LITERATURE REVIEW

The main purpose of literature review is to provide a background for the previous research on migration and to review some of the available works related to this field. In migration literature there exists no single theory or models that covers all the aspects of migration. Therefore here an attempt has been made to examine some of the important studies in this field. For convenience the reviewed literature is divided under two main headings: work done in India and work done outside India. Out of numerous studies on internal migration both in and outside India, some important works done by eminent scholars in India and abroad have been reviewed briefly which are related to my present doctoral work.

Work Done in India

Internal migration is commonly understood as the movement of people from some rural area to nearby or distant city centres and it helps in redistribution of people over a large region. Gosal (1961) points out that the increasing level of urbanization, industrialization, different plans for economic development, educational facilities, extension of irrigation in arid and semi-arid areas, will play important role to make India’s population more mobile. Large cities attract larger number of migrants and find out inverse relation between migratory distance and the number of in-migrants. He estimates that short run migration is the dominant one in the country with future perspective about the internal migration which is bound to increase in future due to obvious diversification of economic activity. Zachariah (1964) studies the pattern of internal migration in Indian sub-continent during the period 1901-1931 using census data. His whole work is based on place of birth data in state level to estimate the demographic characteristics of net migration. He concludes that the extent of population redistribution in India during 1901-31 caused by internal migration was small compared to the experience of some western countries. Rele (1959) categorized internal migration into quantitative and qualitative. Former type describes the characteristics of migrants and plays an important role on population redistribution whereas later deals with the overall process of transition of the entire community. He discussed the trends of urbanization from 1901 to 1961 and analyzed the implication of population movement on urbanization. Several studies have been under taken by researchers to study the quantum and pattern of migration flow (Bose 1960, 1980; Kumar 1987; Premi 1981, 1982). According to Chandna and Siddhu (1980), Geography
is a spatial science in which classification of in-migration according to distances is of specific importance. Population redistribution tendencies mainly found with regards to the changing employment potential pattern of different areas. Movement over territories is a characteristic feature of all human populations irrespective of their stage of economic development (Gill, 1981).

Usually cities possess some easy and comfortable socio-economic conditions, high wages rates, better employment opportunities (pull factor) that are attractive to village people who suffer from unemployment, very low wages, poverty, social and family disputes, bad health and educational facilities etc (push factors) in the rural areas. Majumdar and Piplai (1969) indicate ‘push factor’ as a cause of internal migration and in-migrants pulled by better employment opportunities and often reach a higher standard of living in the in-migrating states. They concluded that pull factors are more effective than push factors in the in-migration into large cities. Saxena (1977) justified the conclusion that the emigrants are pushed to (not pulled by) the cities and rural-urban migration are generally male selective where 72 percent male economically self supportive. Mahapatro (2012) pointed out that interaction of various factors in the course of development can not only accentuate the pace of mobility but would lead to emergence of new migration patterns. There can be contrasting reasons for this current increase in the migration rate. On the one hand increasing unemployment, poverty, population pressure, environmental degradation, depletion of natural resources etc limits the livelihood options and may force people to migrate while urbanization, better employment and educational opportunities, improvement in educational level, changing occupational pattern, development of transport and communication are the new impetus facilitating spatial mobility.

Generally migration is age and sex selective phenomenon and all people cannot move. Zachariah found that, in 1961, the age distribution of the migrants to Greater Bombay was distinctly different from that of the non-migrants. Among the migrants, there was an excess of adolescents and young adults. The changes in the age-sex structure of migrants and non-migrants can also effect the crude birth and death rates, the rates of labour force participation, the rates of school attendance, etc (Bhende and Kanitkar, 2008). Banerjee (1977) classified migrants according to their place of birth, age composition, sex, occupation and economic status, duration of
residence in urban centers and occupational history of migrant population. He investigates objective and subjective factors for population migrations which are different in rural and urban areas. He finds out that economic motives are the most important one behind both rural and urban migration. He also discussed the importance of migration data and theoretical framework of migration. Singh (1986) concerned migration selectivity and compared it between rural and urban areas. He selected three states for the study area i.e. Bihar, West Bengal and Kerala; discussed how demographic conditions, economic prosperity as well as regional disparities in socio-cultural patterns account for the differing patterns of migration selectivity. He noticed that regional variations account a reflective impact on migratory behavior of an area of a population and so it is hard to find universally applicable differentials of migration. For this reason a little progress has been made towards building a general theory of differentials in migration. Premi (1987) gave a detailed discussion on differentials of urban to urban along with urban to rural migration and highlighted three types of migrants i.e. lifetime migrants, inter-censal migrants and current migrants. He also analyzed the share of intra-district, inter-district and inter-state migration in urban to urban and urban to rural streams. At the national level both males and females urban to urban migration streams are continuously increasing from census year 1961 to 1971. Kalotra (2010) gave a detailed study of Punjab which supports sex selectiveness of migration. He shows spatial pattern of sex ratio among in-migrants in Punjab in 2001 using district wise census data. He shows that sex-ratio among in-migrants is more than that of the local population of the state. The districts which share its boundary with some neighbouring states have more female in-migrants due to marriage. Kalotra (2010) thinks that the migration is one of the three basic determinants of population change. Males are more migratory because of economic activity or employment. He has analyzed the occupational pattern of in-migrants to Punjab from other states and Union Territories of India in terms of industrial categories and occupational divisions. Internal migration may be differential with respect to employment opportunities, wage differences, educational facilities, family ties, matrimonial reasons etc. It has been observed that industrialization and economic development has been accompanied by large scale movements of people from villages to towns, from towns to other towns and from one country to another country (Lusome and Bhagat, 2006).
Female migration is an important phenomenon in India, particularly in short distance movement. Prabhakara (1986) highlights the internal female migration pattern dominated by rural-rural i.e. short distance marriage or by agricultural labour migration. He also finds out that the proportion of non-working migrants is comparatively higher than the working; the absorption of migrants according to educational levels in the working sector is low. Sundari (2007) examined the gender related issues involved in migration. She tried to identify the factors that would induce women migration to another area. The trend and patterns were analyzed to see the impact on the economic status of migrant families. Macro level analysis was carried with all India data on migration with special reference to Tamil Nadu state and micro level investigation was conformed to a sample of 955 migrant women selected from three urban centers of Tamil Nadu namely, Chennai city, Coimbatore city and Tirupur town. The author indicates that migration has helped the migrant households to avoid the hunger, starvation and death.

Smita and Chandna (1991) try to identify the areas of in- and out- migration by differentiating between the actual growth rate and the average rate of natural increase. The authors point out that high density of population areas experience long history of emigration and out-migration. On the other hand in-migration is largely seen in the areas of high demand for labour in different sectors of economy. An attempt has been made by differentiating the actual rates of population recorded by the district during 1971-81 from the average rate of natural increase for the state to which a district belongs. The districts where actual growth rate exceeded the average rate of natural increase have been categorized as areas of net out-migration. The magnitude of in- and out- migration, however, was determined by the amount by which the actual growth rate deviated from the average rate of natural increase. Khairkar (2003) discusses that migration is one of the major components in population change and plays an important role in influencing the rate of growth and characteristics of population in Pune city.

There are lots of studies showing trend and pattern for specific district of a state. Majumdar and Majumdar (1978) stress the importance upon migration pattern, causes and motivation. He finds that the most of the migrants are as manual labour in construction work. After migrations these people change their occupation from agricultural labourer to construction worker. Roy (1979) analyses internal migration
patterns and basic issues for both rural and urban areas at the set up of district, state and cities/UTs (Union Territories). His analysis based on 1971 census data of place of birth and place of last residence illustrates the patterns of rural to rural migrants. Siddiqui and Nazim (1993) give a detailed discussion on the patterns of migration in Saharsa district in Bihar. They highlight the patterns of movement, aspect of migration, and composition of migrants by residence. They pointed out that rural areas had greater share in both in-and out- migration than its urban counterpart and female migration dominated over male migration in Saharsa district. Khan (1999) examined variation in costs and incomes and related decision taking patterns that affects migration rates. Khan and Qureshi (2004) highlighted the patterns of internal migration flows, magnitude direction of migration. Their primary data was collected from 2220 rural households in 106 villages and 873 urban households in 11 towns of the district. They also highlighted types of migration streams, characteristics of migrants and also the areas of population gains and loss in the study area. Gupta and Sharma (2004) pointed out the trend of migration is mainly the result of the change in opportunities for economic wellbeing and he consider migration is a good indicator of socio-economic change. Lusome and Bhagat (2006) provide the trends and patterns of internal migration during 1971-2001 on the basis of census data. They recognized internal migration as an important factor in influencing social and economic development, especially in developing countries. They pointed out that socio-economic changes in the last three decades have greatly increased the mobility of Indian population.

Migration takes place usually within well defined streams and migration follow well defined routes to reach highly specified destination. Bose (1967) discussed on internal migration in India in terms of the origin, volume of migration streams, direction and distance based on census data of 1961. His view about rural to rural migration stream is larger in India and female migration is mainly due to ‘marriage migration’ and male migration is due to ‘economic migration’ and rural to urban migration is more important among males for long distance migration. He has also calculated the annual ‘out migration rates’ based on the duration of residence data. The author also pointed out that in urban areas there were no significant differences between the male and female out-migration rates, while in rural areas, the female migration rates were higher for to rural areas. Mitra (1968) discussed
migration and classified the movements into five types, i.e. rural to rural migration or rural turnover, urban to rural or reverse migration, rural to urban migration or rural push, urban to urban migration or urban turn over, rural to small town to city or step migration. He tries to illustrate movement direction and migration volume between various states and related them to the socioeconomic characteristics of losing and gaining regions. Khan (1983) studied general pattern of male out-migration from twelve villages of eastern Uttar Pradesh. She found that the migrants, overwhelmingly young workers are literates in larger population than illiterates. She pointed out that out-migration have been helpful in reducing the dependence on agriculture and helps in diversification of occupation which is not possible in rural areas. She also discussed in her another book (1986) that education plays important role on migration aspiration and out-migration is important element for reducing unemployment and deprivation in origin areas. Mehta (1990) showed that out-migration in Bist Doab of Punjab is mainly due to seeking jobs in labour sector. Kalotra (2009) noticed that out-migrants from Punjab are moving to the neighbouring states. The common cultural tradition has played an important role in most of the women migration to the adjoining states. Males have been going with families to urban areas because of employment, business. Reja and Das (2013) finds out male out-migration rate from West Bengal has increased over the decade. Pattern of out-migration is more to the distant states like Maharashtra, Delhi and Haryana. Their paper analyses the reasons of out-migration for both year 1991 and 2001.

Kaur (2009) discussed the trend of rural-rural male migration of the agriculturally developed state of Punjab during 1971-2001. Her study revealed that the proportion of the rural-rural male migrants were being decreasing as a result of mechanization of agricultural operation and increasing level of urbanization. In her another paper Kaur (2009) revealed that the proportion of intra-district urban-urban male migrants was being increasing while the proportion of inter-district and inter-state migrants was being decreased in the state. During that period Punjab has recorded an overall increase in the number of towns, increase the level of urbanization, expansion of urban areas, improvement of transport facilities and industrial development. The growth rates of large cities are, therefore, predominantly the result of migration as well as areal expansion. At the state level, the more urbanized states show a contribution of net rural to urban migration to urban growth.
of about one-third, whereas at the all India level the contribution is about one-fifth
(Bhagat and Mohanty, 2009). Recently Kaur (2013) finds out that in the agriculturally
developed Punjab state male migrants have been increasing since 1971. She
established that rural-urban male migration in Punjab is directly associated with the
proportion of urban population and number of towns. She also analyzes the reasons
of decline in intra-district and inter-district male rural-urban migration and of increase
in proportion of inter-state rural-urban male migration which has been suggested to
increase further with the development of transportation and communication facilities.

Gupta (1961) studied the migration from the villages of Punjab to analyze the
relationship between the socio-economic status of family and emigration from rural to
urban areas. He showed that higher the status of particular family lower is the
tendency among its members to emigrate. This confirms his hypothesis which says
that propensity of out-migration is inversely related with the status of the family.
Nazim and Siddiqui (1996) made an attempt to understand the social conditions of
migrant population and reasons behind migration decision making process. They
selected six variables such as educational status, household income, house type, land
size, consumption of milk, vegetables of migrants and non-migrants and gave a
detailed analysis of socio-economic characteristics of migrant population in Kosi
Plain of Bihar. On the basis of these variables, they found out that aspirations and
motivations play an important role for upward social mobility for migrant population
than the non-migrants and these populations were originated respectively from the
two separate classes of economically poorest and economically richest households of
that rural community. Khan (1999) in his book discussed demographic features and
social structure of migrant population of Ara district (Bihar). He find that most of the
migrants are service holders, lawyers, doctors, professors, engineers, administrators,
hotel workers, business men, skilled and unskilled persons.

Internal migration assumes special importance in any country in the process of
socio-economic development. Bhatia (1992) selected Patiala district in Punjab to
examine socio-economic characteristics of migrants and studied the impact of
migration on technology change and agricultural production. Shah (1998) studied
rural-urban migration to identify the economic, social and cultural factors which are
responsible for the large scale migration at micro and macro levels. The author also
focused on the vertical movement of rural migrants of region and has shown how
immobility adversely affects their income earnings and the remittance to their households. The author also analyzed the current situation and projection of rural industrialization that would play an important role in regulating and directing rural-urban migration stream in that region. Oberai and Singh (1983) described determinants and implications of migration for rural and urban development in Punjab. They gave detailed discussion about three flows of migration i.e. in-migration, out-migration, and return-migration and analyzed the nature of data and volume of migration in the rural areas of agriculturally prosperous Ludhiana district of Punjab. They estimated the rate of rural out-migration was higher than the combined rate of in-migration and return-migration from rural areas. They made an attempt to investigate the relationship between fertility patterns for similar population groups in rural and urban areas. In urban areas family planning causes a smaller number of children and consequently lesser fertility than in rural areas. Cherunilam (1987) pointed out natural growth rate of population has been found to be generally lower in urban areas than rural areas. Thus rural-urban migration is the main reason for urbanization. Kundu and Gupta (1996) studied the pattern of internal migration and calculate inter-state net migration and its contribution on urbanization. Chaudhuri (2001) attempted to estimate the crucial linkage between migration and economic development where dynamics of migration has been given special attention while formulating policies for economic development. He points out that such mobility has induced changes in modes of subsistence, life styles, social relationships, structure of production and distribution. It involves spatial mobility of both economically active people which constitutes the labour force in the production and distribution process as well as dependents who do not participate directly in that economic process. Such flow of people can either accelerate or reduce the pace of economic development and can have a variety of socio-economic and environmental impacts upon both the place of origin and destination. Rao (1996) investigated the linkages of migration with economic development. He calculated in-migration, out-migration, net migration and gross migration rate and show how it related to economic development. Bhagat (2009) points out that both in and out migration rates have significant positive associations with per capita income, percentage of workforce and share of Gross Domestic Product (GDP) in the non-agricultural sector. He finds that an area of higher in-migration is also associated with higher out-migration rates. Nanavati (2004) and Chattoraj (2015) highlighted internal migration is a natural process in which surplus
labour is gradually withdrawn from the rural sector to provide needed manpower for urban industrial growth process. This is socially beneficial because human resources are being shifted from locations where marginal product is not only positive but also rapidly growing as a result of capital accumulation and technological progress. Roy and Debnath (2011) find that various socio-economic factors and level of development is positively associated with net migration. They point out that migration is beneficial for overall development and there is no reason to raise voice against human mobility in the context of Indian economy. Abbi (2012) pointed out that internal migration enhanced higher incomes, improved health, higher literacy, improved quality of life and other benefits in Navi Mumbai.

It is an automatic equilibrator which drew out surplus population employed in the agricultural sector in rural areas to the modern industrial sector in urban cities to initiate the development process. Apart from the natural change in the birth and the death rates, migration is becoming an important factor of urbanization, social change, development and demographic issues (Sensarama, 1997). Through the migration process a continuous interaction between the rural and urban migrants with different cultural worlds brings about significant socio-cultural changes. The magnitude of the migrants is largely dependent upon structural changes both at the place of origin and destination. The residents of the rural areas fight the poor resource base by taking up non-farm activities or farming with modern equipments in rural areas or by migrating seasonally to urban areas (Rani and Shylandra, 2001). Migration provides a base for development as it leads to expansion of ideas and information, cultural diffusion and social integration. Rural-urban migration helps in making availability of cheap labour for industries and changes occupational structure for household in villages (Singh and Yadav, 1981). The structural-functional approach considers migration as a response to the overall strategy of economic development (Amin, 1974 and Meilink, 1976). Migration influences the social, political and economic life of the people (Lusome and Bhagat, 2006). The distribution of total movement within a country among the rural-rural, rural-urban, urban-rural and urban-urban components is closely associated with the degree of economic and social development (Mahrotra, 1974). The analysis of in- and out-migration for different states of the Indian Union in the light of socio-economic characteristics indicates that high in-migration is positively associated with high level of urbanization, high per capita domestic product and the low share of
primary sector in state’s economy and vice-versa (Sivamurthy and Kadi, 1983). Studies by Oberai and Singh (1983) and Bhagat (2009) states that with the increasing level of development of the state the in and out migration rate also increases. Devi and Malhotra (2014) finds that out of eight socio-economic indicators only two i.e. per capita net state domestic product and human development index show positive and significant relationship with interstate in-migration rate.

Work Done Outside India
The first step towards developing the theory of migration was taken by Ravenstein. In two articles entitled ‘The laws of Migration’, published in 1885 and 1889, he suggested that all migration emanates from low productivity areas towards high productivity areas. The choice of destination area is moderated by distance. Migrants from the rural areas frequently move first to nearby towns, if any, and to large towns and cities. He noticed that the rural people are more migratory than urban people. This rural to urban migration steps up with every development in the means of transport and communication and is positively related to the growth of trade and industry in destinations. In a classic article, Lewis (1954) suggested a model based on transference of surplus labour which was later extended by Fei and Ranis. This model treats migration as essentially an equilibrating mechanism which shifts labour-surplus to labour deficit areas with the help of market forces and eventually brings about equilibrium between the two areas. Migration between two places, is a direct function of the number of opportunities encountered on the way and the number of other migrants competing for opportunities in that area i.e. the number of opportunities is positively associated with the number of in-migrants at the place of destination (Stouffer, 1960). George (1965) confirmed himself to two states i.e. West Bengal and Assam, and dealt with estimation of volume of migration and areas of population gain and loss at the district level in a historical perspective from 1901 to 1961. He observed that because of new openings population moved into plantation areas in Assam and industrial and urban sectors in West Bengal.

Bogue (1969) considered migration as an adjustment to economic and social change. He explained there was a positive and negative aspect to the migration provoking situation. Besides, he also discussed the role of push and pull factors at the origin and destination. Push factors that were considered are decline in a national
resource, decrease demand for a particular product, exhaustion of mines, timber or agricultural resources, loss of employment, opportunity for employment, opportunities to earn a large income, opportunity to obtain desired specialized education or training, preferable environment and living conditions etc. Behrouzinia (2010) in his study found that in Iran the factors such as academic ranking of the university, job opportunity and chance of marriage in the host society have been the most assimilation factors in motivating students to migrate to a poor province.

Studying relating to both developed and developing countries have uniformly corroborated the fact that migrants generally concentrated at the ages 15-20 and 30-35 years. In the Soviet Union, the ages of particular concentration during 1939-58 were those between 18 and 35 (Daragon, 1965), while in the USA, the peak was between the age, 20 and 29 and then (Thomas, 1965). A sample survey in Lagos showed immigrants to be particularly concentrated at the ages 15-34 (Ejiogu, 1968). In Ghana, Caldwell (1968) found that initial migrations to the towns were generally made between 15 and 25 years of age. Female in-migration rates in Guayaquil (Ecuador), Panama City and Greater Santiago were usually higher at the ages 10-14 than the ages 30-34 (Elizaga, 1965).

Despite the universality in the age characteristics of migrants, there are considerable variations in causes of migration. In Indian scenario the main motives of migration of males are economic, while for females social causes, particularly marriage, are much more important than economic causes. This study highlight how causes of migration differ between the sexes, these differences influence the differential age characteristics of migrants by sex. It has been found in many studies that most of the rural-urban migration occurs in adult age groups, in which most of the males migrate for employment related reasons and female migrate because of marriages (Guo and Yang, 1999).

Migration is sex specific as well. Studying dealing with sex in migration has shown considerable variations among different countries. Varying patterns of sex selective migration appear to be associated with economic aspects of the social structure in conjunction with the social-cultural position of women in society. In Latin America, for example, females have been found to be more migratory than males (Elizaga, 1965). Massive migration of young women to the towns of Latin America
results from the fact that poor farmers send their daughters to towns to become domestic servants, because they are not needed at home if the mother does little more than domestic duties (Boserup, 1970). Cultural contrasts seem to play a crucial role in variations in sex differentials in migration between different countries. Sometimes the contrasts in sex differentials in migration exist within the same country as well because of cultural plurality. India is a case in point.

Migration is said to be selective of occupation as well. From the economist point of view, migration is selective of occupations with very small degrees of specialization when economies are in the early stages of development and industrialization, and are in the early stages of development and industrialization, and as the economy develops migration becomes selective of more specialized occupations (Shaw, 1975). It is generally said about the Third World Countries that most rural migrants come from two major economic classes, one is very poor-landless and illiterate peasants who are predominantly ‘pushed’ into towns and second one is relatively well-off better educated workers are more likely to be ‘pulled’ into urban areas by attractive economic opportunities (Lipton, 1980).

Kosinski and Prothero (1970) highlighted methods and associated difficulties of migration data collection with special reference to developing countries. He treated migration as the manifestation of the people of the different level of socio-economic development and areas in which they live. Migration may be observed as both the causes and consequence of spatial and temporal variation and most useful movements are from rural to urban areas. They highlighted various factors that are motivating the process of migration at the place of origin and destination. In general they examined the consequences, advantages and disadvantages of migration. Studies of rural-urban migration in Colombia by Shultz (1971) have suggested that female migration to cities is closely related to economic factors. In south Asia, particularly in India, migration is highly selective of male mainly due to economic reason and female migration mainly due to marriage. Economic reasons for female in-migration to urban areas are quite less. Martine (1975) analyzed the volume, socio-economic characteristics and consequences of internal migration in Colombia. The data collected from CELADE’s Operation Muestra de Censo (OMUECE), provided a series of special tabulation from a two percent sample of the 1964 Colombian Census. The author pointed out that all streams of migration were selective of the younger and
unmarried population. He found out that socio-economic characteristic migrants at each of their individual destinations were more sharply differentiated than they were from the residential population. Migrants have higher activity rates than the residential population. Brown and Neuberger (1977) noted that migratory movements play an important role in determining location of commodities and economic activities, including technological changes that destabilize intra-and inter-urban equilibrium. He also said that migratory movement and development processes are interrelated and interact. White and Woods (1980) made an attempt to analyze the migration process for all residential changes among the human population i.e. volume, length, their shapes, direction and the patterns of migration flows. He focused on the characteristic shapes in which migration flows or streams would take on. The steps and chain migration, streams and counter streams in migration were also discussed. He used deductive methodology and the analogous relationship between migration and the forces of gravity.

Jones (1981) has studied internal migration and pattern of international migration in global context. He also pointed out the impact of migration in rural and urban areas. Clark (1986) observed that international migration has impact on global population structure. He discussed relative importance of individual decision making towards migration verses structural and contextual impacts on the individual decision and ability to change residences in the city. According to Skeldon (1992) Population mobility is an integral part of the development process, in both causes and is caused by changes in the economic and social structure of an area. There can be no development without migration and no significant redistribution of population without development. Voigt-Graf (1997) noticed different migrant groups that tend to be subsumed under the broad category of the Indian Diaspora display very diverse social and economic patterns in Australia and these differences can be explained by different pre-migration and migration experiences. Newbold (1999) highlighted the immigrant patterns with reference to spatial and temporal location of 25 largest metropolitan areas within the United States. He compared the settlement patterns and reasons for migration among foreign born cohorts (age 45-59) from 1980 to 1990 census. The results indicated that influx of different cohorts showed different responses to the determinants of settlement and migration behavior, although the overall distribution of the foreign born population was changed a little over the two census periods. The author examined changing responses to settlement and migration for both periods and
cohorts effects. The systematic differences between 1980 and 1990 were observed in terms of the settlement pattern with respect to the periods effects. Shumwayan and Otterson (2001) analyzed changing patterns and distribution of income concentration and identified clusters of countries based on their economic structure which is associated with increasing population growth in new west countries. Besides, in the Mountain West region countries were attracting the largest amount of in-migrants and resulted in the higher level of population concentration in the rural west. They pointed out that rapid population growth, the changing characteristics of in-migrants, and their spatial concentration in new west countries provided a basis for conflicts over what the rural west is becoming.

Henry et al. (2003) analyzed the environmental factors of inter-provincial migration in African countries which were supposed to be responsible for large migration flows in ecologically marginal regions. They also examined the relative importance of socio-demographic and biological variables. The results showed that inter-provincial migrations in Burkina Faso were influenced by high literacy and economic activity rates at the origin and destinations. They also found the contribution of environmental variables in the explanation was crucial. Nelson and Sewall (2003) examine metropolitan and non-metropolitan shifts during the 1970s and 1980s within an age cohort framework. They focused on cohort specific in-migration in two regions: New England and the four corner states of Utah, Colorado, Arizona and New Mexico. The results showed that the older cohort shifts towards non metropolitan destinations whereas younger cohort generally moves towards metropolitan areas influenced by labour and housing market variables. The analysis further demonstrated a large potential for future non-metropolitan population growth, yet those growth experiences are likely to vary regionally.

A wide range of issues associated with the internal migration such as migration volume, trends, patterns both intra- and inter-states, causes and characteristics of migration have been discussed by various eminent scholars. However, certain gaps still exist in our knowledge of some important aspects of internal migration in West Bengal. The trend and pattern of internal migration and the correlation between migration and socio-economic variables are such important aspects in West Bengal with fewer studies in the literature. So this work is a modest attempt to study the trend and pattern of internal migration and its linkages with socio-economic transformation in West Bengal.
METHODOLOGY

Data Source
The data bases of this study are secondary sources. Migration data collected from Census of India Publication, D-series table. The census of any country is the most important source for internal migration as well as cross-country level. Census of India continues to be the basic source for providing valuable data on internal migration which as assumed considerable importance in the recent years because of various socio-economic factors that stimulates migration (Mahrotra, 1974). A study shows that 138 countries collected information on internal migration in their censuses compared to 35 through registers and 22 from surveys (Bell, 2003). Yet the population census has remained the most important source of migration data (Bhagat, 2006). Census of India is the single largest source of data on migration characteristics for the people of India (NSSO, 2010). The main source for the study of internal migration in India is provided by the decennial population census (Bhende and Kantikar, 2008). The reason of considering census data is stage-wise migration was generated at a district level, which provided scope for introducing stratification into the analysis. It collects migration data information on the place of birth since the first regular census of 1872. Till 1961 census, place of birth data was collected at the district level. In 1971 an additional question of place of last residence was introduced and has been continued till the present census. From 1981 census, questions on reasons for migration have been asked which includes five reasons for migration: marriage, education, employment, family moved and others. In 1991 census two new reasons i.e. business and natural calamities have also been included.

The data used of this study are the year of 1991 and 2001 Indian censuses. The following migration tables have been used:

Table D-2 Migrants classified by place of last residence, sex and duration of residence in place of enumeration. This is used for working out the migration in three distance level (i.e. intra-district, inter-district and inter-state level) and also of four migration stream (i.e. rural to rural, rural to urban, urban to urban and urban to rural).

Table D-3 Migrants by sex, place of last residence, duration of residence and reasons for migration. This table has been worked out to find reasons of migrations for all the distance level.
Despite several merits, there are certain deficiencies. The publication of latest migration data based on 2011 enumeration is not published till now. Therefore, 1991 and 2001 census data are taken to examine the trend and pattern of internal migration and socio-economic transformation. At a glance attempt is also made to capture some of the available NSSO data of 1999-2000 (55th round) and 2007-08 (64th round). The magnitude of change is observed to be different but the direction and pattern is almost similar. From census data detailed statistics information are available as required by the author in the present analysis. However some information collected from NSSO records have been discussed briefly in chapter four.

Other socio-economic data have been obtained from the Statistical Abstract of West Bengal (2005-06), Economic Review of West Bengal (2006-07), Human Development Report (2004), Statistical Hand Book (2008), etc. The selection of these data was based mainly on their availability and comparability from different districts of West Bengal.

The present study is based on secondary sources of data to show trend and pattern of internal migration and socio-economic transformation in West Bengal. The district has been considered as the spatial unit of study. The whole data is enumerated on destination place from place of last residence. The magnitude of internal migration
has been calculated on the basis of distance level i.e. intra-district, inter-district and inter-state which is worked out to compare over two time periods (i.e. 1991 and 2001). It has been converted into percentage to work out the pattern. These percentages have been classified then as high, medium and low based on standard deviation and mean. On the basis of census data, it is possible to separate the three types of internal migration which indicate relationship between distance and migration:

**Intra-District or Short Distance Migration**: Persons born (or with last residence) outside the place of enumeration within the district.

**Inter-District or Medium Distance Migration**: Persons born (or with last residence) outside the district of enumeration but within the state.

**Inter-State or Long Distance Migration**: Persons born (or with last residence) in a state beyond the state of enumeration.

Based on the rural and urban nature of the place of last residence and the place of enumeration, internal migrants further classified into four migration streams: rural-rural, rural-urban, urban-rural, urban-urban.

**Rural-Rural Migration**: The migrants whose place of last residence and place of enumeration are recorded as rural have been categorized as rural-rural migration stream.

**Rural-Urban Migration**: The migrants whose place of last residence is rural and the place of enumeration are recorded as urban have been categorized as rural to urban migration stream.

**Urban-Rural Migration**: The migrants whose place of last residence is urban and the place of enumeration are recorded as rural have been categorized as rural to urban migration stream.

**Urban-Urban Migration**: The migrants whose place of last residence as well as place of enumeration is recorded as urban have been categorized as urban-urban stream.

**Selection of Indicators/Variables**

The standard dictionaries define the term ‘indicator’ as one that indicates, shows, or point out. Social indicators based on quantitative observations give general view of
different aspects of social life in which we are interested in. Indicators are like parameters that are expressed as relative number and help to make general comments on some aspect of social life. On the other hand social variables represented by absolute in numbers make specific comments. An indicator is a composite of at least two variables, while a variable is a single entity. An indicator can be viewed as a combination of matter of facts (data) and matters of relation (Theory). On the other hand, a social variable can be constructed only through a correct sequence between functional and logical orders. It is therefore; through an appropriate transformation of the variables within a theoretical framework an indicator can be obtained.

Socio-economic indicators are statistical measure which gives information regarding socio-economic conditions and changes therein overtimes for various segment of society. By social condition, we mean both external (social and physical) and internal (subjective and perceptional) context of human existence. Socio-economic indicators can play a pivotal role in developmental planning in two ways. Firstly these can help in analyzing the pre-planned socio-economic conditions. Secondly, these can assist in monitoring the progress towards developmental goals and planning in terms of specific objectives, assessment of distribution of well being. These indicators also as critical variables in building development models provide information to facilitate the formulation of policy program and selection of priority areas.

Therefore, indicators can be obtained through appropriate transformation of the variables within a theoretical format. As the socio-economic condition of a society changes with time, these social indicators are compiled at various intervals. Some of them can be collected only at decennial intervals such as population data and other economic tables published by Census of India, while some are at quinquennial intervals. However socio-economic transformation of any region is determined by a large number of socio-economic variables. In the present investigation for internal migration and its relationship with socio-economic transformation a list of such variables has been considered. The economic significance of migration will become clearer if we analyse interrelationships between migration and some of the dependent socio-economic variables. Fifty nine dependent variables grouped into six categories i.e. demographic, educational, agricultural, employment, health and other variables are considered out of which thirteen are migration independent variables.
Table 2.1: Internal Migration and Socio-Economic Variables

<table>
<thead>
<tr>
<th>Categories</th>
<th>Variables</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td><strong>Independent Variables</strong></td>
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<tr>
<td>Migration Variables</td>
<td>X_1</td>
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<tr>
<td></td>
<td>X_2</td>
<td>Intra-District Migration</td>
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<td></td>
<td>X_3</td>
<td>Inter-District In-Migration</td>
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<tr>
<td></td>
<td>X_4</td>
<td>Inter-State In-Migration</td>
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<tr>
<td></td>
<td>X_5</td>
<td>Out Migration</td>
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<tr>
<td></td>
<td>X_6</td>
<td>Inter-District Out Migration</td>
</tr>
<tr>
<td></td>
<td>X_7</td>
<td>Inter-State Out Migration</td>
</tr>
<tr>
<td></td>
<td>X_8</td>
<td>Rural-Rural Migration</td>
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<td></td>
<td>X_9</td>
<td>Rural-Urban Migration</td>
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<td></td>
<td>X_10</td>
<td>Urban-Rural Migration</td>
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<tr>
<td></td>
<td>X_11</td>
<td>Urban-Urban Migration</td>
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<td></td>
<td>X_12</td>
<td>Inter-District Net Migration</td>
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<td></td>
<td>X_13</td>
<td>Inter-State Net Migration</td>
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<tr>
<td><strong>Dependent Variables</strong></td>
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<tr>
<td>Demographic Variables</td>
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<td>Y_2</td>
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<td>Y_3</td>
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<td>Y_5</td>
<td>Percentage of Urban Population to Total Population</td>
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<td></td>
<td>Y_6</td>
<td>Percentage of SC Population to Total Population</td>
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<td>Y_7</td>
<td>Percentage of ST Population to Total Population</td>
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<td></td>
<td>Y_8</td>
<td>Literacy Rate</td>
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<td></td>
<td>Y_9</td>
<td>Male Literacy Rate</td>
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<td></td>
<td>Y_10</td>
<td>Female Literacy Rate</td>
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<td>Rural Literacy Rate</td>
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<td></td>
<td>Y_13</td>
<td>Number of Primary Schools per Lakh Population</td>
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<td>Y_14</td>
<td>Number of Primary Schools per sq km Area</td>
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<td>Educational Variables</td>
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<td></td>
<td>Y_26</td>
<td>Percentage of Net Sown Area to Total Reporting Area</td>
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</tbody>
</table>
In this analysis, in-migration and out-migration rate have been computed. These have been computed for males and females separately. In order to show district-wise spatial migration pattern, choropleth map is used, the districts have been divided into three categories i.e. high, medium and low basis of mean and standard.
deviation method with application of GIS-Arc view programme (version 3.1). Out
migration from West Bengal into other states and migration into Bengal from other
states has been depicted by dot methods on political map of India. A matrix has been
developed to show the migration streams (i.e. rural-rural, rural-urban, urban-rural and
To show patterns of migration stream by three distance level have been used
choropleth map.

To know the internal migration and socio-economic transformation in West
Bengal, a set of socio-economic variables has been taken. Then the correlation matrix
is calculated. Correlation matrix based on Karl Pearson’s method has been used to
examine the relationship between the variables of migration and socio-economic
transformation with help of application of SPSS programme (version 16.0). Student’s
‘t’ test technique has been chosen to identify the significant relationship between the
variables at 1% and 5% level of significance.
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