasons behind the lower level of economic migration in the inner city discussed in the later. On the other hand, among the non-economic reasons, the migration owing to marriage was also overwhelmingly higher in the inner city (75.19 percent), as compared to the peripheral city (57.58 percent) and the opposite scenario is also true for the migration due to other than marriage in both the cities i.e., based on the male and female migration by non-economic reasons, significant difference has been found between the cities ($\chi^2 = 101$, $P < .001$). The finding of the sample study is consistent with the study conducted by Mitchell (1959), Safa (1975) that most of the migration other than forced migration

moves to cities for better economic opportunities is viewed as an economic phenomenon, though some non economic factors are also involved in migration.

7.3.2 Streams of Migration (First Generation)

In a democratic set-up every one has the right to live, to move free and to do work anywhere in the country i.e. migration as a socio-economic process cannot be stopped and as a result frequent and large inflow of rural population to the cities in search of better socio-economic opportunities exerts pressure on existing infrastructure and amenities causing life to be difficult in the cities for the poor migrants. If we observe the scenario of urban migration by streams, it will be seen that in 2001, inter-district migration was significantly higher (34.0 percent) in SMCA, followed by intra-district (37.10 percent), inter-state (26.40 percent) and international (2.5 percent) (Census, 2001). In contrast, the present sample study of squatter settlements in both the inner and peripheral city of SMCA recorded that the majority of the squatters (about 59 percent) were inter-state migrants in the inner city. However, a large number of the squatters in the peripheral city were inter-district migrants (63.44 percent). On the other hand, the proportions of inter-state and international migration to the inner city was about 3 and 13 times higher than that of the proportions in the peripheral city. The proportion of inter-district and intra-district migration in the inner city was about 3 and 2 times lower than that of the proportions in the peripheral city. In terms of gender, the proportion of female inter-state and intra-district migrants was quite higher than that of the males in both the inner and peripheral city squatter settlements. Therefore, based on male and female migration by streams, significant heterogeneity has been found between the cities ($\chi^2 = 162.10$, $P < .001$).

Regarding migratory movement, more than 80 percent of the squatters were from rural areas in both the inner city and peripheral city. Only in the case of urban-urban migration, proportion of female squatters was slightly higher than that of the male counterpart in both the cities. Based on male and female rural-urban migration, significant difference is seen between the cities ($\chi^2 = 4.47$, $P < .001$). Therefore finding is in the line with the study of Islam (1999), Aziz (1984) and Mangin (1967) and several others that show that most of the squatters in the city areas are from rural origin.

7.3.3 Push and Pull Factors of the Migrant Households (First generation)

In terms of migration and related push and pull factors, the present study found that the migration due to economic reasons was overwhelmingly higher among the first generation squatter households in both the cities. It was around 78 percent in the inner city as against 85 percent in the peripheral city. Instead of having wide differences in the push factors of migration in both the cities, majority of the squatter households had migrated due to non-availability of work/unemployment, followed by income differential and poverty. Economic push and pull factors are often complementary to each other and thus the migration due to greater employment opportunity was supported by non-availability of work at the origin. Differential wage rate was another crucial reason for migration.

Among the non-economic push factors, majority of the migration into the inner city was due to Bangladesh war of independence in 1971 (50 percent), followed migration owing to partition of India 1947 (18.18 percent), ecological displacement due to floods, soil erosion, droughts (18.18 percent), family conflict (9.09 percent) and ethnic violence due to anti Bengali riots in Assam (4.55 percent). On the other hand, in the peripheral city, a greater number migrated due to family conflict (61.11 percent), followed by ecological displacement due to floods, soil erosion, droughts (22.22 percent), war of Bangladesh in 1971 (11.11 percent) and ethnic violence (5.56 percent). The non-economic pull factors are also complementary to non-economic push factors and hence it is observed that more than 72 percent of migration was due to social security/safety, as against 28 percent for better future prospects in the inner city. The picture was quite different in the peripheral city, where more than 83 percent of the migration was due to better future prospects. In terms of migration due to non-economic push and pull factors, significant difference is observed between the cities ($\chi^2 = 16.22$, $P < .01$ for non-economic push factors and $\chi^2 = 12.48$, $P < .001$ for non-economic pull factors). Similar findings have been found in the studies of Lewis (1954), ILO (1966), Lee (1966), Todaro (1969, 1976), Beier et al (1976), Papola (1981), Gilbert and Gugler (1982), Sundari (2003) where unemployment/unavailability of employment, income differential and poverty are the major contributing economic push factors of migration and high employment opportunities and high wage rate in the city areas are the crucial pull factors of migration. On the other hand, the non-economic push and pull factors like

Bangladesh war in 1971, partition of India in 1947, ecological displacement due to floods, soil erosion, droughts, family conflict and ethnic violence due to anti Bengali riots in Assam, social insecurity/safety, better future prospects are also responsible for migration among the squatter households in SMCA. But the present study did not support the studies of Walsh and Trlin (1973) and Shaw (1974) that there is a positive relationship between high man/land ratios and a propensity to migrate. On the other hand, the present study supports the study of McDowell & de Haan (1997) and Stark (1991) that migration can be interpreted more as a household livelihood strategy than as a completely individual choice.

In recent past, the greatest challenge to urban planning in the cities of developing countries is that local governments do not have the ability to track the growth of population together with the basic infrastructure for the community. Migration a socio-economic process, where everyone has the right to move elsewhere and it can't be stopped. So, in order to solve those problems especially the quality of environment and maintaining the level of economic development, the local bodies and urban planners can develop regional planning approach which must integrate the city planning with its surrounding rural/semi-urban areas.

7.4 Generation of Human Capital in the Sample Inner and Peripheral City Squatter Settlements of SMCA

7.4.1 Literacy Rate (Excluding 0-6 Age)

In terms of literacy rate in slums and non-slums population, the picture of Siliguri was below the state average. According to census 2001, the literacy rate in the slums of SMCA was 68.18 percent, much lower than the state and national average of 74.40 and 73.10 percent respectively. Male and female slum literacy rate in SMCA was also lower than that of the literacy rate in the state and the nation.

As per the information generated from sample study, the literacy rate among the squatters who are normally the older migrants living in the heart of the city was far lower than that of the literacy rate of the squatters who are relatively the new migrants living in the peripheral city. It is also found also that there was a negative correlation between literacy rate and the family size in both the inner and peripheral city squatter settlements ($r^2=-0.225$ and $r^2=-0.024$ respectively) (Table 5a Appendix-C and Table 6a Appendix-D). The female literacy rate was also far lower than that of the

male counterpart in both the cities. Based on male and female literates, significant heterogeneity is found between the cities ($\chi^2 = 4.91, P < .05$). As a whole, literacy rate among the squatters who are normally the older migrants living in the inner city squatter settlement was far lower than that of the literacy rate of the new migrants living in the peripheral city. The study evidenced that the literacy rates among the sample squatters in both the inner and peripheral city squatter settlement were not only lower than that of the census literacy rate of slums in the state and the nation, but it was significantly lower than that of the slum literacy rate in the million plus cities like Mumbai (83 percent), Delhi (67 percent), Kolkata (73 percent) and Chennai (76 percent) (NIUA, 2008). Therefore the study revealed that in terms of educational achievements, the squatters and slum dwellers in SMCA are particularly deprived compared to the state and metropolitan cities and this further raise the question of proper implementation and monitoring of the schemes and programmes, addressed to improve the quality of life of slum dwellers along with human development of the region.

7.4.2 Level of Education (Excluding 0-6 Age)

The number of illiterate and functionally literate squatters was significantly higher in the inner city compared to the peripheral city indicating also the lack of educational aspirations and motivation. The illiterate and functionally literate females dominated the scenario in both the inner and peripheral city. On the other hand, the percentage of squatters who attained the primary level of education was marginally higher in the inner city. Whereas, at secondary and higher secondary levels of education, the proportion was significantly higher in the peripheral city. Similarly, the proportion of female squatters who attained higher secondary and graduate level of education was also quite high in the peripheral city indicating higher educational status.

Primary level of education is the clear preference among the squatters in the inner city of SMCA. The higher secondary and college level education is simply luxurious to them primarily due to socio-economic backwardness as well as lack of motivation. This is also evidenced in studies, e.g., by Laquian (2004) where urban poor in all Asian countries are characterized by low levels of education. On the other hand, high degree of illiteracy among the slum dwellers was also due to the lack of educational facilities and economic backwardness, (Mohsin (1979), Mani (1980) in Asian countries.

Thus, in order to increase access to higher levels of education, income generating mechanisms have to be strengthened along with the following steps; (1) Mobilisation for enrollment and remedial teaching programmes have to be organized in the squatter settlements through the active participation of NGOs and self help groups to build awareness and confidence. (2) Community mobilisation campaigns should be initiated in the squatter settlements to motivate the poor households for sending children to the school including dropouts and out of school children. This is particularly to facilitate the implementation of right to education Act, 2009.

7.5 Physical Capital available to the Sample Squatter Households in the inner and Peripheral City Squatter Settlements of SMCA

7.5.1 Land Characteristics

The study shows that the majority of the households in both the inner and peripheral city were compelled to stay in squatter settlement as a residential place due to their poor economic condition, followed by high price of urban land. All the squatter households in the inner city had built their houses illegally on railway land but the picture is very different in the peripheral city, while, about 80 percent households had built their houses illegally on government vested land and the remaining on railway land. Findings of the sample study conformed to the work of Ghosh et al (1972), that due to poor economic condition and high price of urban land, squatter settlements occur near railway crossings, bus depots and low-lying areas either in the heart of the city or in the periphery.

Tenurial status is one of the key elements in the poverty cycle. Lack of security of land tenure hinders most of the attempts to improve housing conditions as well as future planning for the urban poor (Wegelin and Borgman, 1995). It has a direct impact on access to basic services and on investment at settlement level and also reinforces poverty and social exclusion of the urban poor (UNDP, 1991). Living conditions in slums and squatter settlements are extremely difficult along with constant feeling of land insecurity in their settlements. In 2003, the World Bank estimated that between 30 to 50 percent of urban residents in the developing world had no legal documentation to show that they have tenure security (State of the World's Cities, 2006/07). So far as security of tenure of land occupied by the squatters is concerned, it is observed that 86-95 percent of the households reported to have the holding number as security of land given by the SMC in both the inner and

peripheral city, while the remaining proportion of the households do not have any security of land even with holding number. Holding number itself does not prove any legal status of the land occupied by the squatters. Thus, in this sense, squatter households in both the inner and peripheral city do not have any tenure security and this finding conforms with the study of Stanwix (2009), where the households living for many years did not own land nor did not have any legal proof of residence in slums of Gujarat and Rajasthan. Therefore, the study suggests the need for focusing the policy and strategies for tenure security of the households living in the squatter settlements of SMCA to move out from the poverty cycle.

7.5.2 Housing Characteristics

In terms of ownership of houses, about 95 percent of the squatter households in SMCA have their own house and a negligible proportion live in rented (around 5 percent) house in both the inner and peripheral city. The majority of the households in both the cities live in *kutchha* houses, followed by semi *pucca* and a small proportion of the households live in *pucca* houses. With a negligible difference in the structure of houses within cities, the proportion of household with *kutchha* and *pucca* houses were quite higher in the inner city compared to the peripheral city. The housing quality or the structure of the houses particularly the *pucca* houses directly depends on the level of income of the squatter households that has been reflected by the correlation coefficient which is significant at 5 percent level in both the inner and peripheral city ($r^2=0.229$ and 0.323 respectively (See Table 5a & 6a in Appendix-C and D respectively). i.e., the higher the level of income the higher the possibility of having *pucca* houses. The NSSO report (2008-09) shows that the majority of the households in the notified slums in India live in *pucca* houses (around 64 percent), followed by semi *pucca* (30 percent) and *kutchha* houses (7 percent), as against 74 percent of the households in the notified slums of West Bengal live in *pucca* houses, followed by semi *pucca* (16 percent) and 10 percent in *kutchha* houses. Therefore, in terms of the construction of *pucca*, the households living in both the inner and peripheral city squatter settlements in SMCA were worse off than that of the state and national average. In the aggregate, the study revealed that the housing condition in both the inner and peripheral city squatter settlements is far from satisfactory which further requires monitoring and implementation of various housing programmes and schemes under the state and central government projects.

Interestingly, in both the inner and peripheral city squatter settlements, although majority of the households use their houses for residential purposes, a small proportion also use their houses for both residential and commercial purposes. The quality and durability of a house heavily depends on the materials that have been used for construction. In this regard, the study found that maximum number of squatter houses of the households in both inner and peripheral city has been constructed with tin roof (about 78 and 96 percent respectively). On the other hand, the proportion of houses of the households made with plastic and pucca roof were significantly higher in Mazdoor Colony than that of the proportion in the peripheral city due to high disparity in income among the households.

The environmental condition of the squatter houses is also reflected through the types of kitchen. Within cities, the percentage of the households not having any separate kitchen was marginally higher in the inner city (45.83 percent) than that of the percentage in the peripheral city (42.50 percent) indicating that both the cities were locked in space and very congested in terms of housing. Compared to some of the million plus cities in India, it is seen that 74.2 percent of the census households do not have separate kitchens in Delhi, followed by Kolkata (66.8 percent), Mumbai (59.2 percent) and Chennai (50.3 percent) (NFHS-3, 2005-06). Therefore, the study revealed that in terms of separate kitchen, the slum/squatter households in SMCA is far better than that of the households in the above mentioned million plus cities in India.

7.5.3 Residential Crowding by Shelter Deprivation

As mentioned earlier that residential crowding can be measured by sufficient living area (according to UN -HABITAT, three persons per room) i.e., a household is said to be suffering from shelter deprivation in terms of sufficient living area, when more than three persons are sharing a single room. On the basis of this definition, about 20 percent of the world's urban population is residing in inadequate dwellings. Two-thirds were found in Asia. Africa ranked second with 75 million people and Latin America and the Caribbean ranked third with 49 million people (UN-HABITAT, 2006). In this regard, the present study found that the average number of room per households and average number of person per room were higher at 2.42 and 2.34 in the inner city as against 2.09 and 2.14 respectively in the peripheral city indicating that the crowding within households in the inner city was much higher compared to

the peripheral city. A report of the NFHS-3 (2005-06) shows that the average number of sleeping rooms per households and average number of person per sleeping rooms was 1.3 and 2.5 in Delhi, 1.4 and 2.3 in Kolkata, 1.3 and 2.3 in Mumbai and 1.2 and 2.1 respectively in Chennai.

The sample study of the squatter settlements in SMCA show that 28.33 percent of the households had shelter deprivation with more than three persons per room in the inner city, as against 21.67 percent in the peripheral city i.e., in terms of shelter deprivation by living area, crowding within households the inner city squatter settlements was significantly high as compared to the peripheral city which can be attributed to larger family size of the households in the older inner city settlements.

So far as the degree of shelter deprivation is concerned, it is evident that the household with 'two' and 'more than two' shelter deprivation with five and more than five persons per room of the household was significantly high at 17.50 percent in the inner city as against 11.67 percent in the peripheral city further indicates that residential crowding is higher in the inner city squatter settlements as compared to the peripheral city squatter settlements. In this context, report of the NFHS-3(2005-06) found that the percentage of households with five or greater than five persons per sleeping room in the million plus cities in India like Delhi was 48 percent, 41 percent in Kolkata, 40 percent in Mumbai and 32 percent in Chennai (NFHS-3; 2005-06). Therefore, residential crowding in the slums of both the inner and peripheral city was significantly lower compared to the mentioned million plus cities in India.

7.5.4 Infrastructural Facilities

In terms of access to infrastructural facilities by the households, it has been found that the proportion of households that avail the kutcha approach road within slums was around 2 times higher the peripheral city (62.50 percent) than that of the proportion in the inner city (33.33 percent). In contrast, the households availing pucca approach road within slum was about two times higher in the inner city (66.67 percent) than that of the peripheral city (37.50 percent). Therefore, based pucca and kutcha approach road infrastructure available to the households within slums, significant difference has been found between the cities ($\chi^2 = 20.45$, $P < .001$). It has also been seen that during the rainy season almost all the approach roads in the peripheral city goes under water due to lack of proper drainage facility.

So far as solid waste disposal is concerned, various studies have shown that most of the squatter settlements do not have any arrangements made either by public or private services for garbage collection and disposal. But the picture is quite different in the sample study, while 100 percent of the households have access to the corporation's dustbin for garbage disposal in the inner city, whereas around 78 percent of the households in the peripheral city have such accessibility. Remaining 21.67 percent of the households do not have any access to garbage disposal in the peripheral city and consequently garbage is thrown to the nearby open space/streets, making reasons for environmental degradation. Therefore, in terms of garbage disposal, the inner city squatter settlements had adequate facilities compared to the peripheral city.

In terms of drainage facilities, the sample study shows that 90.83 percent of the households in the inner city squatter settlement of SMCA had pucca surface drainage facility, as against 35 percent in the peripheral city. The proportion of the households who do not have any drainage facility was significantly higher in the peripheral city (65 percent) as compared to 9.17 percent in the inner city i.e., in terms of drainage facility of the households (between have and have not's), significant difference is found between the settlements ($\chi^2 = 79.09$, $P < .001$). A study by Sundari (2003) also found that in the metropolitan city like Chennai, the drainage facility was not available to more than 90 percent of the households. Therefore, in terms of drainage facility of the households, the inner city squatter settlements in SMCA were not only better off compared to the peripheral city but also more adequate than that of the conditions of the drainage facilities in Chennai.

In terms of electricity connection, the sample study in SMCA found that 84.17 percent of the total households in the inner city squatter settlements had electricity connection, as against 76.67 percent in the peripheral city. The χ^2 test based on electricity connection of the households (between have and have not's), no significant difference is seen between the cities at 5 percent level.

To sum up, in terms of infrastructural facilities like pucca approach road within the squatter settlements, solid waste disposal, drainage facility, electricity connection of the households, accessibility and availability of such facilities were adequate in the inner city compared to the peripheral city. Various studies and

literature review evidenced that the slum dwellers are vulnerable and mostly excluded from the basic amenities but from the present study it can be concluded that in terms of basic amenities of the squatters in SMCA is quite well off compared to other cities in India. This is also true that in SMCA, the squatters are still excluded from critical infrastructural facilities that are available to the non-slum population. Thus, there is a need for allocating funds for the development of infrastructure that must reach the poor people living in slum/squatter settlements and improve their quality of life.

7.5.5 Scenario of Sanitation, Drinking Water and Fuel Sources

Poor sanitary conditions and poor water quality lead to sickness, cause water borne diseases and in turn affect the life expectancy of the people. So far as the physical amenities of the squatters in the sample study of inner and peripheral city are concerned, it is found that the proportion of households with personal sanitation facility was significantly higher at around 91 percent in the peripheral city as against 62 percent in the inner city. On the other hand, 38.33 percent of the households in the inner city availed the community sanitation, but there was no community sanitation facility in the peripheral city. Around 9 percent of the households in the peripheral city did not have any sanitation facility and used open spaces cause serious health risk for themselves and others

As a whole, in terms of sanitation, the inner city squatter households had access to adequate sanitation facility than the peripheral city and thus the difference between the cities was highly significant ($\chi^2 = 8.77$, $P < .01$). As per the NSSO report (2008-09), 10 percent of the residents in the notified slums of India do not have any sanitation facility, as against 13 percent in west Bengal. Among the million plus cities, the households without sanitation facility was 1.6 percent in Mumbai, 19.1 percent in Delhi, 1.4 percent in Kolkata and 2.8 percent in Chennai in 2006-06 (NFHS-3). Therefore, in terms of sanitation, it is observed that the condition of the squatter households in the inner city was much better as compared to the above million plus cities, the state and the country as a whole, but it was much worse in the peripheral city. Therefore, special attention should be given on Integrated Low Cost Sanitation programme especially to the peripheral city squatter settlements, where many of the household still lacked with sanitation facilities.

In terms of drinking water, the proportion of households having drinking water facility near the premises through stand post supplied by SMC was 98 percent in the inner city compared to 9 percent in the peripheral city. On the other hand, the proportion of households with independent sources of drinking water in the peripheral city (63.33 percent with tubewell and 27.50 percent with well) was significantly higher than that of the proportion in the inner city (1.67 percent with tubewell only). This is because other facility is available in inner city. As a whole, based on various source of drinking water available to the household, significant difference is found between the cities ($\chi^2 = 119.90$, $P < .001$). At the national level, majority of the residents in the notified slums have access to drinking water facility through tap (84 percent), followed by tube well (10 percent), bore-wells (2 percent) and other sources (4 percent). On the other hand, at the state level, 77 percent residents have drinking water facility through taps, 17 percent through tubewells, 2 percent with and 4 percent with others 4 percent (NSSO, 2008-09). Another report of NFHS-3 (2005-06) found that among the million plus cities in India, 97.7 percent of the households have piped drinking water sources in Mumbai, 84.4 percent in Delhi, 85.1 percent in Kolkata and 72.0 percent in Chennai. Various reports and studies documented that in many of the cities, the slum dwellers suffer most from non-availability of safe drinking water. However, from the sample study, it is found that in terms of piped drinking water facilities, the inner city squatter/slum households was far better than that of the metropolitan cities, the state and the national average. An opposite scenario is found in the peripheral city squatter settlements with regard to the corporation's piped drinking water facility. Therefore, there is a need for special attention with regard to Corporation's drinking water facility among the households in the peripheral city.

The provision of fuel sources for cooking is another important environmental factor for the households who are living in congested squatter settlements. In the sample study of inner city squatter settlements, 53 percent of the household use wood as a main fuel source, followed by LPG (38.33 percent), kerosene (5 percent) and both LPG and wood (3.33 percent). In the peripheral city, 50 percent of the household use wood as a main fuel source, followed by LPG (45 percent), LPG and wood (2.50 percent) kerosene (1.67 percent) and charcoal (0.83 percent). If the cooking medium of the households is grouped as LPG and other than LPG, then it is found that around 61 percent of the households were not able to use high price commercial fuel sources

like LPG due to economic constraints in the inner city, as against 50 percent in the peripheral city. A study of NFHS-3 (2005-06) shows that among the million plus cities in India, 67.90 percent household in the census slums of greater Mumbai use LPG/natural gas/biogas as a main cooking medium, as against 48.50 percent in Delhi, 45.50 percent in Chennai and 35.40 percent in Kolkata. On the other hand, 30.30 and 1.60 percent households use kerosene/coal/charcoal and other solid fuel items respectively as main cooking medium in greater Mumbai, 30.20 and 21.30 percent respectively in Delhi, 54.40 and 12.1 percent respectively in Kolkata and 44.40 and 10.10 percent respectively in Chennai. Similarly, State of the World's Cities 2010/11 shows that in 2006, 45 percent of the slum households use LPG/electricity/natural gas /biogas as a main cooking medium in India, as against 4.50 percent in Bangladesh, 21.20 percent in Nepal. On the other hand, around 16 and 40 percent of the slum household use kerosene/coal/charcoal and other fuel items respectively as a main cooking medium in India, as compared to 0.10 and 95.40 percent respectively in Bangladesh and 15.70 and 63.10 percent respectively in Nepal (Table-2.6.4, Chapter II) i.e. majority of the slum households use the solid fuel items (kerosene/coal/charcoal and other fuel items) as main cooking medium in the mentioned south Asian developing countries as well as in the metropolitan cities in India except greater Mumbai.

7.5.6 Utilization of Public Health Services

With regard to the utilization of public health services, the sample study shows that a significant proportion of the households in the inner city squatter settlements utilize government hospitals for their treatment (56.67 percent), followed by both the government and private institution (25.83 percent), community health centre (10.83 percent) and only about 7 percent of the households utilise private medical institutions for treatment. On the other hand, in the peripheral city, a larger number of the households utilize both private and government medical institutions (34.17 percent), followed by community health centre (26.67 percent), government hospital (24.17 percent) and private health institutions (15 percent). Therefore, by and large medical facilities provided by the public sector remains to be the major supporting services for the squatters or slum dwellers in the inner city. In contrast, in the peripheral city, both the private and public sector medical institutions remain the major supporting services for the squatters. Therefore, the study revealed that due to close proximity to the

government hospital and expensive treatment in the private institutions, most of squatter households in the inner city avail the public medical facilities. On the other hand, a substantial portion of the slum households in the peripheral city are compelled to visit the nearest quack doctors due to distant location of the government hospitals and also to cope with the busy work schedule.

So far as child delivery (0-6 years of age) in the squatter settlements of SMCA is concerned, it is found that the institutional delivery (government Marti Sadan, government hospital and private hospital) was far higher at around 61 percent in the peripheral city, as against around 46 percent in the inner city. In contrast, the percentage of non-institutional delivery (home delivery) was significantly higher at around 54 percent in the inner city, as against 39 percent in the peripheral city i.e. instead of having available public medical facilities in both the inner and peripheral cities non-institutional delivery with the help of untrained dais was quite common due to customs and traditions of the joint family systems, in addition to monetary problems etc. In this context, Agarwal et al (2007) reported that 66.6 percent of non-institutional deliveries were conducted by untrained persons in Delhi slums. Sathe (1991) in their study in Aurangabad city reported that 100 percent of the deliveries were conducted by untrained persons.

Health is one of the most important human assets that are generally reflected through the quality of life. The sample study tried to measure the general health conditions among the squatter households in terms of frequency to visit health centers for treatment. In general, it is assumed that higher the frequency of visit to the health centers for the purpose of treatment, the higher is the incidence of sickness and vice versa. In the inner city, the proportion of households visiting health centres for treatment once a week was 9.17 percent, once in a month was 49.17 percent, and once in six months was 41.67 percent. On the other hand, the proportion of households visiting health centres for treatment once a week was 1.66 percent, once in a month was 39.17 percent, once in six month 50 percent and once a year was 9.17 percent. The proportion of households visiting health centres for treatment once in week and once in six months was far higher in the inner city than that of the proportions in the peripheral city indicating that in general, the health condition among the households in the peripheral city were much better compared to the households in the inner city.

The relatively high incidence of sickness in the inner city was primarily due to old age problems.

7.5.7 Value of the Physical Assets

Most of the urban squatters possessed low cost household assets. Generally, they cannot afford costly items in their households due to low level of income. The value of the physical assets of households that they possess was significantly lower with the mean value of about Rs. 5143 in the inner city compared to the mean value of about Rs. 11647 in the peripheral city. It is true that some of the households with higher level of earning have some costly items. The households who possess the lower value of physical assets were marginally lower in the inner city compared to the peripheral city. But the households who possess higher value of physical assets in the peripheral city were about 5 times higher than that of the inner city. Interestingly, instead of having almost equal average income of the households in both the inner and peripheral city, the correlation between the value of physical assets and the level of income of was positively significant in the inner city ($r^2=0.485$), but it was insignificant and positive in the peripheral city ($r^2=0.154$). From the above analysis it can be realized that the demand for some of the basic physical assets among the older migrant households has increased gradually with the level of income in the inner city and in contrast, owing to availability of such basic physical assets, the income effect is very low among the new migrant households in the peripheral city. On the other hand, it is normally assumed that the household living in squatter settlements having pucca houses possess the higher value of physical assets and vice versa and in this regard the sample study found a significant correlation between the value of the physical assets and the households having pucca houses in the inner city ($r^2=.251$) at 10 percent level, but no such significant correlation is found in the peripheral city.

7.6 Economic Livelihood of the Squatters in the Inner and Peripheral City of SMCA under Study

7.6.1 Earning Status of the Households

In terms of earning status of the households, it is found from the sample study that the proportion of households with single earning members was significantly high at around 66 percent in the inner city than that of the proportion in peripheral city at around 38 percent. The opposite scenario is seen in case of joint earner households in

both the cities. Therefore, based on single and joint earner households, significant difference is seen between the cities ($\chi^2 = 19.03$, $P < .001$). On the other hand, a negligible proportion of the households do not have any workers either due to old age or more number of minors.

7.6.2 Work Participation Rate (WPR)

A sample study by Ghosh et al (1995) evidenced that about 30 percent of the slum dwellers in SMCA were engaged in workforce constituting 49.14 percent male and 9.22 percent female. But the present sample study found that the WPR was slightly higher in the inner city around 35 percent, as against around 34 percent in the peripheral city. In terms of gender, the female WPR was almost equal at around 15 percent in both the cities. It has already been mentioned that the slum dwellers are very poor in terms of human capital and these poor rural migrants integrate themselves in the urban labour market especially in the informal sector through social capital formation. The fact is that human capital generated through education, knowledge and skills are less important in those types of works where the slum dwellers remain engaged. Therefore, the sample study found a significant negative correlation between WPR and literacy rate ($r^2 = -.276$) in the inner city. On the other hand, in the peripheral city, the correlation between WPR and literacy rate is negatively significant ($r^2 = -0.272$). On the other hand, it is also observed that length of residence has positive effects on employment of the migrant squatters in the inner and peripheral city squatter settlements instead of having low correlation between WPR and length of migration was $r^2 = 0.186$ and $r^2 = 0.054$ respectively. The study found that the WPR in both the inner and peripheral city squatter settlements of SMCA was lower than that of the WPR in the million plus cities like greater Mumbai (36.8 percent), Delhi (35.1 percent), and Kolkata (36.5 percent), but higher than the WPR of the state (34.2 percent) and the nation (32.9 percent). Interestingly, the female WPR was significantly high in both the cities of SMCA compared to the female WPR in the metropolitan cities, the state as well as the country as a whole.

7.6.3 Employment by Sectors

Cities are the engines growth and the urban economy is characterised by a greater degree of industrialization and commercialization in order to survive for a large number of poor who are looking for employment particularly in the informal sector

(Wratten, 1995, Satterthwaite, 1997). The rapid pace of urbanisation witnessed a steady growth of informal sector activities especially in the cities of the developing countries like SMCA. This sector is closely associated with the poverty of the squatters/slum dwellers, because due to lack of opportunities in the formal sector, a greater number of squatters concentrate in the informal sector. The informal sector provides some form of livelihood for the rural migrants living in the slums/squatter settlements. In general, the workers engaged in informal sector activities are significantly higher among the slum population than that of the workers in the non-slum population. As per estimate of the 61st NSSO report (2004-05), around 73 percent of the urban workers in India are engaged in the informal sector enterprises constituting about 74 percent male and 65 percent female. The present sample study in the inner and peripheral city squatter settlements of SMCA shows that the proportion of formal sector employment was about double (13.19 percent) in the inner city than that of the proportion in the peripheral city (7.07 percent). In contrast, the proportion of informal sector employment was far higher in the peripheral city at around 93 percent, as against around 87 percent in the inner city. The proportion of formal sector employment in the inner city was around two times higher than that of the proportion of formal sector employment in the peripheral city. The female employment structure appeared to be very different from that of men. In both the cities, the proportion of female employment in formal sector was lower than that of the male counterpart. The opposite picture is seen in case of informal sector employment, where, the proportion of female employment was marginally higher in both the cities. Therefore, the study revealed that the informal sector is the sole provider of employment and means of economic livelihood among the squatters in the SMCA. The findings also corroborate with regard to the feminization of the informal sector. the present study is significantly consistent with the studies of ILO (1977), Aziz, (1984), Bryant (1992), Mitra (1994), Mohanty (2006), Ready (2007), Timalsina (2007) that the urban informal sector emerges to be the sole sector that absorbs the rural migrants and serves as a survival sector for urban poor who are living in the slums and squatter settlement.

7.6.4 Employment by Activity Status

Due to lack of education and employment-oriented training facilities, migrant slum dwellers usually do not gain entry into formal sector employment and ultimately they

get engaged in the informal sector with the help of the friends and relatives, neighborhoods and fellow villagers i.e., employment network especially in the informal market is common for them. The main livelihood opportunities with regard to the economic activities of the squatters includes undertaking and engaging in construction work, black smiths, working as pulling rickshaws and trolleys, maid-servants, hawker, playing in local traditional bands and making sculptures etc, for their survival (Goyle et al, 2004). Employment by activity status in the sample study show that the proportion of permanent employment that includes sweepers in Corporation, Railway Department, etc., in the formal sector was significantly high at around 23 percent in the inner city, than that of the proportion in the peripheral city at around 15 percent. In contrast, the proportion of casual employment that includes sweepers in Corporation, Railway Department, Food Corporation of India, and worker in Anganwari Kendras etc., in formal sector was much lower in the inner city (77.42 percent) as compared to the proportion in the peripheral city (84.62 percent). The proportion of female permanent employment in formal sector dominated the males in both the cities, but the nature of work is menial jobs where women in large numbers are engaged.

On the other hand, in the informal sector an overwhelming proportion of the workers was engaged in self employment that includes rickshaw and van pulling, street vending, kabadiwala, electrician, cycle repairing etc (51.47 percent), followed by salaried employment that includes working in wholesale shops, cosmetic shops, as maid-servant, security guard, hotel worker, driver, etc (29.90 percent) and casual employment that includes mainly construction worker, labour in wholesale trade, transportation sector etc. (18.63 percent) in the inner city. But, in the peripheral city, the proportion of self employment was the highest at around 39.77 percent, followed by casual (33.92 percent) and salaried employment (26.32 percent). In terms of gender, the proportion of female salaried employment in the informal sector dominated the males in the inner city, but in the peripheral city, female casual employment dominated the males. Based on total employment by activity status in the informal sector, significant difference has been found between the cities ($\chi^2 = 11.68$, $P < .01$).

In both the formal and informal sector employment, majority of the workers in the inner city were engaged in self employment (43.83 percent), followed by salaried

(29.79 percent) and casual employment (26.38 percent). The proportion of female worker by activity status was significantly higher in salaried employment than that of the males in the inner city. But, in the peripheral city, a larger number of workers were engaged in casual employment (36.96 percent), followed by self (29.79 percent) and salaried employment (25.54 percent). In terms of gender, the proportion of female workers by activity status was marginally higher in casual employment than that of the male counterparts in the peripheral city.

The sample study also recorded that the proportion of informal or casual workers in both the formal and informal sector as a whole was slightly higher in the peripheral city at around 97 percent comprising around 97 percent male and 96 percent female, as against about 99 percent in the peripheral city, comprising about 99 percent male and 98 percent female. Whereas, in India 92.38 percent of the urban workers were informally employed (NSSO, 2004-05). Expectedly, the proportion of informally employed workers in both the inner and peripheral city squatter settlements in SMCA was significantly higher than that of the urban workers who are informally employed at the national level.

It is found that most of the workers in both the inner and peripheral city squatter settlements were not only engaged in informal sector employment, but almost all the workers were informally employed. Therefore, the government or local bodies should involve directly in the process of formalization of casual employment in the formal sector as well as protective and supportive measures be designed for the informal sector workers and should be strengthened and implemented efficiently to provide the workers who are living in the squatter settlements of SMCA.

7.6. 5 Level of Education in Employment by Activity Status

Education is an important human capital which has positive impacts especially for searching jobs and availing economic opportunities. Various studies with regard to the role of education in accessing employment show that the people with low educational base remain engaged in low paid informal sector activities. The present sample study in the inner and peripheral city squatter settlements observed that the proportion of literate workers was almost equal at around 59 percent in both cities. Among the literate workers, around 57 and 53 percent of the workers attained primary and secondary levels of education, as against 2 and 6 percent in higher secondary and

graduate levels of education in both the inner and peripheral city squatter settlements respectively. By activity status, the proportion of literate workers was the highest in salaried employment (around 61 and 72 percent respectively), followed by self-employment (around 58 and 65 percent respectively) and casual employment (56 and 44 percent respectively) in both the inner and peripheral city. The proportion of workers who attained secondary, higher secondary and graduate levels of education were significantly higher in the peripheral city than the inner city. By activity status, it is found that the proportion of workers with higher levels of education (higher secondary and graduate) was significantly higher in the peripheral city compared to the inner city. Therefore, it is seen that primary and secondary level of education was the first preference among the workers in both the inner and peripheral city, but a study by Reddy et al (2003) in Fiji found that the average level of education for the squatters involved in the informal sector employment was no higher than primary level of education. Finally it can be concluded that the workers in the slums are educationally poor in employment.

7.6.6 Level of skill and Sources of Acquisition of Skill among the Squatters in SMCA

In general, the role of education and skill training are crucial factors of human capital in accessing better employment opportunities. It has been mentioned earlier that in terms of literacy rate, the squatters in SMCA are far behind compared to the average literacy rate in the million plus cities like Mumbai, Delhi, and Kolkata, Chennai, the state and the nation as a whole. So far as the level of skill is concerned, the proportion of skilled workers in the peripheral city was much higher at around 44 percent, as against around 32 percent in the inner city i.e., based on skilled and unskilled workers, significant difference has been found between the cities ($\chi^2 = 6.47, P < .05$).

In terms of acquisition of skill among the workers, it is evident that majority of the workers in both the inner and peripheral city squatter settlements acquired their skill through learning by doing (around 73 and 78 percent respectively) followed by private institution and government institutions (about 27 and 22 percent respectively). On the other hand, in terms of gender, the percentage of female workers was worse than that of the male counterpart in both the cities. As a whole, in both the inner and peripheral city in SMCA, most of the workers are engaged in very low-skilled activities which consequently increase the insecurity of employment. A large

number of workers found that due to lack of education and skills, it is difficult to move into alternative well paid decent jobs and thus they are compelled to remain in the low paid informal sector activities. Therefore, it can be concluded that owing to lack of education and skill, the squatters are also economically vulnerable.

7.7 Income, Expenditure and Savings Profile of the Squatter Households in the Inner and Peripheral City

Quality of life or well being is often characterized by the economic profile of the households. The sample study observed that the income disparity of the households in the inner city was very high that ranges from Rs.400 to Rs 25500, as against the disparity in income of the households in the peripheral city where income ranges from Rs. Rs.0.00 to Rs.15000. The average monthly income of the households was almost equal in both the cities (around Rs. 4682 and Rs. 4684 respectively). Whereas, the income differential was significantly high in the inner city (with SD of 3346.39) than that of the income differential in the peripheral city (with SD of 2065.78). Such income differential between the cities may be primarily due to the nature of jobs, differences in wage rate, regular and irregular type of work, duration of residence etc. It has already been discussed that the level of income among the lower income groups particularly the squatter households depends not only on the wage rate, nature of job etc., but it is also true that the level of income is positively correlated with the family size. The study found that the correlation between income and family size is positively significant at 10 percent level in both the inner and peripheral city ($r^2=0.471$ and $r^2=0.335$ respectively) (Table 5a Appendix-C and Table 6a Appendix-D). So far as the expenditure pattern is concerned, the proportion squatter households that spending Rs.3000- Rs. 4500 thousand per month fall under median class was marginally lower at about 35 percent in the inner city compared to 39 percent in the peripheral city. On the other hand, the proportion of households spending below the median class was more than two times higher in the inner city (30 percent) as against about 13 percent in the peripheral city. But, the proportion of households that are falling above the median class was significantly higher at about 47 percent in the peripheral city than that of the proportion of 35 percent in the inner city. Though, the mean expenditure of the household in the both the inner and peripheral city was almost equal at around Rs. 4471 and 4488 respectively. Interestingly, the expenditure differential among the household in the

peripheral city was much higher (with SD of 4684.17) than that of the expenditure differential in the inner city (with SD of 3087.10). The study observed that expenditure of the squatter households not only depends on the level of income, but it is closely associated with family size that has been reflected through the correlation between total expenditure and family size which is positively significantly at 10 percent level in both the inner and peripheral cities ($r^2 = 0.488$ and $r^2 = 0.374$ respectively) (See Table 5a & 6a in Appendix-C and D respectively)

Savings is a source of financial capital for all and particularly for the squatter /slum dwellers because savings provide support at the time of financial crisis, illness and also can avoid indebtedness. Financial capital can also provide working capital for small entrepreneurs. The sample study found that, 50 percent of the squatter households had savings with LIC, followed by Bank savings account and private financial institutions in both the inner and peripheral city squatter settlements. In terms of income group it is also found that a greater number of the households (around 20 percent) having savings fall into the middle income group of Rs.3000-45000 in the inner city. On the other hand, in the peripheral city, a considerable number of the households at around 23 percent having savings fall into the upper middle income group. The average monthly savings and its differential among the households in the inner city were comparatively higher (mean savings of Rs. 211.01 and SD of 351.61) than that of the average savings and its differential in the peripheral city (mean savings of Rs. 195.72 and SD of 285.51).

In both the inner and peripheral city, it has also been found that the inequality in income, expenditure and savings was very low in terms of Gini-coefficient. But, the inequality in income, expenditure and savings was significantly high in the inner city (with Gini co-efficient 0.301 for income, 0.300 for expenditure and 0.205 for savings) than that of the inequalities of the respective variables in the peripheral city (with Gini co-efficient 0.195 for income, 0.194 for expenditure and 0.139 for savings). The higher inequality of these variables in the inner city was primarily due to high differential in income and corresponding expenditure and savings.

In both the inner and peripheral city squatter settlements, it is seen that some of the households have very low level of income and expenditure and some have relatively very high level of income and expenditure. This finding of the present study

is consistent with statement of UN-HABITAT that not all the slum dwellers are poor or not all the poor are slum dwellers.

7.7.1 Proportion of Expenditure and Savings to total Income

Regarding the proportion of expenditure and savings to total income, it was almost equal in both the inner and peripheral city squatter settlements (around 96 and 4 percent respectively). Total consumption expenditure has been classified into food and non-food items, with the households spending more than 50 percent of their income on food items in both the inner and peripheral city settlements (about 59 and 51 percent respectively). This finding is supported by Bihon (2006) in Addis Ababa, a capital city of Ethiopia, where he shown that most of the poor households spent more than 50 percent of their income on food items. The proportion of expenditure on food items was significantly higher in the inner city due to larger family size compared to the peripheral city particularly. In contrary, the proportion of expenditure non-food items was much higher in the peripheral city at 44.53 percent compared to 36.91 percent in the inner city primarily due of high indebtedness among the dwellers which is evident from the correlation between expenditure on non-food items and indebtedness that is significant ($r^2=0.332$) at 10 percent level.

7.7.2 Monthly per Capita Income, Expenditure and Savings relationship among the households under SMCA

In terms of per capita income, expenditure and savings, the present study found that monthly per capita income of the households living in the peripheral city squatter settlements was significantly higher at around Rs. 1049 as compared to Rs 828.75 in the inner city. The lower per capita income was primarily owing to large number of family members in the later. Similarly, corresponding monthly per capita total expenditure (around Rs. 791), per capita expenditure on food and non-food items (around Rs.485 and 306 respectively) and savings (around Rs.37) were significantly high in the peripheral city than that of the monthly per capita total expenditure (around Rs. 1005), per capita expenditure on food and non-food items (around Rs.538 and 467 respectively) and savings (around Rs.44) of the households in the inner city. If the poverty line recommended by the Planning Commission for 2009-10 in terms of per capita consumption expenditure of Rs.859.50 in urban areas is considered, it is to be found from the present sample study that all the squatters in the inner city squatter

settlements were living below poverty line. On the other hand, all the squatters in the peripheral city are living above the poverty line.

7.7.3 Expenditure on Food and Non-Food items

Statistical analysis with regard to the expenditure on food and non-food items show that the mean expenditure on food item as a whole was around Rs 2743 in the inner city, as against around Rs 2403 in the peripheral city. Among all the food items, significant difference is observed in the mean values of other food items that include fish, meat, fruits, fast food, drinks etc., between the cities ($P < 0.05$). The expenditure differential on different food items was very high particularly for other food items that include fish, meat, fruits, fast food, drinks etc., in the inner city than that of the expenditure differential in the peripheral city because some of the households having relatively better economic status in the inner city are spending more on fish, meat, fruits, fast food, drinks etc. On the other hand, the mean expenditure on total non-food items was much lower in the inner city (about Rs. 1728) than that of the peripheral city (about Rs. 2086). Within cities, significant difference is seen in the mean expenditure of total non-food items ($P < 0.5$). Similarly, based on the mean expenditure for the various non-food items, it is observed that the squatter households in the inner city are spending more on medical purposes (Rs. 159) and less on other non-food items (about Rs. 253) as compared to the peripheral city (about Rs. 76 and 328 respectively) and thus the difference in the mean expenditure on medical and other non-food items was highly significant between the cities ($P < .01$ for each). As a whole, among all the food and non-food items, the expenditure differentials were significantly high for rent & loan installment, education and other non-food items that include clothes, house repairing, transportation, rituals, gambling etc., in both the inner and peripheral city.

7.8 Estimation of Marginal Propensity to Consume and Expenditure Elasticity on Food and Non-Food Items: Validation of Engel's Law in SMCA under Study

7.8. 1 Estimate of Marginal Propensity to Consume (MPC)

The empirical study based on the validation of Engel's law, it is found that among all the food items, the MPC was highest on other food items like fish, meat, fruits, fast food, drinks (0.38) in the inner city, followed by, grocery items (0.07), food grains (0.06), milk and milk product (0.03), vegetables (0.02) and as a whole the MPC on

food items stood at 0.56. Therefore, out of the given increase in consumption expenditure, 38 percent is spent on other food items, 7 percent on grocery 6 percent on food grains, 3 percent on milk and milk products, 2 percent on vegetable and as a whole 56 percent is spent on food items.

In the peripheral city, the MPC in different food items was significantly high on other food items like clothes, house repairing, transportation rituals, gambling etc. (0.23), followed by food grains, grocery items (0.07 each), vegetables (0.03) and milk and milk product (0.02) and in aggregate the MPC on food items came to 0.42 i.e. with the given increase in consumption expenditure, 23 percent is spent on other food items, 7 percent each of food grains and grocery items (other than food grains), 3 percent on vegetables, 2 percent on milk and milk products and thus 42 percent spent on total food items. Therefore, it is found that the inner city squatter households are spending more on total food items to meet the necessary consumption needs as compared to the peripheral city. In both cities, the MPC is significantly higher on other food items like fish, meat, fruits, fast food, drinks etc., indicating that the share of expenditure increases for such food items with an increase in expenditure. The finding is significantly consistent with the study of Lahiri (1990) in Egypt that the expenditure on the protein rich products like meat, fish, poultry, and dairy products increases with an increase in income or expenditure.

Among the non-food items, the MPC was far higher for rent & loan installment (0.12), followed by education (0.09), for each entertainment and other non-food items include clothes, house repairing, transportation, rituals, gambling etc., (0.05), for each medical and fuel items (0.04), mobile (0.03) and electricity (0.02) and as a whole the MPC on non-food item was 0.44. With the given increase in expenditure, 12 percent is spent on rent & loan installment, 9 percent on education, 5 percent for each entertainment and non-food items, 4 percent for each medical and fuel items each, 3 percent on mobile and 2 percent on electricity and as a whole 44 percent spent on total non-food items by the households in the inner city.

In the peripheral city, The MPC was also higher on rent & loan installment (0.27), followed by other non-food items that include clothes, house repairing, transportation rituals, gambling etc (0.12), education (0.06), entertainment (0.04), electricity (0.03), for each medical and fuel items (0.02 each) and as a whole the MPC

on non-food item was 0.58. The study observed that with the given increase in expenditure, 27 percent is spent on rent & loan installment, 12 percent on other non-food items, 6 percent on education, 4 percent on entertainment, 3 percent on electricity, 2 percent for each medical and fuel items and as a whole 58 percent on total non-food item in the peripheral city. It is clear from the sample study that the squatter households in the peripheral city are spending more on non-food items owing to high indebtedness.

So far as family size and expenditure is concerned, it is found that in both the inner and peripheral city, an increase in family size led to an increase in expenditure on food items as a whole, but the increase expenditure on total food items was significant at 5 percent level only in the inner city. On the other hand, within food items, an increase in family size increased the expenditure on food grains, grocery, milk and milk products and vegetables in the inner city squatter settlements, but the increase was highly significant for food grains and vegetables only. The exception is found on other food items in the inner city, while an increase in family size decreased the expenditure on other food items significantly and thus MPC has been found to be to negative. Similarly, in the peripheral city, an increase in family size led to increase in expenditure significantly only for food grains and milk and milk products. In contrast, due to increase in family size decreased the expenditure on grocery, vegetables and other food items and hence MPC for those items are found to be highly negative.

The sample study shows that an increase in family size curtailed the expenditure on total non-food items in both the inner and peripheral city. Within non-food items, an increase in family size curtailed the expenditure on medical expenses, education, mobile, entertainment and rent & loan installment the MPC for those items are found to be negative in the inner city. The only exceptional was fuel, electricity and other non-food items, while an increase in family size increased the expenditure of those commodities, but the increase in expenditure was significant only for fuel items in the inner city. On the other hand, in the peripheral city among the non food items an increase in family size increased the expenditure on education and fuel items only, as against the curtailment of expenditure on medical expenses, electricity, mobile, entertainment, rent and loan installment and other non-food items and the MPC for these items has been found to be negative. To sum up, it is observed that an

increase in family size increased the consumption expenditure for total food items, as against the curtailment of expenditure on total non-food items in both the inner and peripheral city.

On the other hand, an increase in family size increased the consumption expenditure of the squatter for almost all the food items in both the inner and peripheral city except other food items like fish, meat, fruits, fast food, drinks in the inner city and grocery, vegetables and other food items in the peripheral city. In contrast, a close examination of MPC show that an increase in family size curtailed the expenditure on medical expenses, education, mobile, entertainment and rent and loan installment, as against the increase in expenditure on fuel items, electricity and other non-food items that include clothes, house repairing, transportation, rituals, gambling etc., in the inner city. On the other hand, increase in family size curtailed the expenditure for almost all the items excluding education and fuel items for which expenditure and thus the MPC increased in the peripheral city. Finally, the study observed that the MPC is very high for total food items as against the non-food items in the inner city and in contrast, the MPC is significantly high for total non-food items than that of the MPC on food items in the peripheral city. The finding in the inner city did not support the study of Gupta (1986), Tiwari and Goel (2002), but consistent with the finding of the peripheral city that the MPC is lower in food items than that of the MPC on non-food items. However, the increase in expenditure on different food and non-food items with respect to family size may be due to diseconomies of scale and curtailment of expenditure may be due to economies of scale.

7.8.2 Estimate of Expenditure Elasticity

The estimate of expenditure elasticity on different food and non-food items reveals that the demand for food items less than unity (essential goods) confronts the well-known Engel's law. The results of the log linear model on expenditure consumption relationship represent the elasticity of different food and non-food items by its nature. The study found that in both the inner and peripheral city squatter settlement, the expenditure elasticity of total food items was less than unity (0.81 and 0.10 respectively), as against the more than expenditure elasticity of non-food items (1.29 and 1.01 respectively) and hence the total food items falling under necessary commodity group and total non-food items falling under relative luxury group i.e. for

the essential items, the quantity demanded increased by smaller percentage than total expenditure implying that squatter households do not spend much of any increase in total expenditure on this particular commodity and for the non-essential items, the quantity demanded increased by larger percentage than total expenditure implying that quantity demanded is quite responsive to changes in total expenditure.

Among all the food items, food grains, grocery, milk and milk products, vegetables excluding other food items like fish, meat, fast food, fruits, drinks, etc., are falling under essential commodity items with the expenditure elasticity of less than unity in the inner city. In the peripheral city, almost all the food items like food grains, grocery, milk and milk products and vegetables fall under essential commodity group. Only, the other food items that include fish, meat, fast food, fruits, drinks, etc that fall under the category of relative luxurious with the expenditure elasticity of greater than unity. A similar study by Ghosh (2010) in Bangladesh evidenced that in both rural and urban areas, cereals, vegetables, edible oil and clothing are treated as necessities and some other high nutritional food items e.g., egg, fish, meat and sugar are found to be luxuries in both urban and rural areas.

On the other hand, almost all the non-food items such as medical, electricity, mobile, entertainment, rent & loan installment and other non-food items that include clothes, house repairing, transportation, rituals, gambling etc. are falling under relative luxury items excluding education and fuel that fall under essential items in the inner city. In the peripheral city, almost all the non-food items like medical, education, fuel, electricity, mobile and entertainment falling under essential items excluding non-food items that include rent and loan installment and other nonfood items are falling under relative luxurious category.

So far as expenditure elasticity with respect to family size in the inner city squatter settlements is concerned, it is observed that elasticity co-efficient of family size of for most of the food and non food items food grains, grocery, milk and milk products, vegetables, education, fuel items, electricity, mobile and total food items are less than unity and positive in the inner city indicating that these items are most important. On the other hand, the elasticity co-efficient of family size is negative for other food items that include fish, meat, fruits, fast food, drinks etc., medical expenses, entertainment, rent and loan installment and other non-food items that

include clothes, house repairing, transportation, rituals, gambling etc. are negative implying that an increase in the family size, holding total expenditure constant makes the family poorer i.e., after increasing its expenditure on the necessary items to satisfy the required level, they cannot or spend less on other items that are less significant to them in terms of basic needs. This observation has more or less similar findings of the studies by Ali (1981), Siddiqui (1982) (*op.cit*).

Therefore, the above analysis revealed that the expenditure elasticity for most of the food items are found to be less than unity supporting the Engel's law implying that the food items is an essential or necessity for all the time. The expenditure elasticity for most of the non-food items found at higher rate than unity and turned out to be relative luxury items.

The proportion of expenditure incurred on all such commodity groups has been increased as total expenditure increased and aligned with Engel's law. The behavior of such consumption pattern of the households living in squatter settlements indicates that as they come from below the subsistence level of living, so they allocate their increase in expenditure between food and the non-food items. This finding is consistent with the observation of studies by Gupta (1986); Rao and Raddy (1995) where they found that the food articles are necessities and non-food items are luxuries for the urban poor. The food articles like milk and milk products, pulses, egg, fish, & meat, and sugar are necessities and found to be more elastic than others.

7.9 Financial Capital of the Squatter Households in the Inner and Peripheral City of SMCA

7.9.1 Indebtedness of the Households

The income-expenditure pattern of the households found that the per capita expenditure of the households is marginally lower than the per capita income in both the inner and peripheral city squatter settlements and it is expected they are free from indebtedness, but the fact is that a considerable number of the squatter household are indebted either with formal sources or informal sources or with both the sources. In the sample study, the indebtedness of the households in the inner city was significantly lower at around 46 percent, compared to 57 percent in the peripheral city.

In terms of different sources of loans, the proportion of households having formal sources of loan/credit through PF, Bank, and Private Financial Intermediaries like Bandhan, ASHA, and SKS etc., was around 2 times higher in the peripheral city (45.83 percent) than that of the proportion in the inner city (24.17 percent). The purpose of loan was primarily due to setting up new business, followed by house construction, wedding, health care and food consumption, expansion of business etc. A significant point should be mentioned that none of the households that had taken loans for the purpose of children's education in both the inner and peripheral city squatter settlements indicating lack of positive attitude and aspiration towards education. On the other hand, proportion of household having informal sources of loan/credit through friends and neighbours, relatives, employer of the households, money lender, etc., was about 4 times higher in the peripheral city (17.50 percent) than that of the proportion in the inner city (4.17 percent). About 4 percent of the households took loans from both the formal and informal sources in the inner city squatter settlement, as against 7 percent in the peripheral city. On the other hand, it is found that out of total households having loans/credit, only about 31 percent had public institutional loan through banks and provident fund in the inner city, but interestingly no households were there that had public institutional in the peripheral city. The reasons behind the lack of public institutional loans/credit was mainly due to insecure status of land of the squatters and slum dwellers, lack of collateral assets for mortgage and fear of repayment of loans on time. With this finding of the study, Baltensperger (1976) pointed out that lack of institutional loans among poor is characterized not only by interest rates but also by non-price elements including collateral assets. Apart from this, the awareness regarding facilities of the public institutional loans in the squatter settlements was very low. Therefore, the study suggests that in order to improve the financial development of the slum dwellers, major initiatives have to be taken by the local bodies particularly in access to public institutional loans.

7.10: Quality of Life of the Squatter Households in the Inner and Peripheral City of SMCA

In recent past, the notion of "Quality of Life" has received growing attention by the researchers, social planners and policy makers because the measures of quality of life exposé the social, economic and geographical conditions of the urban poor that range

from better to worse. Mohapatra and Das, 1998 (*op.cit*) have showed that the quality of life or well-being among the poor in the city of Shillong of North East India by constructing composite index. The study found that in general, the quality of life or well-being does not depend on economic characteristics for the city slum dwellers, but depend on other indicators. Similar study conducted by Beck and Mishra (2010) on socioeconomic profile and the assessment of quality of life among Oraon tribal people living within and around the Sambalpur Town in Orissa and found that the socio-economic and overall quality of life is far from satisfactory due to poor education, sanitation, housing, less possession of asset, and low per capita income, etc. Wani and Khairkar (2011) in their paper tried to explore few aspects of socio-economic condition and the Quality of Life in Srinagar City. The study found that socio-economic status and quality of life of higher income groups was far better than the low and middle income group and differences were mainly due to income conditions which in turn negatively affect on access to water supply, sanitation facility, disposal of household wastes, etc.

In the context of quality of life index of the squatters in SMCA, it is found from the sample study that a considerable proportion of the households (40 percent) in the inner city squatter settlements had moderate quality of life, followed by poor quality of life (28.33 percent), fair quality of life (18.33 percent), bad quality of life (12.50 percent) and the households with good quality of life was only 0.83 percent in terms of all socio-economic variables.

On the other hand in the peripheral city, 36.67 percent households had poor quality of life, followed by moderate quality of life (35.83 percent), fair quality of life (14.17 percent), bad quality of life (10 percent) and the households with good quality of life is only 3.33 percent in terms of all socio-economic variables. Classifying the quality of life indices into three categories as overall poor (bad and poor taken together), moderate and overall fair quality of life (fair and good taken together), it is to be found that the overall poor quality of life of the households was relatively high in the peripheral city (46.67 percent) than that of the proportion of the household in the inner city (40.83 percent). The graph on the scores on quality of life index that emerged was interesting. The locus of distribution of reduced scores of households after a certain point was relatively close to Y axis implying that the overall quality of life is poor in the peripheral city squatter settlements. On the other hand, the locus of

distribution of households after a certain point in the score classes is relatively away from the y axis representing the overall better or fair quality of life in the inner city squatter settlements.

Now, if we try to analyze the impact of income to determine the quality of life, it is found that average level of income of the squatter households was almost equal in both the inner and peripheral city squatter settlements. Apart from income, the average value of physical assets of the squatter households was more than 2 times lower in the inner city than that of the value of the physical assets in the peripheral city. But interestingly, the overall quality of life of the older squatter households who are living in the inner city was relatively better than that of the quality of life of the squatter households who are relatively the new migrants living in the peripheral city. It is also true that in each of the squatter colonies, some of the households have been able to improve their economic well being but their overall living condition in terms of family size and dependency ratio, education, health and sanitation, infrastructural facilities and community involvement were not at the desired level. The study revealed that economic characteristics are no guarantee for the overall better quality of life of the squatters. The evidence of the study suggests that the local governments should be more sensitive regarding all these variables which have direct impact on quality of life or well being of the squatters or slum dwellers.

7.11: Conclusion

Most of the large and medium sized cities like SMCA in India witnessed a high growth of informal settlements with the increasing pace of urbanization and rural-urban migration due to regional income disparities, imbalanced growth process etc., in particular. As mentioned earlier, that urbanization is positively correlated with the socio-economic development of the city. From the study of the sample inner and peripheral city, it is found that in the inner city, squatter households were about 4 times older residents than that of the peripheral city. The inner city squatter settlements are dominated by higher proportion of Scheduled Caste as against General Caste in the peripheral city. They were heterogeneous in terms of sex ratio, family size, caste, religion, mother tongue and dependency ratio in both the inner and peripheral city. So far as migration in terms of reasons are concerned, migration due to economic reasons was about double in the peripheral city compared to the inner city, where majority of the squatters were inter-state migrants in the former and inter-

district for the later. More precisely, the study of the inner and peripheral city squatter settlements in SMCA, revealed that due to lack of proper planning strategy various socio economic problems were acute in the sample area, where the provision of basic amenities and social infrastructure are not adequate to sustain the substantial number of people living in slums and squatter settlements, but the problem was more acute in the peripheral city squatter settlements in SMCA. Most of the squatters in the inner city squatter settlements are dependent on public medical services due to close proximity of the sub-divisional hospital, but a substantial segment of the slum households in the peripheral city depend on local quack doctors due to distant location of the hospital and busy work schedule. In terms economic activity, the informal sector is the sole provider of employment and it was significantly higher in the peripheral city compared to the inner city. The average monthly income of the households was almost equal in both the cities, but poverty among the squatters in both the inner and peripheral city have been characterized by very low levels of income. The indebtedness of the households was significantly lower in the inner city than the households in the peripheral city. The inequality in income, expenditure and savings of the households was significantly high in the inner city than that of the inequalities in the peripheral city. The expenditure elasticity for most of the food items are found to be close to unity supporting the Engel's law that the food items is essential among the squatter households and increases with the increase in expenditure. Based on 20 socio-economic variables, a composite index on quality of life of the households found that instead of having low levels of economic well-being, the inner city squatter settlements are much better compared to peripheral city indicating that the overall quality of life not only depends on the economic variables but also depends on other demographic, physical and social set of variables.

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CHAPTER: VIII

SOCIAL CAPITAL FORMATION AND LIVELIHOOD STRATEGIES OF THE SQUATTERS IN THE INNER AND PERIPHERAL CITY UNDER SILIGURI MUNICIPAL CORPORATION

8.1 Introduction

In the recent past, many of the cities in the developing world have experienced an influx of poor immigrants mostly from rural and semi urban areas in search of better livelihoods. This increasing pressure of population and inability to accommodate them by the local governments aggravates the housing problem which forces these migrants to settle for informal solutions. More importantly, the people in these settlements suffering from lack of education, skills and knowledge and resources have to resort alternative informal activities for the survival in the city. Livelihoods of the slum dwellers are determined by the range of assets that are available to the households like physical, human, financial capital, natural and social capital. Taken together, these are valuable assets that individuals and groups can use to address a wide range of needs and interests. So far as social capital is concerned, it can be defined as the working product of interpersonal networks, contacts, knowledge and related human resources. A central theme of the social capital theory is that people invest social capital with the expectation of some future return. Lin (2001), in his study examined four ways through which an investment in social capital provides some return. Firstly, social capital provides information through the networks of relationship. Secondly, social bonding as a means of relationships influences the optimal use of resources that exist within the networks. Thirdly, the social network helps to provide identity of the members. Finally, social networks provide support and public reinforcement among the member within networks. According to DFID (2002), social capital is considered as one of the most important capital assets to devise livelihood strategies. In an urban set up, it is important for two reasons (i) to build social capital as an explicit poverty elimination strategy among the urban poor and (ii) to increase the participation of the most vulnerable groups not only for making pro-poor programmes effective, but also for strengthening the rights of the poor.

A number of studies pointed out that social capital as a source of various networks like kinship, non-kinship and ethnic relations is the living reality and crucial factor for the livelihood strategy of the slum dwellers. They use their existing networks not only for resource mobilization but also for survival and accessing basic amenities and services. Thus, the social networks can be treated as a 'productive resource' to the dwellers of the informal settlements (Gukurume, 2012). The urban poor in the developing countries relies heavily on social capital to help them 'get by' and 'get ahead' (Thomas 1995).

Woolcock (1998), Grootaert, (2001), Das (2004) expressed that it is untenable to consider social capital as an independent variable of poverty because of its material benefit. But, social capital as norms of reciprocity and relationship is a "bottom-up" approach to poverty alleviation. It is a necessary condition for long-term development and it is one of the most important capital for the poor (World Bank, 2001). The existence of social relationship and interactions among friends, neighbours, relatives and members of the other social groups generate social capital and the ability to work collectively for livelihood, which is particularly important for the urban poor (Winfried, 1996; Moser, 1998). Therefore, social co-operation is one of the most important 'resources of the poor' and that people without social relationship or connections are the most impoverished of all (Mercedez G. R, 1994).

The urban poor who are living in slums or informal settlements in general are vulnerable with respect to the determinants of livelihoods. A question obviously arises as to how these informal settlers adopt themselves in the urban centers with their limited livelihood resources? In this context, the role of social capital has been examined through its various sources/networks as a livelihood strategy of the squatters in both the inner and peripheral city areas of SMCA. Social capital in the form of inter-relationship or networking of friends, relatives affects not only the process of migration but also affects the socio-economic life of the migrants. Therefore, in the present chapter, the role of social networks as a source of social capital has been captured in migration, housing settlement, access to employment and credit market as a means of survival of the slum dwellers in both the settlements of SMCA under study.

8.2 Social Networking in Migration of the Squatter Households in the Inner City

In the theory of social capital, migrant networks play an important role in permanent labor migration in both developed and the developing world. Migration is a social process. When people intend to move from rural and semi-urban areas either on temporary or permanent basis, they always make contact with early migrant population in order to fulfill their desired aim. Such social relationships that help a person to migrate from native place in search of livelihood opportunities at the destination are in general known as migrant networks. Migrant networks are simply the ties between the people that connect migrants, former migrants, and non migrants at origin and destination through kinship, friendship, recruiting agencies etc (Massey et al, 1998). Formation of social capital through these channels help the rural poor in case of making decisions to migrate to the city by providing information regarding adaptation and opportunities in the urban labour market (Dennecker, 2002; Hossain, 2006). At the initial stage of migration, the friends, relatives and fellow villagers often provide food, accommodation and information regarding job opportunities as well as how to cope with the urban life (Das, 2000). Therefore, role of social capital in migration remains one of the central concerns for the households and communities to enhance their access in the livelihoods strategies (Geburu and Beyene, 2012).

In most cases, income differentials between native place and destination promote for chain migration assisted by networks of ethnic bonding, kinship bonding etc. and such types of network have been identified through the information received by the poor rural households to migrate in the city (Table-8.2.1). The present sample study observed that a considerable numbers of households have received information to migrate in the city from migrant relatives and family members at destination (48.51 percent), followed by migrant friends belonging to the same ethnic group at destination (33.64 percent), friends and relatives at origin (9.90 percent) and self (7.92 percent). Similar picture is also found between the colonies i.e. maximum numbers of households received information from migrant relatives and family members at destination to migrate in the city like the SMCA, followed by migrant friends of the same ethnic group at destination, friends and relatives at origin and self (households who migrated with their on own decision). The study thus revealed that in terms of

sources of information to migrate to the city, the networks of migrant relatives and family members, migrant friends of the same ethnic group played an important role.

Table (8.2.1): Sources of Information for Squatter Households in the Inner City to migrate in the City

Sources/Squatter Settlements	Mazdoor Colony	Lichubagan Colony	Inner City
Total Number of Households	48	53	101
Migrant Friends of the same Ethnic Group at Destination	15 (31.25)	19 (35.85)	34 (33.66)
Migrant Relatives and Family Member at Destination	27 (56.26)	22 (41.51)	49 (48.51)
Friends and Relatives at Origin	3 (6.25)	7 (13.2)	10 (9.90)
Self	3 (6.25)	5 (9.43)	8 (7.92)

Source: Field Survey (Oct. 2010 – March 2011) Figures in the parentheses represent the percentage of Total Households

8.3 Social Networking in Search for Housing among the Squatter Households in the Inner City

The concentration of economic activities leads to the migration of the workforce from rural to urban areas in search of employment. These migrants are unable to get good houses due to poor income and high price of urban land (Srinivas, www document-1) and consequently occupy vacant government lands, private lands either within the inner or in the peripheral city. Social networks like friends, relatives, neighbours and political connections play an important role for searching housing settlements. In this context, Thomas (*op.cit*) pointed out that the urban poor use their social networks for everything especially information about housing and employment. In another study Roberts (1978) noted that social networks play a major role to build a house among the urban poor in Latin America. Warah (2005), for Kenya's capital city of Nairobi examined that, migrants without any social relationship had less access to information about livelihood issues, such as housing than those migrants who had a stronger network of friends and relatives in the city. The present sample study presented in Table (8.3.1) show that a greater number of the squatter households has received information regarding housing from migrant friends and neighbours of the same ethnic group (38.33 percent), followed by migrant relatives and family member (25.83 percent) and political leader, NGOs etc (15.83 percent), by birth (15.83 percent) and self (around 4.17 percent) in the inner city. In both the colonies, major sources of information in searching for housing were migrant friends and neighbours belonging

to the same ethnic group, followed by migrant relatives and family members, but between the colonies, wide variations were observed among the other sources of information like others (political leaders/local dada, NGOs etc), self, by born. The study further revealed that the migrant friends and neighbours and migrant relatives and family members are the crucial sources of information in searching for housing among the squatters in both the colonies and in the peripheral city as a whole. The finding of the study is consistent with the studies mentioned above.

Table (8.3.1): Sources of Information for Squatter Households in the Inner City in Searching for Housing

Sources of Information /Squatter Settlements	Mazdoor Colony	Lichubagan Colony	Inner City
Total Number of Households	60	60	120
Migrant Friends & Neighbours of the Same Ethnic Group	21 (35.00)	25 (41.67)	46 (38.33)
Migrant Relatives and Family Member	17 (28.33)	14 (23.33)	31 (25.83)
By Birth	12 (20.00)	7 (11.67)	19 (15.83)
Self	2 (3.33)	3 (5.00)	5 (4.17)
Others (political leader/local dada, NGOs etc)	8 (13.33)	11 (18.33)	19 (15.83)

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses are the percentage of Total Households

8.4 Social Networking in Access to Employment of the Squatters in the Inner City

By and large in general the migrants in the squatters are predominantly from rural origin with backward class in terms of assets like lands, poor housing, basic amenities etc. Prior to migration, majority of them were employed in rural occupations with poor income and irregular employment. In most of the cases, economic factors played an important role behind migration. In this regard, the most pertinent question is how these migrant slum dwellers in the cities like SMCA integrate themselves with the urban labour market. The concept of social networks as a source of social capital can provide a substantive answer to understand the question. A study by Li (1996) in china found that rural migrants in general do not have high human capital base but what they have is the social capital through which most of them integrated themselves in the informal labour market during a very short span of time. Some other studies by Mortuza, (1992) in Bangladesh, Edleman and Mitra (2006), Banerjee & Bucci (1994) in their study in India revealed that among the urban poor contact based networks through relatives, friends, members of own caste groups and co-villagers are the

crucial source of social capital in accessing jobs. Patacchini (2012) documented that the possibility of getting a job through social networks is higher among the workers of the same ethnic group when they are living nearby areas and possibility of getting a job declines with respect to distance. Similarly, Granovetter (1995), Lin & Dumin, (1996), Lin (2001) stated that social capital play a key role among the workers in finding jobs. The means of securing jobs through networks have an important effect on occupational attainment (Knight and Song, 2005).

The present sample study tried to capture the role of social capital by its various channels/sources in finding jobs of the squatter in the inner city areas of SMCA. As a whole, three networks have been identified which operates through ethnicity bonds, kinship bonds and non-kinship bonds depicted in Table (8.4.1). It is found from the table that out of total employment in the inner city squatter settlements, a greater number of the workers (about 55 percent) obtained their jobs through migrant friends and neighbours belonging to the same ethnic group (NETWORK1). About 23 percent of the workers find their jobs through migrant relatives and family members (NETWORK3) and the workers who did not receive any help from others and got jobs with their personal efforts was around 13 percent. A small number of the workers about 9 percent got their jobs through non-migrant friends, local leaders, NGOs (NETWORK 3). By activity status, it is also observed that majority of the workers in salaried and casual employment find their jobs through NETWORK1, followed by NETWORK3, SELF and NETWORK2. In casual employment, no workers got their employment by their own efforts i.e. the workers found their employment either NETWORK1 or NETWORK3 or NETWORK2. Out of total casual employment, majority of the workers got their jobs through NETWORK1, followed by NETWORK3 and NETWORK2. Therefore, the sample data as a whole shows that NETWORK1 and NETWORK3 played a crucial role in accessing employment by activity status. This finding is in the line of Knight and Song (*ibid*) that the means of securing jobs through networks have an important effect on occupational attainment.

It is noteworthy that there is a strong inter-relationship between the occupational choice and social networking, but some other factors that also influence the workers in case of occupational attainment depends on the nature of contact and

Table (8.4.1): Sources of Information in accessing Employment of the Squatters in the Inner City

Squatter Settlements/Activity Status/		Employment by Activity Status	NETWORK 1	NETWORK 2	NETWORK 3	SELF
Inner City	Salaried	70 (29.79)	40 (57.14)	6 (8.57)	11 (15.71)	13 (18.5)
	Casual	62 (26.38)	33 (53.23)	12 (19.4)	17 (27.42)	0 (0.00)
	Self Employed	103 (43.83)	57 (55.34)	2 (1.94)	26 (25.24)	18 (17.48)
	Total	235 (100.00)	130 (55.32)	20 (8.51)	54 (22.98)	18 (13.19)

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses represent the percentage of total employment by activity status,

access to information regarding urban labour market. Therefore, an econometric model of multinomial logistic regression has been used to capture the impacts of networks in accessing jobs of the migrant workers living in the squatter settlements in the inner city.

8.4.1 Social Networking in Employment/Occupational Choice Function (Maximum Likelihood Estimate): A Multinomial Logit Model

8.4.1(I) Methodology

The multinomial logit model is a simple extension or generalisation of the binary logit model, but it is more general because the dependent variable is not restricted to two variables. Binary means the response variable has two categories and multinomial means the response variable has three or more categories. As in binary logit regression, the predictors or the explanatory variables in multinomial logit model may be quantitative, categorical or a mixture of the two. Multinomial logit model is robust and superior to ordered models in predicting occupational probabilities (Miller and Volker, 1985, Meng and Miller, 1995). The model not only enable us to estimate the probability of being in a particular outcome depending on certain personal characteristics, but also to probe the impact of a particular factor on occupational attainment while the other factors remain constant.

The multinomial logit model for occupational choice takes the following form;

$$P\left(Y_{ij} = \frac{m}{X_i}\right) = \frac{\text{Exp}(\beta_m X_i)}{\sum_{j=0}^m \text{Exp}(\beta_j X_i)} \dots\dots\dots (1), \text{ Where, } m = 0, 1 \dots j \text{ (0=salaried, 1= casual}$$

and 2= self-employed)

And, $P\left(Y_{ij} = \frac{m}{X_i}\right)$ implies the conditional probability that an individual i found in the dependent variable m for the given independent or explanatory variable X_i , β_j is the corresponding coefficient which reflects the impact of changes in X_i on the probability.

The dependent variable Y_{ij} takes the value of one when the i^{th} individual is observed in employment category j , and zero if the i^{th} individual is observed in other categories outcomes indicated as

$Y_{ij} = 1$ if the i^{th} individual chooses occupation j

0 = Otherwise

In the multinomial logit model, one category is used as the "reference group" (also called a base category), and the coefficients for all other categories describe how the independent variables are related to the probability of being in that categories versus the reference group. The ratio of the probability of choosing one outcome category over the probability of choosing the reference category is often referred to as odds. The log of odds is the natural logarithm of those odds.

To overcome the indeterminacy problem in the multinomial logit model the parameters of one group considered as zero ($m=0$, for example) (Mitra, 2004). Therefore, the probability function becomes;

$$P\left(Y_{ij} = \frac{m}{X_i}\right) = \frac{\text{Exp}(\beta_m X_i)}{1 + \sum_{j=0}^m \text{Exp}(\beta_j X_i)} \dots\dots\dots (2), m = 1 \dots j, \text{ for other outcome}$$

$$P(Y_{ij} = 0) = \frac{1}{1 + \sum_{j=0}^m \text{Exp}(\beta_j X_i)} \dots\dots\dots (3), \text{ if } j=0, \text{ for base outcome}$$

Since the coefficients shows the relative impact rather than absolute effect. Therefore it is needed to calculate the marginal effects (the change in probability of the outcome or dependent variable due to one unit increase in independent or explanatory variables) of the repressor on their probabilities. Then, the equation of the marginal effects on the probability takes the following form,

$$\frac{\partial P_m}{\partial X_i} = P_m (1 - P_m) \beta_m \dots\dots\dots (3)$$

8.4.1(II): Modeling for Employment/Occupational Choice Function

Occupational differentiation arises mainly due to the preference or availability of jobs in the labour market particularly for the people who are living in the slums and squatter settlements. In the present study, the dependent or response variable based on occupational choice has been classified into three different categories; salaried employment (a person who worked in others' farm or non-farm enterprises and in turn received salary or wages on a regular basis, but not on the basis of daily or periodic renewal of work contract), casual employment (a person who is casually engaged in others' farm or non-farm enterprises and in return received wages according to the terms of the daily or periodic work contract) and self employment (persons who operated their own farm or non-farm enterprises or engaged independently in a profession or trade on own account or with one or few partners) and correspondingly the self-employment category with highest number of observations (workers) has been considered as the reference or base category in the model. In order to capture the impacts role of networks in accessing jobs of the migrant workers three network dummies have been introduced as an explanatory variables. NETWORK1 takes the value of 1 for the workers who received help from migrant friends and neighbours belonging to the same ethnic groups and 0 for otherwise. NETWORK 2 takes the value of 1 for the workers who received help from non-migrant friends, local leaders, NGOs etc. and 0 for otherwise. NETWORK 3 takes the value of 1 for the workers who received help from migrant relatives and family members and 0 for otherwise. On the other hand, the workers who did not received any help from others and got the employment with their own initiative fall under the self category (SELF) which has been taken as reference to specify the above network dummies.

Other explanatory variables introduced in multinomial logit model are Duration of residence (DUR), age (AGE) and family size of the employed person (FZEP) in their actual values. Along with these, three other dummy variables have also been introduced Gender dummy (SEX) takes the value of 1 for male and 0 for female, dummy for education (EDU) takes the value of 1 for literate and 0 for illiterate and the dummy for social castes (CASTE) takes the value of 1 for General Caste and 0 for other than General Caste (SC/ST/OBC).

Occupational variation arises mainly due to the preference or availability of jobs in the labour market particularly for the people living in the squatter settlements. But, the fact is that the occupations having better earning, decent works and good future prospects are more desirable to the migrant workers. In the sample study of 120 household, the total number of employed persons was 235 (about 35 percent of the total squatters/slum dwellers) in the inner city, while 29.79 percent of the workers were salaried employee, 26.38 percent casual employee and 43.83 percent in self employed.

Table (8.4.2) Descriptive Statistics of the determinants in Multinomial Logit Model

Explanatory Variables ↓	Min.	Max	Mean	SD
Duration of Residence of the Employed Person (DUR)	15	70	32.86	10.83
Age of the Employed Person (AGE)	15	80	40.49	17.15
Family Size of the Employed Person (FZEP)	1	22	6.43	3.60
Education of the Employed Person (1=Literate, 0=Illiterate) (EDU)	0	1	0.59	0.49
Sex of the Employed Person (1=Male, 0=Female) (SEX)	0	1	0.79	0.41
Caste of the Employed Person (1=General, 0=SC/ST /OBC) (CASTE)	0	2	0.41	0.50
NETWORK 1(1=Migrant friends and neighbours of the same ethnic group, 0=Otherwise)	0	1	0.55	0.50
NETWORK 2 (1=Non-migrant friends, local leaders, NGOs etc, 0=Otherwise)	0	1	0.09	0.28
NETWORK 3 (1=Migrant family member and Relatives, 0=Otherwise)	0	1	0.23	0.42

The above Table (8.4.2) depicts the determinants /explanatory variables used for occupational choice of the workers in multinomial logit model in the inner city. Normally, it is assumed that the workers with long duration of residence have higher probability of getting a job rather than the workers with short duration of residence because the role of networks or rural-urban links in accessing jobs among the older residents are assumed to be much stronger than the new residents. From the above table, it is seen that the duration of residence of the workers as an absolute number ranges from 15-70 years with the mean value of about 33 years in the inner city. In terms of occupation by activity status, the average duration of residence was about 34 years in self employment, 33 and 32 years in salaried and casual employment respectively. Similarly, the average age of the workers was also highest for self employment around 35 years, followed by salaried and casual employment about 33

and 32 years respectively (Table 8.4.1a, Appendix-E). As a whole, the average age of the workers was about 40 years in the inner city. The workers in salaried employment recorded the higher family size (around 7), followed by casual and self employment with around 6 members in each category (Table 8.4.1a, Appendix-E). Overall, the average family size of the workers was around 6. Similarly, around 90 percent of the workers were males in casual employment, followed by 79 and 70 percent males in self and salaried employment respectively. It is also found that more than 50 percent of the workers belonged to other than general cast (SC/ST/OBC) in the inner city. It has been estimated from the sample study that the proportion of literate workers in salaried employment was about 61 percent, as against 56 and 58 percent in casual employment and self-employment respectively. As a whole, the proportion of literate workers in the inner city was 59 percent.

8.4.1(III): Interpretation of the Results

Apart from 37 types of working activities of the total workforce in the inner city squatter settlements, three employment categories have been considered to run the multinomial legit model. As it is seen from the study that a higher proportion of migrant workers living in slums or squatter settlements were engaged in self-employment and hence this category has been used as a reference or base category for comparison with other occupations (salaried and casual).

The results of the model shown in Table (8.4.3) illustrated that the Likelihood Ratio (LR) Chi-Square test value is 55.12 with less than the level of significance of 0.05 suggesting the model has statistically high significant relationship between explanatory and response variables. Similarly, Cox & Snell, Nagelkerke and McFadden R Square provides an information regarding the magnitude of variation in the dependent variable and is termed as pseudo R square, using this, the distribution revealed that 21, 42 and 11 percent of the variation has been explained by the set of variables for exploring the dependence on the three categories of networks for securing employment. The parameter of the multinomial logit model has been estimated with 235 observations using maximum likelihood procedure.

The results corresponding to the workers engaged in salaried employment show that only three variables (AGE, FZEP and NETWORK 1) are statistically significant in the inner city. The demographic variable age (AGE) is highly significant

at 1 percent level but its impact is negative in access to salaried employment i.e. with an increase in age of the employed person the probability of getting salaried employment with reference to self-employment category is declining. It is in conformity with the fact that the older workers are less demanded than their younger counterpart in salaried employment.

In order to capture the role of networks in accessing employment, the empirical study show that NETWORK 1 (migrant friends and neighbours belonging to the same ethnic group) played a significant positive role among the migrant workers in joining salaried employment with reference to base category. The other networks like NETWORK 2 (non-migrant friends, local leaders, NGOs etc) and NETWORK 3 (migrant family member and relatives) are not significant but the values of the co-efficient showing positive impacts in accessing salaried employment. The family size (FZEP) is positively significant at 20 percent level i.e. due to an increase in family size the probability of getting salaried employment is increasing. Though, the impact of family size is negligible but yet the possibility to get salaried employment was high for the workers with higher family size.

There are some other variables like duration of residence (DUR) and education (EDU) that are insignificant, but have positive impacts in accessing salaried employment. On the other hand, the coefficients of SEX and CASTE are negative and insignificant indicates that due to an increase in one unit of male employment the probability of getting salaried employment reduces. The General Caste workers are also less likely to get salaried employment, but the probability of the General Caste (SC/ST/OBC) has higher preference in salaried employment due to one unit increase in employment.

In case of workers engaged in casual employment, a large number of variables are found to be significant when compared to the variables significant in salaried employment in the inner city. Among the casual workers, length of residence (DUR) and education (EDU) have significant negative impact at 10 and 1 percent levels of significance respectively. Therefore, it corroborates with the earlier reference that older migrants and literate workers are less likely to participate in casual employment i.e. the with an increase in the length of residence and literacy rate of the workers, the probability in accessing casual employment decreases as compared to the base

category. AGE and FZEP also play a negative role but they are not significant indicating that the higher the age and family size, the lower the probability of availing casual employment as compared to base category.

Table (8.4.3): Results on Employment/Occupational Choice Function (MLE):
Multinomial Logit Model

Explanatory Variables ↓	Salaried Employment				Casual Employment			
	β	Exp (β)	Prob.	Marginal Effect	β	Exp (β)	Prob.	Marginal Effect
DUR	0.027 (1.57)	1.027	0.0894	0.0022	-0.045*** (3.15)	0.956	0.0229	-0.001
AGE	-0.031* (4.01)	0.969	0.0844	-0.0024	-0.003 (0.03)	0.997	0.0239	-0.0001
FZEP	0.069**** (2.21)	1.071	0.0933	0.0058	-0.02 (0.13)	0.981	0.0235	-0.0005
EDU	0.001 (0.00)	1.001	0.0872	0.0001	-0.785* (4.00)	0.456	0.0109	-0.0085
SEX	-0.501 (1.37)	0.606	0.0528	-0.025	0.611 (1.57)	1.842	0.0442	0.0258
CASTE	-0.093 (0.07)	0.911	0.0793	-0.0068	0.052 (0.02)	1.053	0.0252	0.0013
NETWORK 1	1.209**** (1.83)	3.350	0.2918	0.2498	3.356* (12.83)	28.671	0.6873	0.7213
NETWORK 2	0.013 (0.00)	0.987	0.0860	0.001	1.027*** (3.40)	2.793	0.0670	0.0642
NETWORK3	0.58 (1.27)	0.560	0.0488	0.0269	1.088*** (3.14)	2.967	0.0711	0.0719

Note 1: Self Employment is the reference or base category. N= 235. Figures in parentheses are Wald χ^2 test statistic, *, **, ***, **** represents $p < 0.001$, $p < 0.05$, $p < 0.10$ and $p < 0.20$ respectively. Likelihood Ratio $\chi^2 = 55.12$ with $p < 0.001$. Pseudo R-Square (Cox and Snell: 0.21, Nagelkerke: 0.42, McFadden: 0.11).

On the other hand, the co-efficient of SEX and CASTE show that they are not significant but their impact is positive i.e., with an increase in male workers, the probability of getting casual employment is very high and the probability of getting such employment increases marginally with the increase in General Caste worker. In terms of employment choice, it is observed that all the networks in casual employment are highly significant, where NETWORK 1 providing significant support to the squatters in getting casual employment, followed by NETWORK 3 and NETWORK 2 i.e., with reference to the base category, the probability of finding casual employment of the migrant squatters is significantly high with an increase in the role of all these networks in the inner city. The marginal effects shown in Table (8.4.3.)

have conformity with the result that has been analyzed in accessing salaried and casual employment with reference to the base category.

It is noteworthy that there is an important inter-relationship between occupational choice and networking in the urban labour market. As a whole, the occupational attainment or choice not only influenced by networks but some other influential factors are there like duration of residence, age, family size, educational attainment, sex and caste depending upon the nature of contact and the access to information related to the labour market in the city areas.

8.5 Social Networking in Access to Loan/Credit of the Squatter Households in the Inner City

In terms of access to formal and informal credit markets, social capital is a crucial factor for financial development among the urban low-income groups. A study by Guiso et al (2004) in Italy found that where the social capital is very strong, the households have higher institutional credit and less of the informal credit. Another study by Grootaert (*op.cit*) made a similar conclusion that social capital among the poor communities in Bolivia, Burkina Faso and Indonesia makes a significant contribution in case of access to credit. The present sample study has tried to show the role of social capital through various sources of information in access to credit markets in the inner city squatter settlements of SMCA.

Table (8.5.1): Sources of Help in Access to Loan/Credit of the Squatter Households in the Inner City

Squatter Settlements/ Sources of Help in Access to Loan	Migrant Friends and Neighbours of the same Ethnic Group	Migrant Relatives	Employer	Local Leader/ NGOs etc.	Self	Total
Mazdoor Colony	13 (46.43)	4 (14.29)	6 (21.43)	3 (10.71)	2 (7.14)	28 (100.0)
Lichubagan Colony	12 (37.50)	7 (21.88)	5 (15.63)	2 (6.25)	6 (18.75)	32 (100.0)
Inner City	25 (41.67)	11 (18.33)	11(18.33)	5 (8.33)	8 (13.33)	60 (100.0)

Source: Field Survey (Oct. 2010 – March 2011), Figures in brackets are the percentage of total households with indebtedness

From survey data given in Table (8.5.1) it is found that a considerable number of indebted households taken help from migrant friends and neighbours belonging to the same ethnic group (41.67 percent), followed by migrant relatives and employer (18.33percent each), the indebted households who did not receive any help from others (self) (13.33 percent) and local leader/NGOs etc (8.33 percent). Within

colonies, the networks of friends and neighbours ties are much stronger than the other networks in access to both formal and informal credit. Though, the difference among the networks of migrant relatives, employer and local leader/NGOs etc., was marginal between the colonies.

8.6 Social Capital Formation among the Squatter Households through Community Participation in the Inner City

The community participation as a means of social capital formation of the urban poor is one of the crucial approaches in poverty alleviation as well as to lead better the quality of life. Several studies in different countries have shown that community participation is an important element in community cohesion, household relationships, and in the range of information that available to households and individuals (Hannerz, 1980). The social network of relatives, friends and neighborhoods help the poor not only to solve their economic crisis but also help to solve social problems. The study found that the urban squatters or slum dwellers in SMCA also played an important role in the formation of social capital through the participation in different community problems/programmes. Their participation was not only bounded to their own communities but they also participate in different community development programmes/political meetings, rallies, etc. Though, some studies revealed that residents of the larger cities are less likely to attend public meetings, religious activities, to work on community projects or even to visit friends than the residents of small towns and villages i.e., the community participation in urban areas is lower than the rural areas. Simultaneously, it has also been seen that the community participation of the urban poor is quite high (Putnam, 2000; Bixby, 2006). This is also true that without participating in different political meetings, activities and maintaining contact with the local leaders the urban poor cannot achieve their expected goals and thus some of the poor squatters participated in direct politics.

The formation of social capital through community participation of the squatter households in SMCA is shown in Table (8.6.1), where, it is found that maximum number of the households participate in community development programmes by contributing money for various social festivals, rituals etc.(74.17 percent), followed by the participation in community meetings/political meetings/rallies etc (71 percent), participation to resolve community problems (25 percent), participation in

community development work (21 percent) in the inner city as a whole. Within colonies, the community participation of the households through the contribution of money for community development and participation to resolve community problem were significantly high in the Lichubagan colony (78.33 and 30.00 percent respectively) as compared to the Mazdoor colony (70 and 20 percent respectively). In contrast, participation of the household in community development work and participation in community meetings/political meetings/rallies etc. were significantly high in Mazdoor colony (25 and 65 percent respectively) as compared to Lichubagan colony (16.67 and 53.33 percent respectively).

Table (8.6.1): Social Capital Formation of the Squatter Households through Community Participation in the Inner City

Community participation/ Squatter Settlements	Mazdoor Colony	Lichubagan Colony	Inner City
Total Number of Households	60	60	120
Contribution of Money for Community Development	42 (70.00)	47 (78.33)	89 (74.17)
Participation to Resolve Community Problem	12 (20.00)	18 (30.00)	30 (25.00)
Participation in Community Development Work	15 (25.00)	10 (16.67)	25 (20.83)
Participation in Community Meetings/Political Meetings/Rallies, etc.	39 (65.00)	32 (53.33)	71 (59.17)

Source: Field Survey (Oct. 2010 – March 2011, Figures in the parentheses are the percentage of total households

8.7 Social Networking in Migration of the Squatter Households in the Peripheral City

In the sample study, the role of social networks in migration of the squatters has been reflected through the different sources of information (Table 8.7.1), where it is found that a considerable number of the households in the peripheral city at about 45 percent have received information to migrate in the city directly or indirectly from migrant relatives and family members, followed by migrant friends belonging to same ethnic group at destination (about 34 percent), self (about 13 percent) and friends and relatives at origin (about 8 percent). On the other hand, in both the colonies, the proportion of households that received information from migrant relatives and family member was quite larger, followed by migrant friends of the same ethnic group at destination, households who migrated on their own initiative (self) and friends and relatives at origin. Therefore, in terms of sources of information to migrate into the city, the migrant relatives and family members played a crucial role, followed by

migrant friends of the same ethnic group in both the colonies and in the peripheral city as a whole.

Table (8.7.1): Sources of Information for Squatter Households in the Peripheral City to Migrate in the City

Sources/Squatter Settlements	Rajibnagar Colony	Shivnagar Colony	Peripheral City
Total Number of Households (First Generation)	60	60	120
Migrant Friends of the same Ethnic Group at Destination	24 (40.00)	17 (28.33)	41 (34.17)
Migrant Relatives and Family Member at Destination	25 (41.67)	29 (48.33)	54 (45.00)
Friends and Relatives at Origin	7 (11.67)	3 (5.00)	10 (8.34)
Self	4 (6.67)	11 (18.33)	15 (12.50)

Source: Field Survey (Oct. 2010 – March 2011). Figures in the parentheses represent the percentage of total households.

8.8 Social Networking in Search for Housing among the Squatter Households in the Peripheral City

The sample study in the peripheral city squatter settlements found that major sources of information in searching for housing among the squatter households were migrant friends and neighbours belonging to the same ethnic group, relatives and family members and others (local leader/dada, NGOs etc). It is found from Table (8.8.1) that 45 percent of the households received information regarding housing from migrant friends and neighbours belonging to the same ethnic group in the peripheral city, followed by migrant relatives and family member (around 33 percent), other sources like local leaders, NGOs etc (15 percent) and self (8 percent). On the other hand, in the colonies significant variation is observed in the sources of information for housing settlement (Table-8.8.1).

Table (8.8.1): Sources of Information for Squatter Households in the Peripheral City in Searching for Housing

Sources /Squatter Settlements	Rajibnagar Colony	Shivnagar Colony	Peripheral City
Total Number of Households	60	60	120
Migrant Friends & Neighbours of the same ethnic groups	28 (46.67)	26 (43.33)	54 (45.00)
Migrant Relatives & Family Members	18 (30.00)	21 (35.00)	39 (32.50)
By Birth	0 (0.00)	0 (0.00)	0 (0.00)
Self	4 (6.67)	5 (8.33)	9 (7.50)
Others (local Leader/dada, NGOs etc)	10 (16.67)	8 (13.33)	18 (15.00)

Source: Field Survey (Oct. 2010 – March 2011). Figures in the parentheses indicate the percentage of total households.

The study evidenced that in case of search for housing of the squatters, the networks of migrant friends and neighbours of the same ethnic group, relatives and family members played a significant role in both the colonies and in the peripheral city as a whole.

8.9 Social Networking in Access to Employment of the Squatters in the Peripheral City

Table (8.9.1) shows that the squatters received help from various networks in accessing employment. Out of total employment in the peripheral city squatter settlements, majority of the workers (about 54 percent) obtained their jobs through migrant friends and neighbours of the same ethnic group (NETWORK1), followed by the workers who did not receive any help from others and got jobs with their own initiative (21.20 percent), 19.02 percent of the workers find their jobs through migrant relatives and family members (NETWORK3) and 5.43 percent of workers got their jobs through non-migrant friends, local leaders, NGOs (NETWORK2). By activity status, a large number of the workers in salaried and casual employment obtained their jobs through NETWORK1, followed by NETWORK3 and NETWORK2 in the peripheral city. On the other hand, in case of self-employment, maximum number of workers got employment through their personal efforts (SELF), followed by NETWORK1, NETWORK3 and NETWORK2. Therefore, with regard to the role of networks in accessing employment by activity status, NETWORK1 and NETWORK3 played a crucial role among the squatters in the peripheral city squatter settlements as a whole.

Table (8.9.1): Sources of Information in Access to Employment of the Squatters in the Peripheral City

Squatter Settlements/Activity Status		Employment by Activity Status	NETWORK1	NETWORK2	NETWORK3	SELF
Peripheral City	Salaried	47 (25.54)	28 (59.57)	4 (8.51)	7 (14.89)	8 (17.02)
	Casual	69 (37.50)	44 (63.77)	4 (5.80)	19 (27.54)	2 (2.90)
	Self Employed	68 (36.96)	28 (41.18)	2 (2.94)	9 (13.24)	29 (42.65)
	Total	184 (100.00)	100(54.35)	10 (5.43)	35 (19.02)	39 (21.20)

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses represent the percentage of total employment by activity status

Network 1 represents the workers, who received help from migrant friends & neighbours of the same ethnic group, Network 2 represents the workers who received help from non-migrant friends, local leaders, NGOs.

Network 3 represents the workers who received help from migrant relatives and family members

Self: represents workers who did not receive any help from others and find jobs through their personal efforts.

8.9.1(I): Social Networking in Employment/Occupational Choice Function (Maximum Likelihood Estimate) in the Peripheral City: A Multinomial Logit Model

From table (8.9.2), it is found that the duration of residence of migrant workers as an absolute number in the peripheral city, ranges from 1-15 years with mean and standard deviation of 10.65 and 4.21 respectively. By occupational activity, the average duration of residence of the migrant workers was around 12 years in self employment, 10 years in each of the casual and salaried employment (Table 8.4.1a, Appendix-E)\

Table (8.9.2) Descriptive Statistics of the determinants used in Multinomial Logit Model

Explanatory Variables ↓	Min.	Max.	Mean	SD
Duration of Residence of the Employed Person (DUR)	1	15	10.65	4.21
Age of the Employed Person (AGE)	17	65	36.41	10.39
Family Size of the Employed Person (FZEP)	1	10	4.92	2.05
Education of the Employed Person (1=Literate, 0=Illiterate) (EDU)	0	1	0.59	0.49
Sex of the Employed Person (1=Male, 0=Female) (SEX)	0	1	0.78	0.42
Caste of the Employed Person (1=General, 0=SC/ST /OBC) (CASTE)	0	1	0.51	0.50
NETWORK 1(1= Previously migrated friends and neighbours with same ethnic group, 0=Otherwise)	0	1	0.54	0.50
NETWORK 2 (1=Non-migrated friends, local leader, NGOs etc, 0=Otherwise)	0	1	0.05	0.23
NETWORK 3 (1=Previously migrated family member and Relatives, 0=Otherwise)	0	1	0.19	0.39

Table (8.9.2) depicts the descriptive statistics of the determinants/explanatory variables used in the occupational choice in multinomial logit model. The absolute age of the workers ranges from 17-65 years with the mean and standard deviation of 36.41 and 10.39 respectively implies that the workers in the peripheral city were mostly from upper age group and as a result the age differential was quite high. But, in terms of occupational status, the average age of the worker was highest at around 37 years in self employment, followed by casual and salaried employment about 36 years in each category (Table 8.4.1a, Appendix-E). The average family size of the workers was around 5 in the peripheral city as a whole. Similar picture exist in terms of average family size of the workers by different activity status in the peripheral city. In terms of gender, the proportion of male workers was around 78 percent, as against 22 percent female workers. More than 50 percent of the workers as a whole belonged

to General Caste. Around 65 and 57 percent of the workers were in self and salaried employment respectively, as against around 32 percent in casual employment. The proportion of literate workers was around 72 percent in salaried employment, as against 65 and 44 percent in self and casual employment respectively. As a whole, the proportion of literate workers was around 59 percent in the peripheral city. In terms of different ways of finding employment, the study found that out of total employment, a greater number of workers obtained employment through NETWORK1 (54 percent), followed by NETWORK3 (19 percent), NETWORK2 (5 percent) and the proportion of workers who did not receive any help from others and got employment by their personal efforts fall under SELF category (21 percent). On the other hand, by activity status, majority of the workers found their jobs through NETWORK1, followed by NETWORK3, the workers who did not receive any help from others and got employment by their personal efforts (SELF) and NETWORK 2.

8.9.1(II): Interpretation of the Results

The following results on the occupational choice are obtained based on the methodology that has already been shown in chapter (V). The results of the model depicted in Table (8.9.3), show that the Likelihood Ratio (LR) Chi-Square value is 80.98 with less than the level of significance of 0.05, suggesting that the model has statistically significant relationship between explanatory and response variables. Similarly, Cox & Snell, Nagelkerke and McFadden R Square provide information regarding the magnitude of variation in the dependent variable and is termed as Pseudo R square. Using this, the distribution revealed that 36, 40 and 20 percent of the variation has been explained by the set of variables for exploring the dependence on the three categories of networks for securing employment.

The results corresponding to the workers engaged in salaried employment found that only four variables (DUR, NETWORK1, NETWORK2 and NETWORK3) are statistically significant in the peripheral city. Length of migration or duration of residence (DUR) is highly significant with negative impact, i.e., with an increase in the length of residence, the migrant workers are less preferred to get salaried employment. On the other hand, all the networks played a significant positive role in accessing salaried employment implying that with an increase in the role of networking the probability of getting salaried employment is very high. The coefficient values of the networks also show that the impact of NETWORK 1 in

getting salaried employment is much higher than the NETWORK 3 & 2. Other variables like age (AGE) education, (EDU) and gender (SEX) are not statistically significant, but they have more or less positive impacts in accessing salaried employment. Similarly, family size of the employee (FZEP) and CASTE are statistically insignificant but have marginal negative impacts in getting salaried employment i.e., with the increase in family size and General Caste of the worker, the probability of joining such employment reduces.

Table (8.9.3): Results on Employment/Occupational Choice Function (Maximum Likelihood Estimate): The Multinomial Logit Model

Explanatory Variables ↓	Salaried Employment				Casual Employment			
	β	Exp (β)	Prob.	Marginal Effect	β	Exp (β)	Prob.	Marginal Effect
DUR	-0.113** (4.92)	0.893	0.0384	-0.0042	-0.136** (6.50)	0.873	0.0066	-0.0009
AGE	0.009 (0.34)	1.009	0.0434	0.0004	-0.010 (0.36)	0.99	0.0075	-0.0001
FZEP	-0.121 (1.50)	0.886	0.0381	-0.0044	-0.070 (0.51)	0.933	0.0071	-0.0005
EDU	0.169 (0.15)	1.185	0.0509	0.0082	-1.265** (7.72)	0.282	0.0021	-0.0027
SEX	0.121 (0.06)	1.129	0.0485	0.0056	0.622 (1.40)	1.863	0.0141	0.0086
CASTE	-0.332 (0.62)	0.718	0.0309	-0.0099	-1.360* (10.22)	0.257	0.0019	-0.0026
NETWORK1	2.106** (4.60)	8.214	0.353	0.4810	3.930* (12.14)	50.917	0.3848	0.9304
NETWORK2	1.185*** (3.34)	3.271	0.1406	0.1432	3.567* (22.32)	35.402	0.2676	0.6991
NETWORK3	1.602** (9.64)	4.965	0.2134	0.2689	3.684* (25.82)	39.79	0.3007	0.7747

Note: Self Employment is the reference or base category, N= 235. Figures in parentheses are Wald χ^2 test statistic, *, **, ***, **** represents $p < 0.001$, $p < 0.05$, $p < 0.10$ and $p < 0.20$ respectively. Likelihood Ratio $\chi^2 = 80.98$ with $p < 0.001$. Pseudo R-Square (Cox and Snell: 0.36, Nagelkerke: 0.40, McFadden: 0.20)

In case of workers engaged in casual employment in the peripheral city squatter settlements (Table-8.9.3), a large number of explanatory variables are found to be statistically significant when compared to the variables significant for salaried employment. Among the casual workers, six variables namely duration of residence (DUR), education (EDU), caste (CASTE) and the all the networks (NETWORKS 1, 2 and 3) are highly significant either positively or negatively. In casual employment, all the networks are positively significant at 1 percent level i.e. the probability of getting casual employment of the migrant workers increases with an increase in the role of

networking. With regard to the co-efficient value of the networks, it is found that the impact of NETWORK 1 is significantly high in accessing casual employment compared to NETWORK 3 & 2. On the other hand, CASTE, EDU and DUR are highly significant with negative impacts at 1 and 5 percent level respectively implying that the worker with general Caste, higher duration of residence and literate would less prefer to get casual employment with reference to the base category. Though, some other explanatory variables like AGE and FZEP are not significant, but they also have more or less negative impact in getting this type of employment. The value of the coefficient of SEX is insignificant but positive indicating that the male workers have the probability in getting casual employment. The marginal effects for all parameters have also been calculated to confirm the interpretation of the results.

8.10 Social Networking in Access to Loans/Credit of the Squatter Households in the Peripheral City

As mentioned earlier that in access to formal and informal credit, social capital plays a positive role on financial development for the urban poor. Here, in the sample study, the role of social capital by its different sources has been captured in terms of access to formal and informal credit markets of the squatters in the peripheral city. From Table (8.10.1), it is found that in access to both formal and informal credit, majority of the indebted households at 43.42 percent had received help from migrant friends and neighbours belonging to the same ethnic group, followed by employer (23.68 percent), migrant relatives (17.11 percent), local leader/dada (9.21 percent) and the households who did not received any help from others (self) was 6.58 percent in the peripheral city as a whole.

Table (8.10.1): Social Networking in access to Loans/Credit of the Squatter Households in the Peripheral City

Squatter Settlement/ Sources of Help	Migrant Friends and Neighbours with same Ethnic Groups	Migrant Relatives	Employer	Local Leader, NGOs etc.	Self	Total
Rajibnagar Colony	16 (41.03)	7 (17.95)	8 (20.51)	4 (10.26)	4 (10.26)	39 (100.0)
Shivnagar Colony	17 (45.95)	6 (16.22)	10 (27.03)	3 (8.11)	1 (2.70)	37 (100.0)
Peripheral City	33 (43.42)	13 (17.11)	18 (23.68)	7 (9.21)	5 (6.58)	76 (100.0)

Source: Field Survey (Oct. 2010 – March 2011)

Within colonies, the scenario was more or less similar i.e., a large number indebted households that had received help from friends and neighbours of the same ethnic

group, followed by employer of the employee, migrant relatives, local leader, NGOs etc., and self. Therefore, the study revealed that the social networks among the squatters have significant effects in access to both the formal and informal credit markets in the peripheral city of SMCA.

8.11: Social Capital Formation through Community Participation among the Squatter Households in the Peripheral City

Community participation of the households living in the squatter settlements is one of the important forms of social capital. The study on different forms of community participation shown in Table (8.11.1) found that in the inner city, about 78 percent of the household contribute money relating to various social festivals for community development, 19 percent participate to resolve community problems, 27 percent participate in community development work and about 76 percent participate in community meetings/political meetings/rallies. On the other hand, between the colonies, the participation of the households through the contribution of money for community development, participation to resolve community problem and participation in community meetings/political meetings/rallies were significantly higher in the Shivnagar colony compared to the Rajibnagar colony. In contrast, the participation of the household to community development work was significantly higher in Rajibnagar colony than that of the participation in Shivnagar colony.

Table (8.11.1): Formation of Social Capital through Community Participation of the Squatter Households in the Peripheral City

Community Participation / Squatter Settlement	Rajibnagar Colony	Shivnagar Colony	Peripheral City
Total Number of Households	60	60	120
Contribution of Money for Community Development Work	45 (75.00)	48 (80.00)	93 (77.50)
Participation to Resolve Community Problem	14 (23.33)	9 (15.00)	23 (19.17)
Participation in Com. Development Work	15 (25.00)	17 (28.33)	32 (26.67)
Participation in Com. Meetings/Political Meetings/Rallies, etc.	44 (73.33)	47 (78.33)	91 (75.83)

Source: Field Survey (Oct. 2010 – March 2011), Figures in the parentheses indicate the percentage of total households

8.12 Conclusion

Unprecedented growth of informal settlements and the resulting poverty in a city like SMCA are the direct consequences of Urbanization. Growth of informal settlements and poverty are positively interlinked with the process of urbanisation. Many authors are sharing this opinion that the slums are the symbols of poverty. In this context, the present sample study observed that most of the rural poor migrants who are living in both the inner and peripheral city squatter settlements are facing several problems like high rates of unemployment, low incomes and, poor access to education, health, urban amenities like electricity, water and securing legal housing. They do not have required levels of skill or education to enable them to get secured employment in the formal sector and thus get absorbed in low paid informal employment. So far as the role of social capital among the informal settlers is concerned, it has been studied with regard to decision making to migrate to the city, housing settlement, access to employment, credit and community participation. The study documented that with the limited financial, physical and human capital base, the formation of social capital through the relationship of friends and neighbours belonging to the same ethnic group (ethnic bonding) relatives and family members (kinship bonding), local leaders/NGOs etc (non-kinship bonding) played a crucial role to make a living of the squatters in both the inner and peripheral city of SMCA and it is essentially a poverty alleviation strategy for them.

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CHAPTER: IX

SUMMARY FINDINGS & CONCLUSION, POLICY REVIEW AND SUGGESTIONS

9.1 Summary Findings

The present chapter provides a brief summary of the preceding chapters including policy review and suggestions. Mushrooming growth of squatter settlements due to rapid urbanization in the cities of the developing world like Siliguri Municipal Corporation Area (SMCA) in Darjeeling district of the state of West Bengal in India is the focus of this present research. Thus, an attempt has been made to understand the formation of social capital and socio-economic outcome of the urban poor in response to various aspects of livelihood opportunities in SMCA.

Chapter I encompasses the statement of the problem, importance, relevance, justification, scope and a review of research in the field that forms the basic foundation and directions of the study. Methods and approaches that are assumed to be appropriate have been applied for the present study including a brief review of the relevant literature. However, it should be mentioned that the analysis of the problems has often been constrained by non-availability of relevant data at the desired level.

Based on secondary sources of information, a study of urbanization and the incidence of informal settlements in different parts of the south Asian countries have been highlighted in **Chapter II**. The study observed that for the first time in human history in 2011, the proportion of urban population reached at about 52 percent i.e., there were one urban resident in every two persons in the world. With the rapid pace of urbanization, slums are also growing dominantly with the addition of about 8.5 million slum dwellers every year in the cities of the developing world though its proportion is reducing. In the developing regions of the world, Asia dominated the global picture, having a maximum number of slum population. Since 1990-2009, in terms of share of urban and slum population to the total urban, slum population in south Asia, India dominated all other countries in south Asia namely Bangladesh, Pakistan and Nepal. The significant point is that when the share of urban and slum population in south Asia is increasing then at the same time the share of urban, slum population in India is continuously declining indicating that other countries or at least

one country other than India is urbanising at a faster rate than India, with higher slum incidence. It is documented that the higher the Human Development Index (HDI), the lower would be the incidence of slums. But in reality, it was seen that in the four south Asian countries, the number of slum population has been increasing even with the increase in the value of HDI. In this region, India is the only country, where, the absolute number of slum population decreased sharply even with marginal increase in the value of the HDI. This is indicative of a possible transition of a certain magnitude of slum dwellers out from the conditions of slums due to effective slum development programmes and a possible declining trend in rural-urban migration. In contrast, with the increase in HDI, the number of slum population among the countries of Pakistan, Bangladesh and Nepal is also increasing indicating that these countries have failed to make substantial improvement in slum conditions and may be due to unabated flow of rural migrants to the urban centers. In terms of living conditions, the slum dwellers in Bangladesh, Pakistan and Nepal are much worse than India, drawing attention to the lack of government initiatives and interventions in improving the socioeconomic conditions of this segment of the population. As per report of the MDG target, a total of 227 million people in the developing world have moved out from slum conditions during 2000-2010 i.e. the target of MDG has been achieved by 2.2 times before the deadline. Not only that the significant numbers of slum dwellers have moved out from slum condition, but more than 200 million slum dwellers are also enjoying better living conditions. India, the most populated country in the Asian region has made significant improvement in the lives of slum condition as well as reducing the incidence. This significant improvement in the lives of slum dwellers has been possible for India mainly because of the implementation of various poverty alleviation strategies.

Chapter III deals with urbanization, migration and demographic changes in North Bengal with special reference to Darjeeling district. In 2001, this region was a place of less than 1/5th of the total and 1/11th of the state's urban population. But the growth rates of total and urban population in North Bengal since 1951 were significantly higher than that of the rest of Bengal and the State. North Bengal, a significant part of the state that includes six northern districts namely Darjeeling, Jalpaiguri, Kooch Behar, Uttar Dinajpur, Dakshin Dinajpur is relatively more backward economically, and also tends to be less advanced in terms of Human Development Index. The

Darjeeling district has recorded lower levels of deprivation in terms of health, income and education index. This region is predominantly rural and is characterized by higher proportion of Scheduled Caste and Scheduled Tribe populations. The Darjeeling district is the remarkable example of the growth of population due to immigration from neighboring countries and states. The level of industrialization in North Bengal region was much lower than that of the rest of Bengal region and the process of urbanization in North Bengal was always slow with compared to the rest of Bengal. Within districts of North Bengal, the process of urbanisation was not significant except Darjeeling district, where there was one in every three persons who were living in urban areas. Despite, the low level of urbanization, the people in the slums have increased substantially in the districts of north Bengal region. The slum population constitutes more than 1/3rd of the total urban population in the North Bengal region, as against 1/4th of the slum population in the rest of Bengal. Among the districts of North Bengal reporting slums, Darjeeling district has housed about half of the total slum population in North Bengal primarily due to rapid growth of urbanization and informal settlements in SMCA. In terms of socio-economic indicators, the slum dwellers in North Bengal region and Darjeeling district were far behind from the rest of Bengal and the state. Lack of access to safe drinking water, drainage facility and proper sanitation are the common features in these settlements.

Chapter IV is the exploration of urbanization, migration and incidence of slums and squatter settlements in the municipal towns of Darjeeling district with special reference to Siliguri Municipal Corporation Area (SMCA). The chapter highlighted the livelihood opportunities of the informal settlers with regard to occupation, basic amenities, health and education. The study found that rapid urbanization and increasing economic opportunities in the cities like Siliguri under the Siliguri Municipal Corporation Area (SMCA) have attracted large numbers of rural migrants from neighboring districts, states and countries i.e., migration played a major role in developing the demographic profile of SMCA. Siliguri shows consistently high growth rate of population over the 60 years of its existence. In absolute terms, the population of four Municipal towns in Darjeeling district has increased rapidly, but the increase in population of Siliguri Municipal Corporation has reached sky high over the period between 1951 and 2001. Among the six Municipal Corporations in West Bengal, the SMC has the highest percentage slum population. On the other

hand, next to Kolkata Municipal Corporation, the second highest share of slum population in the State has been concentrated in SMCA, followed by Asansol Municipal Corporation, Durgapur Municipal Corporation, Howrah Municipal Corporation and Chandannagar Municipal Corporation (Census 2001). The high potential of the town to absorb migrant population in the informal labour market is the consequence of large number of squatter settlements/slums in the city. They are poor in terms of human and physical capital. A majority of the slum dwellers in SMCA are engaged in unskilled, low paid jobs and if self employed, living at subsistence level of income. Employment generation programmes in the informal sector are very often threatened by the lack of skills of the poor. Therefore, any programme on slum development should concentrate not only on improving the level of earnings but also on improving the social and physical infrastructure simultaneously so that there is overall improvement in the quality of life which will help in pulling the slum dwellers out of the vicious circle of poverty.

Chapter V is based on the case study of the inner city squatter settlements where mostly the older migrants reside. The objective of the sample study is to investigate the socio-economic status in terms of the accessibility to different types of livelihood assets of the squatters living in the inner city of (SMCA). High incidence of poverty and formation of squatter settlements in SMCA are closely associated with rapid pace of urbanization and migration. Majority of the squatters in the inner city were belonged to Scheduled Caste and migrated from the poor BIMRU states in India, followed by neighbouring countries particularly from Bangladesh and Pakistan. Inter district migration was also significant in the inner city. They were basically from rural origin and backward class in terms of livelihood assets. Average length of migration of squatter households was around 39 years. In most of the cases, migration was absolutely an economic phenomenon as well as survival strategy for them. All types of livelihood assets are important for the subsistence of the slum dwellers. In terms of human capital like education and skills, the slum dwellers in the inner city of SMCA were very poor. Primary level of education shows a clear preference among them. The squatters in SMCA are also disadvantaged with respect security of land and quality of housing. Infrastructural facilities like drainage, water supply, sanitation, access to electricity etc., were quite satisfactory in the inner city squatter settlements due to locational advantage. More or less, medical facility provided by the public institutions

remains the major supporting services for the squatters or slum dwellers in the inner city. A greater number of the squatters were involved in low paid informal sector activities as against a negligible proportion in the formal sector. In terms of income and the corresponding expenditure and savings, all the squatter/slum households were not poor. The expenditure pattern on food and non-food items found that the expenditure elasticity for most of the food items are found to be less than unity supporting the Engel's law that the food items is an essential category or necessity for all. An empirical study of the Quality of Life Index based on 20 socio-economic variables found that about 41 percent of the households had overall poor quality of life, as against 51 and 18 percent of the households with moderate and fair quality of life in the inner city.

Chapter VI is the case study of the peripheral city squatter settlements where the relatively new migrants reside. The socio-economic characteristics in terms of access to livelihood assets of the squatters in the peripheral city have been highlighted in this chapter. A greater number of the squatters in the peripheral city were the rural migrants from the neighbouring districts and states. Average duration of residence of the squatter households was around 10 years in the peripheral city. Most of the squatters moved to SMCA absolutely for economic reason. In case of migration, economic push and pull factors played a crucial role, though some non-economic factors were also significant. The squatters were mostly involved in informal activities. By activity status, a greater number of workers were engaged in self employment followed by casual and salaried employment. With regard to human and physical capital, the squatters in the peripheral city were also very poor, but in terms of income and the corresponding expenditure and savings all the squatters were not poor. Access to public institutional loans/credit of the squatters was very poor due to insecure land tenure, lack of collateral assets for mortgage and fear of repayment of loan on time, but the micro finance institutions like Bandhan, ASHA, SKS etc., was much popular among the peripheral city squatter settlements. The expenditure pattern based on the validation of Engel's law on food and non-food items found that MPC on food items was lower than that of the MPC on non-food items. A study based on quality of life index show that about 48 percent of the households had overall poor quality of life in the peripheral city, as against 30 and 22 percent of the households with moderate and fair quality of life.

Chapter VII is the synthesis of the experiences of the urban poor living in the Inner and Peripheral City Squatter Settlements under study. The socio-economic characteristics of the squatters living in the inner and peripheral city have been compared with various research studies along with the slum statistics of the metropolitan cities in India, state and the country as a whole in this chapter. But more precisely, the sample study of the inner and peripheral city found that the length of duration of the squatter households in the inner city settlements was about 4 times higher than that of the peripheral city. The inner city squatter settlements are dominated by higher proportion of SC as against General Caste in the peripheral city. With regard to demographic characteristics, the squatters were significantly heterogeneous in terms of sex ratio, family size, caste, religion, mother tongue and dependency ratio in both the inner and peripheral city. The sample study found that the majority of the squatters were inter-state migrants in the inner city and inter-district in the in the peripheral city. So far as migrations in terms of reasons are concerned, migration due to economic reason was around double in the peripheral city compared to the inner city. In the inner city, a significant proportion of the households had migrated due to non-economic reasons particularly due to by partition of India 1947, anti Bengali riots in Assam in 1960^s and Bangladesh war of independence in 1971. With regard human, physical assets, the inner city squatters were much better than the peripheral city. By and large medical facilities provided by the public sector remain the major supporting services for the squatters or slum dwellers in the inner city, but a substantial portion of the slum households in the peripheral city goes for nearest quack doctors due to long distance of the government hospitals and busy work schedule. An interesting point to be noted is that instead of availing public medical facilities in both the inner and peripheral cities, non-institutional delivery is a common feature with the help of untrained dais due to customs and traditions of the joint family, financial constraints etc.

In terms of economic activity, the work participation rate was marginally higher in the inner city at than that of the peripheral city, while the female work participation rate was almost equal in both the cities. For most of squatters the informal sector was sole provider of employment and it was significantly higher in the peripheral city compared to the inner city. In terms of activity status, with minor variations, an overwhelming portion of the workers/employed was engaged in self

employment that includes rickshaw and van puller, street vendors, kabadiwala, electrician, cycle repairing etc, followed by salaried employment that includes worker in wholesale shops, cosmetic shops, midwives, security guard, hotel worker, driver, etc and casual employment that includes mainly construction worker, labour in wholesale trade, transportation etc. The average monthly income of the households was almost equal in both the cities, but the poverty for some the squatters in both the inner and peripheral city has been characterized by low level of income though some of them have relatively high level of income. On the other hand, the financial capital with respect to savings was significantly higher in the inner city than that of the savings in peripheral city because a significant number of female squatters were the member of SHGs in the inner city. On the other hand, the indebtedness of the households was significantly lower in the inner city than the households in the peripheral city. In both the inner and peripheral city, the inequality in income, expenditure and savings was very low in terms of Gini-coefficient. But, the inequality in income, expenditure and savings of the households was significantly high in the inner city than that of the inequalities in the peripheral city. A close examination of the validation of Engel's law based on food and non-food expenditure shows that the MPC was very high for food items as against the non-food items in the inner city, as against high MPC of total non-food items than that of the MPC on food items in the peripheral city. The expenditure elasticity for most of the food items are found to be less than unity supporting the Engel's law implying that the food items is an essential or necessity for all the time. An empirical study based on Quality of Life Index among the squatter households found that the older migrants who are living in the inner city squatter settlements was relatively better than that of the quality of life of the squatter households who are relatively new migrants living in the peripheral city.

Chapter VIII is an attempt to examine the formation of social capital among squatter settlements in response to livelihood opportunities. The informal settlers in general are vulnerable with respect to the determinants of livelihoods. Squatter settlements are the symbols of poverty. A most pertinent question is thus arises as to how these migrant squatters in the cities like SMCA integrate themselves with their limited livelihood resources? Therefore, in chapter VIII, the role of social capital has been examined through its various sources/networks in different aspects of livelihood

strategy of the squatters in both the inner and peripheral city. Various sources of information have been captured in order to examine the role of social capital with regard to decision making of the squatters to migrate in the city, in searching for housing, access to employment and credit market. The study found that with the limited human, physical and financial capital of the squatters, the formation of social capital through its various channels played a crucial role in different aspects of livelihood strategy. As a whole, three networks have been identified which operates through the relationship of friends of the same ethnic group (ethnic bonding), relatives and family member (kinship bonding), local leaders, NGOs etc (non-kinship bonding). All these networks have significant impacts to make a living of the squatters in both the inner and peripheral city areas and it can essentially be treated as a poverty alleviation strategy for them. Finally, Chapter IX of the study presents the final conclusions, policy review at the national and local level along with policy suggestions.

9.2 Conclusion

Population growth in the cities of the developing countries like SMCA has witnessed an increase in the proportion of those people who are living in appalling conditions in the slums and squatter settlements. Since its recognition as Municipal Corporation, the city has had a massive growth of slums. The formation of slums or squatter settlements in SMCA was thus closely associated with rural-urban migration, inflow of refugees from the neighbouring countries and reclassification of the area. The local government of SMC has been very active in the provision of basic services to the poor living in slums, but the supply of basic services is not uniform. In terms of livelihood assets like human capital, the inner city squatters were worse than the peripheral city. So far as physical capital is concerned, the inner city squatter settlements were better served, but the problem was acute problem in the peripheral city. The people in these settlements are mostly involved in informal activities as they are excluded from the formal sectors of the economy due to very weak human and resource base and this sector provides not only the means of economic livelihood for the present generation but also hope for the future generation.

With regard to the economic characteristics, some of the households in both the inner and peripheral city squatter settlements have very low level of income,

expenditure and savings and some of them have relatively high level of income and corresponding expenditure and savings indicating that not all the squatters are economically poor. Inequality in income, expenditure and savings was very low in terms of Gini-coefficient in both the inner and peripheral city, but the inequality of between variables was significantly high in the inner city compared to the peripheral city. The evidence of intra-city variation in economic indicators suggests that the inner city squatters have relatively higher economic status. The empirical validation of Engel's law based on the expenditure pattern of the food and non-food items of the squatters found that as they lived at below the subsistence level of living hence the food items is an essential or necessity and the MPC increases with increase in family size in most cases. In financial development of the squatters, the performance of public institutions was very poor in both the inner and peripheral city squatter settlements, but the micro-finance institutions were much popular in the peripheral city where relatively the new migrants reside.

In the context of poverty and livelihood opportunities, social bonding or relationship played a significant supportive role among the squatters in SMCA. Social capital as a source of various networks or ties like kinship, non-kinship and ethnic relation of the slum dwellers in SMCA is a crucial factor and living reality in terms of accessibility to various socio-economic opportunities, for example, decision making of the rural poor to migrate to the city, information in searching for housing settlements, access to employment, credit market and community participation. They invest their existing relationship or bonding not only with the expectation of economic benefit but also for availing better basic services to make a living better off. Though there was no significant difference in the use of various networks of social capital on different livelihood aspects of the squatters in the inner and peripheral city, but they rely heavily on this productive resource for survival in the city life.

The empirical evidence based on composite index of the quality of life show that the overall quality of life of the older migrants living in the inner city squatter settlements was relatively better than that of the new migrants living in the peripheral city. Therefore, the study reveals that the overall quality of life not only depends on the economic variables but also depends on other demographic, physical and social set of variables. Finally, the study also revealed that in terms of livelihood opportunities, the slums and squatter settlements in both the inner and peripheral city

of SMCA are still the destination and survival sphere for the present and also the hope for future generation.

9.3 Policy Review

Urbanisation, development and growth of informal settlements are positively correlated to each other. In the light of Millennium Development Goals, improvement in living condition of the slum dwellers was a serious challenge to the governments and policy makers. Though, there has been a rapid change in the approach to the urban poverty issues since the Fifth Five Year Plan in India, a massive shift has taken place from various welfare and service oriented strategy to poverty reduction strategy by creating employment opportunities and raising the productivity of the urban poor. With the passing of time, the various development programmes namely Environmental Improvement of Urban Slums (EIUS), Urban Basic Minimum Services for the Poor (UBMSP) Integrated Low Cost Sanitation (ILCS) Scheme of Urban Micro Enterprises (SUME), Scheme of Housing and Shelter Upgradation (SHASU), Prime minister's Integrated Urban Poverty Eradication Programme (PM-IUPEP), National Slum Development Programme (NSDP), Valmiki Ambedkar Malin Basti Awas Yojna, Swarna Jyanti Shahari Rozgar Yojana (SJSRY) with Urban Self-Employment Programme (USEP), Urban Wage Employment Programme (UWEP), Integrated Housing and Slum Development Programme (IHSDP) along with Rajiv Valmiki Ambedkar Malin Awas Yojana (VAMBAY), Awas Yojana (RAY) etc., have been incorporated by the central and state governments for the socio-economic uplift of the urban poor. Apart from the above programmes and schemes, several welfare schemes, for example, Indira Gandhi National Old Age Pension Scheme (IGNOAPS), Indira Gandhi National Widow Pension Scheme (IGNWPS), Destitute Physically Handicapped Pension Scheme, Accident Relief Scheme, Janani Suraksha Yojana (JSY), Antyodaya Anna Yojana (AAY) Annapurna Yojana and Mid-Day Meal etc., have been implemented by central and state government as well as under joint venture (Urban Poverty Report, 2009). Considering the overall impact of the programmes and schemes implemented on the incidence of urban poverty, it is realized that a greater number of urban poor particularly, the slums and squatter settlements remain unaffected. However, in course of time, the absolute numbers of the informal settlers in the cities are increasing rapidly much to the dissatisfaction of the planners and policy makers.

As per as the report of the SMC with regard to implementation, progress and achievements of the Integrated Housing and Slum Development Programme (IHSDP) is concerned (Appendix-E, Table 9i), it is found that under SJSRY, 875 SHGs have been formed in SMC till February 2010. This scheme is being implemented in 33 wards of SMC with 1216 number of resident community volunteers (RCVs), where approximately 16000 women are directly involved in various activities after obtaining vocational training. So far as the achievement of SJSRY is concerned, it is reported that a number of 1150 slum women have been trained under skill development training and 798 of them are earning Rs. 800 to Rs.2000 per month in SMCA. A total of 705 Thrift and Credit Groups has been formed with around 12 thousand members. More than 80 percent of the members are earning Rs. 800 to Rs.1500 per month by taking loans from the Society. On the other hand, the number of Development of Women and Child in Urban Area (DWCUA) group formation has been completed is 7 and bank sanction under process. Further, number of Urban Self Employment Programme under SJSRY was 58 in 2005-2006; number of loan application sanctioned to bank branches for USEP under SJSRY was 05 in 2005-06. With regard to sanitation programme, low cost sanitary latrine has been provided to 12,445 households. Finally, the project report of IHSDP completed for 93 numbers of slums (21 slums in phase-1 and 72 slums in phase-ii) and sent to the government for approval and the estimates of the remaining 10 slums are under the process.

One of the most important schemes under IHSDP is the scheme for dwelling houses for the urban poor. Housing is a pre-requisite condition for individual's mental and economic growth and social stability. As far as the progress and achievements of development programmes under IHSDP (as on 31.10.10) in SMCA is concerned, it is observed that during the period of 2007-2009 (year of sanction), out of 5063 dwelling units sanctioned, a total of 1969 dwelling units spread over 43 wards in SMC have been completed and 254 dwelling units are in the finishing stage in three different phases. The physical progress of various components in slum infrastructural development programme under IHSDP shows that in the first phase, out of 19 numbers of Community Seva Kendra, 35 Community toilets and 34 Community bath have been sanctioned covering 20 wards, while the work of 12 Seva Kendra has been completed with the work in progress for 3 Community Seva Kendra. There was no site available for 4 Community Seva Kendra. Similarly, in the 2nd phase, some new

components under slum infrastructural development programme have been introduced like community centre, livelihood centre, animal pen, rickshaw shed and the boundary wall covering 48 wards. Out of all the sanctioned and tender invited for the respective components of slum infrastructural development programme, the work for 3 community centers, 2 livelihood centers is in progress. Out of total length of boundary walls of 2321 sq.mt, 326 sq.mt has been completed and the work for 210 sq.mt boundary walls is in progress in 17 wards. On the other hand, the site was not available for 5 community centres, 14 livelihood centres, one animal pen, one rickshaw shed, and for 918 sqm boundary walls. In 3rd phase, another new component namely informal market has been introduced under slum infrastructural development programme. In this phase out of 7 municipal wards, 5 community centers and 1 informal market have been sanctioned, and the tender invited only for community centre was 4, while site for one community centre was not available. The work for the livelihood centre, community centre and informal market to be done by Siliguri Jalpaiguri Development Authority (SJDA), particularly for the ward number 4. Among the 'other' development programmes that includes cement and concrete pavement, drain and bituminous road in first phase, the estimated area of cement concrete pavement has been completed in 7 municipal wards. Out of 24744 sq.mt length of drain that was sanctioned, 22034 sq.mt has been completed with the ongoing work of 500 sq.mt in 7 municipal wards. On the other hand, a total of 67096 sq.mt bituminous road, 50259 sq.mt is completed in 7 municipal wards. In the 2nd and 3rd phase taken together, out of 29374 sq.mt sanctioned cement concrete pavement, 15334 sq.mt have completed in 36 wards and out of 43799 sq.mt drain, 24204 sq.mt have been completed in 36 wards within the time limit of implementation. Similarly, in the two phases taken together, out of 89402 sq.mt sanctioned bituminous road, 40172 sq.mt have been completed and the work in progress for 19098 sq.mt in 36 wards (Appendix-E, Table 9i).

In order to improve the living conditions of the urban poor, Urban Wage Employment Scheme (UWES) Urban Basic Minimum Services for the Poor (UBMSP), IPP Project VIII under Health Care Services (UCS) etc., are working effectively in SMCA. Some of the newly introduced programmes by central and state governments like Rajiv Awas Yojana (RAY), Secure for Land Tenure for the Urban Poor (SLTUP), Housing for the Urban Poor (HUP) etc., are in the process of

implementation. Apart from these, several numbers of beneficiaries of applications for financial assistance under IGNOAPS, IGNWPS etc. have been forwarded to SUDA for approval. The SMC was very much aware about the BPL families for availing the benefit of the above schemes. But the fact is that there are so many people who are really poor but their names has not been included in the list of BPL families and as a result they can not avail this benefit. Considering the problem of these people belonging to the economically weaker section, SMC has introduced various social assistance packages in which number of beneficiaries under IGNOAPS was 3129, number of pension scheme holder was 196, the number families availing Antyoday Anya Yojana and Annapurna Yojana was 6038 and 224 respectively. On the other hand, the number of women that availed the Janani Suraksha Yojana (JSY) was 315. The SMC had also proposed to increase the beneficiaries under social package for the financial year of 2010-11. A budget provision of Rs. 12 lakh has been made from Mayor's Discretionary Fund for providing financial support for the purpose of health, education and relief to address special needs under natural calamity of the affected people (Budgets of SMC, 2009-10).

With rapid growth of urbanization, urban poverty has also increased substantially that has become the major concern for the urban local bodies. Keeping in mind the performance of Urban Poverty Alleviation Schemes, it is realized that there is a lack of awareness among the urban poor about the benefits and efficacy of UPA and slum improvement programmes in SMCA. An evaluation of the urban poverty alleviation programmes/schemes in SMCA revealed that the Schemes are suffering from the following limitations:

- (1) There is a need for wide publicity against various Schemes to create awareness among the urban squatters in SMCA. Thus, an integrated approach to alleviate poverty should be given priority that can overcome the problems of housing, employment, security and basic services for the squatters.
- (2) With the expansion of city areas the squatter settlements are also increasing. Therefore, to accommodate and to provide basic services for the expanding number of migrants, more investment is needed on all fronts to make the city worth living for all.
- (3) The respondents of the study area reported that the beneficiaries of the urban schemes are often influenced by political decisions. As a result, the needy and

deprived are often excluded from the list of the beneficiaries. Therefore, in case of providing benefits to the squatters, the officials and authorities should be free from politicization.

- (4) In the process of planning and implementation, partnership management plays a key role for the uplift of the urban poor. In SMCA, no such partnership programmes is found against slum improvement. Whereas, in Delhi, Gujarat Maharashtra, Ahmadabad and in many states, public-private partnership programmes are working well for improving slum conditions. Therefore, in SMCA, the Urban Local Bodies (ULBs) need to include Non-Government Organisations (NGOs) and Community based Organisations (CBOs) within the municipal framework in the process of urban poverty alleviation schemes.
- (5) Most of the financial institutions demanded security for advancing loans either in the form of mortgage of their land or fixed assets or bank/state government guarantee. But, most of the slum dwellers do not have any security of land and they are normally with low resource base against which loans can be demanded from banks. Therefore provision should be made by the local bodies with the banks to provide credit for raising economic development.
- (6) In SMCA, there is no evidence of international agencies who are working with the local governments on slum upgradation. Therefore, the local government need to pay greater attention for inviting national and international agencies like SWEA, World Bank funding, DFID and others who are working for the improvement of slum conditions in various cities in India with regard to basic infrastructure, improving the quality of life, health and well-being of the residents.
- (7) Water Aid, India, has undertaken a joint programme with United Nations Human Settlements Programme (UN-HABITAT) and Municipal Corporation of Bhopal, Indore, Gwalior and Jabalpur, called slum Environmental Sanitation Initiative. But, no such joint programmes have been undertaken by SMCA for slum improvement and thus needs to be looked into by the authorities.

9.4 Policy Suggestions

On the basis of information collected during the period of field survey and the analysis of the study, the following policy suggestions can be recommended.

- (1) Unprecedented growth of slums in SMCA is the direct consequence of urbanization and migration due to inter-regional socio-economic disparities and unbalanced growth process. Therefore, decentralized policies and programmes through the creation of employment opportunities in the rural areas can reduce unemployment, poverty and vulnerability and consequently check the rural-urban migration.
- (2) Implementation of various policies and programmes sponsored by state, central and local government should be strengthened and made effective for improving the socio-economic conditions of the weaker sections particularly for the informal settlers.
- (3) Among the three basic needs of food, clothing and shelter, regularization of the land tenure and entitlements is the key to secure livelihood of the squatters. Therefore, tenure security measures for the urban poor slum dwellers in SMCA with suitable housing under ISHDP scheme should be given first priority to avoid the psychological tension of eviction and mental stress.
- (4) The slum dwellers in SMCA are mostly from rural origin from the neighboring poor states and districts and belonged to the socio-economically backward class. Therefore, the local government should be more sensitive towards educational attainment, job oriented training programmes, skill and knowledge acquisition for the socio-economic uplift of the squatters in SMCA.
- (5) In terms of infrastructural facilities in the slums of SMCA, special focus should be given to new settlements in the peripheral areas. The squatter settlements in the city needs more investment under slum infrastructural development programmes like road, drainage, water supply, electricity etc.
- (6) In most cases, the slum dwellers and squatters are characterized by low level of income and due to environmental degradation they suffer most from illness leading to loss of working days. Medical facility provided by the public sector is not adequate nor the only solution. There should be a provision of subsidized medical centers in the vicinity of the slums especially for the squatters. The squatters and slum dwellers who are living below poverty line require awareness programmes and proper implementation of the schemes regarding institutional delivery and its financial assistance in such a way that the benefit can reach to the needy section of the squatter people.

- (7) The informal sector remains the sole provider of employment to the squatters in SMCA due in inability to absorb a huge number of illiterate and unskilled rural migrants into formal sector. Therefore, the local bodies should be involved directly for generating decent employment opportunities with security in jobs which can make their life secured. The process of formalization of casual employment in formal sector needs special attention for the security of livelihoods among the slum dwellers. The local government should form an committee for monitoring the implementation of Minimum Wage Act to protect the informal sector workers from exploitation. The various social security benefits like provident benefit, accidental benefit, and payment of gratuity etc., for the informal sector workers should be implemented with immediate effect.
- (8) A large number of squatters in SMCA are engaged in street vending always faces the threat of eviction due to lack of legal recognition to their profession. Thus, there should be an effective policy for street vendors so as to run their business without any threat of eviction.
- (9) Most of the squatters in SMCA do not have any information regarding welfare schemes beneficiaries and even various slum developmental schemes and programmes sponsored by the state, central and local bodies. In this context, awareness programmes among slum dwellers through community development projects where resident community volunteers can play a significant role in co-ordination.
- (10) The local government should involve the Non-Government Organisations (NGOs) in implementing various plans and programmes for improving the socio-economic conditions of the slum dwellers. Proper co-ordination and co-operation at all levels is an urgent need for effective implementation of slum development programmes and schemes. In case of providing beneficiaries to the eligible squatters, the government officials should be free from politicization.
- (11) There should be easy accessibility to institutional credit at subsidised rate of interest for the squatters in SMCA to set up new business, expansion of business and other productive purpose along with proper monitoring in case of any default in repayment and in order to protect them from being exploited by money lenders.

- (12) There are large numbers squatter households who are deprived from various welfare schemes like Annapurna Yojana, Antodaya Yojana, Old Age Pension, and Widow Pension etc., for not having the ration card in both the inner and peripheral city of SMCA. Hence, provision should be made by the local authorities to provide ration cards within a short period on receiving application.
- (13) Finally, subscribing to the motto “live and let live”, there should be a strong, transparent and effective participatory management along with the above suggestions that can possibly minimize the urban gap of rich and poor to make a city liveable for all.

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APPENDIX

Appendix- A

Table 2.1: Slum Population (in million) in the Developing Regions of the World

Developing Regions	Slum Population (in Million)			
	1990	2000	2010	2020(P)
Developing Region	650	760	820	880
Africa	123	158	210	262
Sub-Saharan Africa	103	143	198	253
Northern Africa	20	15	12	9
Latin America and Caribbean	105	115	110	105
Asia	423	486	499	512
South Asia	182	194	191	187

Source: State of the World's Cities 2012/13: Prosperity of Cities UN-HABITAT. The computed projection based on annual increase of slum population in 2000-2010

Appendix- B

Table 4.9.1: Per Capita and total Expenditure/Receipt under different heads in SMC

Projected Slum Population and Head of Receipt and Expenditure	1985-1986	1989-1990	2000-2001	2004-2005	2008-2009	2009-2010
Projected Population in SMC (in Lakh)*	2.00	2.46	4.72	5.85	7.25	7.65
Total Receipt (in Lakh)	124.12	306.57	2909.03	2741.08	7088.39	6450.98
Per Capita Total Receipt (in Rs)	62.01	124.41	615.83	468.41	977.77	843.45
Total Receipt in Revenue A/C (in Lakh)	75.58	162.61	1129.64	1698.07	2825.1	2582.7
Percentage of total Receipt in Revenue A/C	60.89	53.04	38.83	61.95	39.86	40.04
Per Capita Revenue Receipt (in Rs)	37.76	65.99	239.14	290.17	389.69	337.68
Total Receipt in Capital A/C (in Lakh)	48.54	143.96	1779.39	1043.01	4263.29	3868.27
Percentage of total Receipt in Capital A/C	39.11	46.96	61.17	38.05	60.14	59.96
Per Capita Capital Receipt (in Rs)	24.25	58.42	376.69	178.23	588.07	505.77
Total Expenditure (in Lakh)	92.78	319.71	2908.02	2740.94	7037.45	5662.96
Per Capita Total Expenditure (in Rs)	46.35	129.74	615.62	468.38	970.74	740.42
Total Expenditure in Revenue A/C (in Lakh)	72.88	140.87	1081.84	1554.48	2506.23	2533.54
Percentage of total Expenditure in Revenue A/C	78.55	44.06	37.2	56.71	35.61	44.74
Per Capita Expenditure in Revenue A/C(inRs)	36.41	57.17	229.02	265.64	345.71	331.25
Total Expenditure in Capital A/C (in Lakh)	19.9	178.84	1826.18	1186.46	4531.21	3129.43
Percentage of total Expenditure in Capital A/C	21.45	55.94	62.8	43.29	64.39	55.26
Per Capita Expenditure in Capital A/C (in Rs)	9.94	72.58	386.6	202.75	625.03	409.16

Source: Various Budgets and reports of SMC, *Note: the estimated population of 1985-86, 1989-90 are based on A.G.R. of 1951-81 and the estimated population of 2004-05, 08-09 and 09-10 based on A.G.R of 1951-2001, only the population figure of 2000-01 has taken from the actual population of census 2001. All per capita figures are calculated from available data.

Appendix- B

Table 4.9.3: Total Project Cost and its share by the State, Central and Local Bodies in Development Projects for the Urban Poor under IHSDP (as on 31.10.2010)

Description of the phase	Name of the Schemes	Project Cost (in lakh)	Date of Sanction	Time limit for implementing of the project	Central Share (in lakh)	State Share (in lakh)	ULB Share (in lakh)	Beneficiary Contribution (in lakh)
1 st Phase	Housing	1998.00	31.03.07	2009-2010	1278.72	399.60	0.00	319.68
	Slum Infrastructural Development *	277.33			221.86	41.60	13.87	0.00
	Other**	1806.38			1445.11	270.96	90.32	0.00
	Total	4081.71			2945.69	712.16	104.18	319.68
2 nd Phase	Housing	1206.00	12.05.08	2010-2011	771.84	241.20	0.00	192.96
	Slum Infrastructural Development *	168.96			135.17	25.35	8.50	0.00
	Other**	624.28			499.42	93.64	31.21	0.00
	Total	1999.24			1406.43	360.18	39.71	192.96
3 rd Phase	Housing	1859.00	19.01.09	2011-2012	1189.76	371.80	0.00	297.44
	Slum Infrastructural Development*	155.64			124.51	23.35	7.78	0.00
	Other**	1584.10			1267.28	237.61	79.21	0.00
	Total	3598.74			2581.55	632.76	86.99	297.44

Source: Financial and Physical Progress of IHSDP Scheme, Phase I,II & III, Siliguri Municipal Corporation, 26-11-2010

Appendix- C

Table 5.7.1: Descriptive Statistics on Income, Expenditure and Savings of the Squatter Households in the Inner City

Squatter Settlements/ Hhs Economy/	Mazdoor Colony				Lichubagan Colony				Inner City				ANOVA (Mean Difference)	
	Min.	Max.	Mean	SD	Min.	Max.	Mean	SD	Min.	Max.	Mean	SD	F Statistics	Sig.
Income	1000	12000	4429.48	2414.09	400	25500	4935.42	4077.8	400	25500	4682.45	3346.39	0.68	0.41
Expenditure	1000	11708	4223.25	2271.98	400	23000	4719.55	3732.93	400	23000	4471.4	3087.1	0.77	0.38
Savings	0	1000	206.23	267.05	0	2500	215.87	421.88	0	2500	211.05	351.61	0.02	0.88

Table 5.9.2i: Correlation co-efficient between Total Expenditure and Family Size in the Inner City

Squatter settlements	Correlation Co-efficient (r^2)
Mazdoor Colony	0.480**
Lichubagan Colony	0.570**
Inner City	0.488**

** Correlation is significant at 0.01 levels

Table 5.9.2ii: Range of VIF and CI for all regression equation on food and non-food items (Engel's Equation) in the Inner City

Squatter Settlements/ Multicollinearity Diagnostics	Total expenditure (as independent variable)		Family size (as independent variable)	
	VIF	CI	VIF	CI
Mazdoor Colony	1.30	4.10	1.30	4.90
Lichubagan Colony	1.48	3.53	1.48	5.52
Inner City	1.31	3.90	1.31	4.58

Appendix- C

Table 5a: Correlation of the Variables in the inner city

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
1. Dur. of Residence	1																					
2. Schedule Caste	-.089	1																				
3. General Caste	.089	-.917**	1																			
4. Other Backward Class	.005	-.243**	-.164	1																		
5. Sex Ratio of the Hhs	-.103	-.038	.017	.052	1																	
6. Family Size of the Hhs	.116	-.097	.131	-.080	.066	1																
7. No. of Literate in the Hhs	.122	-.071	.077	-.013	.051	-.542**	1															
8. Literacy Rate	-.085	.027	-.025	-.007	.085	-.225*	.598**	1														
9. Total Drop-out	.143	-.125	.133	-.013	-.068	.597**	.733**	.563**	1													
10. Drop-out Rate	.030	-.113	.134	-.046	-.001	.081	.137	.435**	.652**	1												
11. Employment Of the Hhs	-.128	-.037	.052	-.034	.064	.525**	.459**	.101	.458**	.173	1											
12. Work Participation Rate	-.186*	.054	-.114	.144	-.101	-.439**	-.424**	-.276**	-.244**	-.004	.359**	1										
13. Level of Income	.060	.194*	-.158	-.095	.021	.471**	.465**	.217*	.372**	.086	.288**	-.265**	1									
14. Housing type (Pucca)	.142	.095	-.079	-.043	.032	.035	.084	.102	-.065	-.138	-.121	-.175	.229*	1								
15. Electricity Facility	-.041	.135	-.081	-.138	.105	.121	.142	.153	.070	.009	.100	-.109	.177	.090	1							
16. Expen. in Food Items	.065	.194*	-.157	-.098	.024	.510**	.521**	.225*	.430**	.098	.339**	-.236**	.949*	.184*	.162	1						
17. Expen. in Non-Food Items	.064	.163	-.127	-.095	.030	.382**	.345**	.170	.260**	.066	.199*	-.261**	.902*	.256*	.165	.729**	1					
18. Total Expenditure	.069	.194*	-.154	-.104	.028	.488**	.479**	.216*	.383**	.090	.300**	-.265**	.997*	.230*	.175	.949**	.908**	1				
19. Level of Savings	-.033	.142	-.146	.005	-.046	.198*	.220*	.163	.179*	.020	.114	-.189*	.761*	.153	.146	.697**	.617**	.711*	1			
20. Value of Physical Assets	-.101	.132	-.101	-.080	-.046	.090	.174	.200*	.155	.056	.086	-.072	.485*	.251*	.227*	.439**	.452**	.478*	.418*	1		
21. Indebtedness	-.058	.216*	-.244**	.059	.156	-.101	-.119	-.084	-.120	-.108	-.030	.025	.132	.227*	-.059	.042	.212*	.124	.169	.013	1	

** Correlation is significant at .01 levels, * correlation is significant at .05 levels

Appendix D

Table 6.7.1: Descriptive Statistics on Income, Expenditure and Savings of the Squatter Households in the Peripheral City

Squatter Settlements/ Hhs Economy/	Rajibnagar Colony				Shivnagar Colony				Peripheral City				ANOVA (Mean Difference)	
	Min.	Max.	Mean	SD	Min	Max	Mean	SD	Min	Max.	Mean	SD	F _{Statistics}	Sig.
Income	1000	12000	4656.67	2132.29	0	15000	4711.67	2014.7	0	15000	4684.17	2065.78	0.02	0.89
Expenditure	1000	11000	4516	2003.94	0	14000	4460.9	1873.47	0	14000	4488.45	1931.84	0.02	0.88
Savings	0	1000	140.67	232.16	0	1300	250.77	323.04	0	1300	195.72	285.51	4.60	0.03

Source: Field Survey (Oct. 2010 – March 2011)

Table 6.8i: Correlation co-efficient between total expenditure and family size in the Peripheral City

Squatter settlements	Correlation Co-efficient (r ²)
Rajibnagar Colony	.386**
Shivnagar Colony	.382**
Peripheral City	.374**

** Correlation is significant at 0.01 levels

Table 6.8 ii: Range of VIF and CI for all regression equation on food and non-food items Engel's Equation) in the Peripheral City Settlements

Squatter Settlements/ Multicollinearity Diagnostics	Total expenditure (independent variable)		Family size (independent variable)	
	VIF	CI	VIF	CI
Rajibnagar Colony	1.18	5.45	1.18	6.31
Shivnagar Colony	1.17	5.64	1.17	6.38
Peripheral City	1.16	5.45	1.16	6.20

Appendix D

Table 6a: Correlation of the Variables in the Peripheral city

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
1. Dur. of Residence	1																						
2. Schedule Caste	-0.058	1																					
3. Scheduled Tribe	0.002	-0.162	1																				
4. General Caste	0.063	.873**	-.189*	1																			
5. Other Backward Class	0.002	-0.162	-0.034	-.189*	1																		
6. Sex Ratio	-0.151	0.013	-0.012	-0.002	0.026	1																	
7. Family Size	.191*	-0.145	-0.146	0.121	.202*	0.112	1																
8. No. of Literate in the Hhs	0.133	-0.075	-.227*	0.082	.193*	-0.046	.489**	1															
9. Literacy Rate	-0.154	-0.035	-.234*	0.112	0.013	-0.031	-0.024	.544**	1														
10. Total Drop-out	-0.029	-0.062	-0.154	0.097	0.063	-0.082	.206*	.581**	.579**	1													
11. Drop-out Rate	-.230*	-0.046	-0.017	0.076	-0.045	-0.058	.241**	0.029	.505**	.713**	1												
12. Employment Of the Hhs	.191*	0.012	-0.008	-0.032	0.05	0.043	.454**	.347**	-0.11	.361**	0.066	1											
13. Work Participation Rate	0.054	0.108	0.157	-0.139	-0.077	-0.096	.432**	.342**	.272**	0.037	0.146	.484**	1										
14. Level of Income	0.125	-0.122	-0.096	0.151	0.001	0.014	.335**	.424**	.212*	.338**	0.127	.409**	0.065	1									
15. Housing type (Pucca)	-0.031	0.077	-0.03	-0.056	-0.03	-0.086	-0.126	0.011	0.147	0.054	0.076	-0.106	-0.058	.323**	1								
16. Electricity facility	0.122	-0.16	-0.117	0.167	0.102	-0.074	0.085	.267**	.268**	.244**	.195*	-0.002	-0.06	.239**	0.088	1							
17. Expen. in food litems	0.146	-0.167	-0.101	.200*	0.004	0.056	.401**	.417**	0.118	.328**	0.093	.395**	0.009	.878**	.264**	.237**	1						
18. Expen. in non-food Items	0.101	-0.064	-0.092	0.082	0.03	-0.005	.278**	.385**	.220*	.291**	0.103	.407**	0.116	.890**	.258**	0.177	.586**	1					
19. Total Expenditure	0.136	-0.124	-0.107	0.152	0.02	0.025	.374**	.447**	.195*	.345**	0.111	.451**	0.076	.992**	.292**	.229*	.866**	.913**	1				
20 Level of Savings	-0.019	-0.04	0.035	0.068	-0.128	-0.066	-0.105	0.042	.210*	0.11	0.172	-0.09	-0.044	.523**	.359**	.181*	.492**	.265**	.411**	1			
21. Value of Physical Assets	-0.005	-0.095	-0.04	0.126	-0.054	-0.162	0.009	0.084	0.082	0.054	0.043	-0.048	-0.068	0.154	0.053	0.058	0.099	0.155	0.15	0.127	1		
22. Indebtedness of the Hhs	0.01	0.024	-0.022	-0.002	-0.022	-0.095	0.042	0.111	.180*	0.157	0.171	0.151	0.029	0.095	-0.073	0.065	-0.178	.332**	0.12	-0.09	-0.018	1	

** Correlation is significant at .01 levels, * correlation is significant at .05 levels

Appendix E

Table 8.4.1a: Social Characteristics and networks of the workers in the Inner and Peripheral City

Squatter Settlements/ Activity Status		Activity Status (%)	Avg. Dur. of Resi.	Avg. Age	Avg. Family Size	Male (%)	Gen. Caste (%)	NET1 (%)	NET2 (%)	NET3 (%)	SELF (%)
Inner City	Salaried	29.79	32.74	37.14	6.90	70.00	38.57	57.14	8.57	15.71	18.57
	Casual	26.38	31.68	39.92	6.35	90.32	41.94	53.23	19.35	27.42	0.00
	Self Employed	43.83	33.64	43.12	6.17	78.64	42.72	55.34	1.94	25.24	17.48
Peripheral City	Salaried	25.54	9.98	35.83	4.53	78.72	57.45	59.57	8.51	14.89	17.02
	Casual	37.50	10.07	36.16	4.77	76.81	31.88	63.77	5.80	27.54	2.90
	Self Employed	36.96	11.69	37.06	5.35	77.94	64.71	41.18	2.94	13.24	42.65

Note: Male worker, General Caste worker and Networks are the Percentage of total Employment by Activity Status

Table 9i: Report of the Progress and Achievements of Development Programmes under IHSDP (As on 31.10.10) in SMCA

Description of the Phase	Physical Progress of Dwelling Houses						
	Total Number of Wards Covered	Sanctioned as per Draft Project Report)	Work order issued	Bank clearance received	Progress		
					Finishing Stage	Completed	Total
1 st Phase	7	1998	1998	1490	35	1262	1419
2 nd Phase	17	1206	1206	1145	157	642	1012
3 rd Phase	19	1859	1814	1042	62	65	364
Physical progress of Slum Infrastructural Development programmes							
	Component	Wards Covered	Sanctioned as per DPR	Tender Invited	Site not Available	Progress	
						Ongoing	Completed
First Phase	Community Seba Kendra	6	19	19	4	2	12
	Community Toilet	7	35	29	13	3	13
	Community bath	7	34	23	11	1	11
Second Phase	Community Centre	12	14	14	5	3	NIL
	Livelihood Centre	16	27	27	14	2	NIL
	Animal Pen	1	1	1	1	NIL	NIL
	Rickshaw Shed	2	2	2	1	NIL	NIL
	Boundary Wall	17	2321	2321	918	210	326
Third Phase	Livelihood Centre	1				To be done by SJDA	
	Community Centre	5	5	4	1	W.No.4 to be done by SJDA	
	Informal Market	1	1			To be done by SJDA	
Physical Progress of 'Other' Development Programmes							
Description of the phase	Component	Total Number of Wards Covered	Sanctioned as per DPR (in sqm)	Work Order Invited (in sqm)	Progress		
					Ongoing (in sqm)	Completed (in sqm)	Total (in sqm)
First Phase	Cement Concrete Pavement	7	NA	NA	NA	Completed	Completed
	Drain	7	24744	24744	500	22034	22534
	Bituminous Road	7	67096	67096	NIL	50259	50259
Second Phase	Cement Concrete Pavement	17	5660	4074	NIL	4001	4001
	Drain	17	15282	12786	NIL	12391	12391
	Bituminous Road	17	35077	32605	7012	23952	30964
Third Phase	Cement Concrete Pavement	19	23714	18964	NIL	11333	11333
	Drain	19	28517	19230	NIL	11813	11813
	Bituminous Road	19	54325	54474	12086	16220	28306

Source: Financial and Physical Progress of IHSDP Scheme, Phase I, II & III, Siliguri Municipal Corporation, 26-11-2010

Appendix F

Questionnaire on "Urbanization and Poverty: A Study on Social Capital Formation among Squatter Settlements in Siliguri Municipal Area"

Respondent's Serial No. -----

Ward No. ----- . Name of the slum-----

Household Information:

Head of the Family-----

Father's Name-----

1. Demographic and Social Characteristics of the Squatter Households in SMCA**1.1: Family Details**

Sl. Number of the Households	Name of the Family Member	Relationship With the Head	Sex	Age	Marital Status	Level of Education
1						
Social Caste	General	Schedule Caste	Schedule Tribe	Other Backward Class	Others (specify)	
Duration of Migration/Residence (in Years)						
Native Place						
Social group	Hindu	Muslim	Christian	Sikh	Buddhist	Others (specify)
Mother Tongue	Bengali	Hindi	Urdu	Nepali	Others (specify)	

Level of Education => 1=Illiterate, 2=Functionally Literate, 3=Primary, 4=Secondary, 5=Higher Secondary, 6=Graduate and above

1.2 Migration Characteristics

Types of migration	Internal Migration	International Migration		
If Internal, Streams of Migration	Inter -State	Intra-State	Inter-District	Intra-District
Migration Movement	Rural-Urban	Urban -Urban		
Status of Migration	Temporary Migration	Permanent Migration		
Purpose of Migration	Economic	Non-economic		
Type of Migration	Single	Full Family		
If Single, whether	Male	Female		

1.3 Reasons for Migration

Economic Push Factors	High Pressure on Agri. Land	Unemployment	Non availability of work.	Acute Poverty	Income Differential	Low Wage Rate		
Economic Pull Factors	Greater Employment Opportunity	If yes, in which sector		High Wage Rate	Others (Specify)			
		Formal Sector	Informal sector					
Non-Economic Push Factors	Political Pressure	Family Conflict/ Quarrels	Partition of India 1947	War of Bangla -desh 1971	Ethnic Violence	Ecological Displacement	Marriage	Others (specify)
Non-Economic Pull Factors	Social Security/ Safety	Better Future	Good Health care and Basic Amenities		Better Education	Others (specify)		

Acute Poverty (who were unable to manage two meals / day)

2. Human Capital: Skill Development and Training among the Squatters in SMCA

Sl. No. of the Households	Sex	Age	Obtained VT Yes/No	Name of the programme	Institution	Type of Training	Duration of Training
1.							
2.							

VT=Vocational Training

3. Physical Capital of the Squatters in SMCA

3.1: Characteristics of Housing, Land

Reasons for Choosing Squatter Settlement/ Slums	Poor Economic Condition	High Price and inability to Purchase Urban Legal Land	Essay access to the Working Place	Resettlement among Ethnic Group/ Communities	Others (Specify)	
Housing Ownership	Own			Rented		
Status of Land	Government	Private	Acquisition of Land			
Place of Occupied Land	Riverfront	Railway Land	Legally occupied		Illegally occupied	
Have Ownership of the Land	Yes	No	If Yes			
Housing Type	Kachha	Pukka	Semi Pukka		Others (specify)	
Roof type	Concrete	Asbestos	Tin roof	Plastic	Others (specify)	
Use of Housing	Residential	Commercial	Mixed			
No. of Rooms	One	Two	Three	Four	Five	More than 5
Separate Kitchen	Yes	No				
Sources of Fuel for Cooking	LPG	Wood	Charcoal	Kerosene	Others (specify)	
Votar Card in SMC	Yes	No		Applied		
Ration Card in SMC	Yes	No		Applied		

3.2: Social Infrastructure

Drinking Water Facility	Corporation Stand Post	Personal tap Water Connection	Personal Tubewell	Personal well	Community Tubewell	Others (specify)
Sanitation Facility	Personal Latrine	Community Latrine	Public Latrine	Others (Specify)		
Electricity Connection	Yes	No	If yes, Types of Connection			
			Own Connection	Sub-Metre	Others (Specify)	
Approach Road (within Slums)	Yes	No	If Yes, Condition of the Road			
			Pucca	Kutchra	Others (Specify)	
Solid Waste Disposal	Public Bin	Direct Collection by Corporation	Others (Specify)	None		
Drainage Facility	Yes	No	If yes, Type of Drain			
			Surface Pucca,	Kutchra	Others (Specify)	
Community Latrine	Yes	No				
Community Bath	Yes	No				

3.5: Physical Assets and its Saleable Value at Market Price in the Survey Period

Items of Physical Assets	Electric Fan	Freeze	Colour TV	DVD	Telephone /Mobile	By-Cycle	Motor Cycle	Computer	Electric Iron
Salable value at Market Price in Survey Period	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Items of Physical Assets	Motor Car	Auto Rickshaw	Van Rickshaw	Rickshaw	FM Radio	Mobile	Others		
Salable Value at Market Price in Survey Period	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.

4. Health Facility

Institutions where Family Member go for Treatment	Com. Health Center	Govt. Hospital	Private Medical Insti.	Home Remedies	Others (specify)	
Frequency of Visit to Health Centre (Any Family Member)	Once in Week	Once in a Month	Once in six month	Once in a year		
Delivery of Children	Institutional	Non-Inst. (Home Delivery)	If institutional Delivery			
			Com. Health Centre	Matri Sadan	Govt. Hospital	Private Hospital

5. Economic Livelihood of the Squatters in SMCA

Hhs	Primary Source of Employment / Occupation	Sector & Status of Employment/Occupation						Monthly Income (In Rs.)	Sources of Help to get Employment	Skilled	Unskilled	Sources of Acquisition Skill of the Worker
		If Formal			If Informal							
		Permanent	Contractual	Casual	Self Employed	Salaried	Casual					
1												
Hhs	Secondary Source of Employment / Occupation	Sector & Status of Employment/Occupation						Monthly Income (In Rs.)	Sources of Help to get Employment	Skilled	Unskilled	Sources of Acquisition Skill of the Worker
		If Formal			If Informal							
		Permanent	Contractual	Casual	Self Employed	Salaried	Casual					
1												
Total Income (Primary + Secondary)												

Casual Worker in Formal & informal Sector are those who received wages either regularly or periodically. In the Informal sector, Salaried worker are those who received wages/salary on monthly basis, Permanent indicate only Government Employee.

Networks in Accessing Employment: 1. Migrant Friends and Neighbours(Same EthnicGroup), 2.Migrant Family Member and Relatives, 3. Non-Migrant Friends (Local Leader, NGOs etc) 4. Self

Sources of Acquisition of Skill of the Worker: 1.Learning by doing, 2. Government Institution, 3. Private Institution, 4. others (Specify)

5.1 Expenditure on Food and Non-Food Items

Food items	Expenditure/ Month (in Rs)	Non-Food Items	Expenditure/ Month (in Rs)
1. Food grain 2. Grocery (Other than Food Grains) 3. Milk and milk product 4. Vegetables 8. Other food items		Medical Education Fuel Items Electricity Mobile Entertainment Rent & Loan Installments Other Non-Food items	

Other food items include fish, meat, fruits, fast food, drinks etc., and Other Non-Food items include clothes, house repairing, transportation, rituals, gambling etc.

6. Financial Capital of the Squatters in SMCA

Are you Member of SHG	Yes	No	If Yes				
			Male	Female			
Have you Applied for Loan/Credit	Yes	No	If yes, have you got Loan				
			Yes	No			
Reasons for not getting Public Institutional Loan	Illegal Status of Settlement	Illiteracy	Lack of Social Relation	Lack of Collateral Assets	Fear of Repayment of Loan	Others (specify)	
Sources of Loan/Credit	Bank	Money	SHG	Money Lender	Cheat Fund	MFI	Others (specify)
Purpose of Loan/Credit	Set up new Business	Expansion of Business	Health & Food	Weeding/ Rituals	Education	Others (specify)	
Sources of Informal Loan/Credit	Friends	Relatives	Neighbours	Shop-keeper	Others(Specify)		

SHG=Self Help Group MFI=Micro Finance Institutions (Bandhan, ASHA, SKS etc)

6.1: Savings of the Squatter Households

Do you have any Savings	Yes			No			
If yes, Types of Savings	Bank	SHG	Cheat Fund	MFI	Post Office	LIC	Others (Specify)
Amount of Savings/ Month (in Rs.)							

7. Social Capital in the Livelihood Strategy of the Squatters in SMCA

Sources of Information to Migrate to the City	Friends/ Relatives at Destination	Family Member and Relatives at Destination	Friends/ Relatives at Origin	TV/ News-paper	Self	Other Sources (Specify)
Sources of Information in Searching for Housing	Migrant Friends & Neighbours	Migrant Relatives and Family Member	By Birth	Peoples at Work place	Self	Others (Political Leader/Dada, NGOs etc)
Sources of Help to get Employment	Migrant Friends and Neighbours (Same Ethnic Group)	Migrant Family Member and Relatives	Non-Migrant Friends (Local Leader,NGO)	Self (who Did not received any help from others to get an Employment)		
Sources of Help in Access to Loan/ Credit	Friends and Neighbor (Same Ethnic Group)	Relative and Family Member	Employer	Local Leader/NGOs etc.	Self (with own efforts)	

7.1: Generation of Social Capital through Community Participation

Do you Contribute Money for Community Development	Yes	No
Do you Participate to resolve Community Problem	Yes	No
Do you Participation in Community Development Work	Yes	No
Do you Participation in Community Meetings/Political Meetings/Rallies	Yes	No

Appendix: G (Operational Concepts and Definition)

Household: A 'household' is usually a group of persons who normally live together and take their meals from a common kitchen unless the exigencies of work prevent any of them from doing so. Persons in a household may be related or unrelated or a mix of both.

Literates: A person aged 7 years and above who can both read and write with understanding in any language has been taken as literate.

Functionally Literate: in this study a person is considered as functionally literate who can sign only, but cannot read to deal with the everyday requirements of life.

Literacy Rate: Literacy rate of population is defined as the percentage of literates to the total population age 7 years and above.

$$\text{Literacy Rate} = \frac{\text{Number of Literates}}{\text{Population aged 7+}} \times 100$$

Main Workers: Those workers who had worked for the major part of the reference period (i.e. 6 months or more) are termed as Main Workers.

Marginal Workers: Those workers who had not worked for the major part of the reference period (i.e. less than 6 months) are termed as Marginal Workers.

Cultivator: For purposes of the census a person is classified as cultivator if he or she is engaged in cultivation of land owned or held from Government or held from private persons or institutions for payment in money, kind or share.

Agricultural Labourers: A person who works on another person's land for wages in money or kind or share is regarded as an agricultural labourer.. An agricultural labourer has no right of lease or contract on land on which he/she works.

Household Industry Workers: Household Industry is defined as an industry conducted by one or more members of the household at home or within the village in rural areas and only within the precincts of the house where the household lives in urban areas.

Other Workers: All workers, i.e., those who have been engaged in some economic activity during the last one year, but are not cultivators or agricultural labourers or in Household Industry are 'Other Workers'

Self-Employed: Persons who are engaged in their own farm or non-farm enterprises are considered as self-employed. Some may operate their enterprise on their own account or with one or few partners without hiring any labour or occasionally hiring a few labourers.

Salaried Employed: A salaried employee is a person working in other's farm or non-farm enterprises (both household and non-household) and in return getting salary or wages on monthly basis (not on the basis of daily or periodically).

Casual Worker: A person casually engaged in other's farm or non-farm enterprises (both household and non-household) and received wages either daily or periodically (but not on monthly basis) is treated as casual worker.

Work Participation Rate: Work participation rate is defined as the percentage of total workers to total population.

$$\text{Work Participation Rate (WPR)} = \frac{\text{Total Workers}}{\text{Total Population}} \times 100$$

Sex Ratio: Sex ratio has been defined as the number of females per 1000 males in the population. It is expressed as number of females per 1000 males.

$$\text{Sex Ratio} = \frac{\text{Number of females}}{\text{Number of males}} \times 1000$$

Dependency Ratio: The dependency ratio is used as a proxy for the ratio between those who are not economically active (and therefore dependent) and those who are economically active. In other words, The dependency ratio tells us how many young people (under 16) and older people (over 64) depend on people of working age (16 to 64). The dependency ratio is worked out with the following formula.

$$\text{Total Dependency Ratio} = \frac{(\text{Percentage of age below 15} + \text{Percentage of Age 65 and above})}{(\text{Percentage of age between 15 and 64})}$$

The total dependency ratio can be decomposed into the child dependency ratio and the aged dependency ratio.

$$\text{Child Dependency Ratio} = \frac{\text{Percentage of age below 15}}{\text{Percentage of age between 15 \& 64}}$$

$$\text{Aged Dependency Ratio} = \frac{\text{Percentage of age 65 \& above}}{\text{Percentage of age between 15 \& 64}}$$

Shelter Deprivation: The concept of shelter deprivation by living area has been derived to examine residential crowding in the slums/squatter settlements in the inner and peripheral city of SMCA. A household is said to be suffering from shelter deprivation when more than three persons is sharing the same room (UN-Habitat, 2006/07). Degree of shelter deprivation of the household has been categorized as; one (four persons/room), two (five persons/room), three (six persons/room), four (seven persons/room) and more than four (more than seven person/room).

Gini-coefficient: This is the most commonly used measure of inequality of a distribution. The coefficient varies between 0, which reflects complete equality and 1, which indicates complete inequality. Graphically, the Gini-coefficient can be represented by the area between the Lorenz curve and the line of equality. It is the ratio of the area between the Lorenz Curve and the line of equality (numerator) and the whole area under the line of equality (denominator). In the preset sample study, inequality in income, consumption and expenditure of the squatter households has been measured in terms of Gini-coefficient as follows;

$$G = \frac{\left[100 - \frac{\sum_{k=1}^n (X_k - X_{k-1})(Y_k - Y_{k-1})}{100} \right]}{100}$$

$$G = 1 - \sum_{k=1}^n (X_k - X_{k-1})(Y_k - Y_{k-1})$$

Where, X_k $k=0 \dots n$, represents the cumulative proportion of the households and Y_k is the cumulative proportion of the respective variables such as income, consumption and savings.

