1.1 STATEMENT OF THE PROBLEM

Migration is one of the basic factors affecting population change of an area, the other two factors being fertility and mortality. Conceptually migration can be defined as the movement of individual or groups of people from one place of residence to another who have the intention of staying in the new place for a substantial period of time. Migration of human beings has taken place from time immemorial and it indicates the inherent tendency of human being to move from one place to another in search of better amenities in life. Since time immemorial people (e.g. nomads) used to move from one place to another in search of rich hunting ground and fertile cultivable land. During the transitional stage of development with the establishment of urban mass production factories and the advent of modern transport and communication, the movements of people were directed from rural to urban areas. Such trends in migration was in response to the creation of new employment opportunities in secondary and service sectors which tended to be spatially located in cities and towns. “The rapid growth of industries, transport & communication and other economic and social overheads in urban areas encouraged people to migrate in large number from rural to big and metropolitan cities in search of better employment opportunities” (Shah, 1998).

In recent years, when nearly all of the less developed countries of the so called third world are in their transitional stage of development, rural to urban migration has become the predominant migratory stream of the world. The urban population in the developing countries had been projected to grow from 275million in 1951 to 1.45 billion in 1990 and over 2.1 billion in 2000 (U.N., 1980), which implies that the percentage of urban dwellers in the developing countries to the total urban population is expected to go up for a mere 38%(in 1951) to 60%(in 1990), and then to 66%(in 2000). Similarly, peering into the dawn of an urban millennium, UNFPA (2007) revealed that in 2008 the world
would reach an invisible but momentous milestone, where for the first time in history, more than half of its human population (3.3 billion people), will be living in urban areas. This is expected to swell to almost 5 billion by 2030. While the world’s urban population grew very rapidly (from 220 million to 2.8 billion) over the 20th century, the next few decades will see an unprecedented scale of urban growth in the developing world. This will be particularly notable in Africa and Asia where the urban populations will double between 2000 and 2030. The report also revealed that by 2030, the towns and cities of the developing world will make up 81 percent of urban humanity. Rural-urban migration being the index of the growing industrialization of economy, urban industrial development offers a positive inducement to the rural people to move to the industries in urban areas for improvement of their economic status (Mehta, 1992). The increasing trend of rural migration, which is empirically evident, has been caused by existing differentials in earnings and the differences in the levels of availability of various amenities in life. Lower levels of earnings and socio-economic facilities of life available in agriculture based economy of rural areas push out the labour force in search of higher levels of earning and better amenities of life in the modern industrial-based economy in urban areas. According to Harris-Todaro Model, migration is based largely on rational economic calculations by the potential migrants. It postulates that migration decision-making is undertaken in response to rural-urban differences in expected rather than actual earnings. In the same vein, several contemporary migration models have been propounded with their focus on urban-rural differentials in mainly employment, earning and social infrastructure as the inducing factor to the increasing trend of migration from rural to urban areas, especially into larger metropolitan cities.

In India, the concentration of rural migrants in urban settlements is increasing over the years. Out of the total population of 1,028.6 million in 2001, 307
million persons had been identified as migrants, which constitute a substantial 29.9 percent of the total population. On the basis of 64th round of the National Sample Survey (NSS), the Ministry of Statistics and Programme Implementation has published a report titled ‘Migration in India 2007-08’ where it is mentioned that migration of households in both the rural and urban areas was dominated by the migration of households from rural areas. Again, among the migrants in the urban areas, nearly 59% migrated from the rural areas. The report also revealed that nearly 60% of urban male migrants and 59% of urban female migrants had migrated from rural areas. In that context, the rural to urban component of the flow is estimated to be highly significant both in terms of number and its subsequent socio-economic impact.

Over the years international migration had hogged the limelight but in recent years, the focus had shifted to internal migration. The Indian Census operation classified internal migration as inter-state, inter-district and intra-district migration. Again migrants are recorded on the basis of their flow pattern such as urban to urban, rural to urban, rural to rural and urban to rural flow. From the economic point of view, the first two flow patterns are considered to be more significant since they have a huge bearing on the process of urban development, nature and size of its labour force and the level of employment (Barua, 2007). Assam is considered as one of the least urbanized states in India. But, within the state, Guwahati, the gateway of north eastern region, is the most urbanized city. From the Census figure it is evident that in Assam, total percentage of urban population went up from 4.29 percent (1951) to 11.24 percent (1991) and then to 12.90 percent (2001). Within the state, Kamrup district exhibited the strongest urbanization process which rose from 7.65 percent in 1951 to 32.76 percent in 1991 and then to 36 percent in 2001. This extraordinary urbanization rate is fueled by the explosive growth of Guwahati city which accounts for 89.18 percent of the district’s urban population. This urbanization process is accompanied by large scale
migration, which is an important and contentious issue in the city. Interestingly, out of total population 8,85,397 in 2001 of Guwahati, 3,78,657 are migrants, constituting more than one third of the total population. Though there are so many factors behind the migration into the city, but most migrants come to the city in search of better livelihood. This is evident in the Census data (2001) which revealed that 54,059 male migrants came into the city in search of employment while 28,862 moved in for business purposes. The tremendous influx of rural migrants to urban center has left the city grappling with massive problems of urban unemployment and environmental issues. Besides, because of the huge addition to the local population, the existing social amenities have been put under severe pressure.

This study focuses on the phenomenon of rural to urban migration into Guwahati, that had taken place and which continues till date, despite the existence of massive unemployment in the city. An attempt is also made to rationalize such a phenomenon by confronting the relevant primary as well as secondary data of rural-urban migration with the Harris-Todaro model. The impact of rural-urban migration on urban development and unemployment is also highlighted and analysis is made on their bearings on policy prescription.

1.2 CONCEPTUAL FRAMEWORK

I. BASIC TERMS AND CONCEPTS

Migrant and Migration: A migrant is a person who has changed his usual place of residence from one migration-defining area to another at least once during the migration interval, while a migration is defined as a move from one migration-defining area to another, made during a given migration interval and involving a change of residence.
**Lifetime migrant**: A person, whose area of residence at the census or survey date differs from the area of his birth or nationality, is a lifetime migrant.

**Return migrant**: A person who moved back to the area where he formerly resided.

**Migration Intervals**: In order to analyze migration, total time period is divided into a series of intervals and assemble the data separately for each interval.

**Internal migration**: It is the migration of persons within the country.

**In-migration and Out-migration**: In-migration refers to movement into a particular area, while out-migration refers to movement of out of a particular area, both referring to movements within a country, i.e., internal migration.

**International migration**: It refers to the movement of people from one country to another.

**Immigration and Emigration**: Immigration refers to movement into a particular country, while emigration refers to movement out of a particular country; both are associated with international migration.

**Place of origin or Place of departure**: The place from which a move is made.

**Place of destination or Place of arrival**: It refers to the place at which a move terminates.

**Gross migration**: The sum of arrivals of in-migrants and immigrants and departures of out-migrants and emigrants. It is the total volume of population turnover that a community is experiencing.
**Net migration:** The net balance between arrivals (in-migration and immigration) and departures (out-migration and emigration). Net migration is considered as positive if arrivals exceed departures.

**Migration Streams:** Migrants who depart from an area of origin and arrive at a common area of destination, during a particular migration interval, constitute a migration stream. There are four major migration streams – 1) rural to rural, 2) rural to urban, 3) urban to urban and 4) urban to rural.

**Distress migration:** Agriculture is the principal occupation of the rural India which provides subsistence to nearly 70 percent of the rural population. Because of population pressure, the agriculture sector is now overcrowded and has to face acute problem of disguised unemployment. Besides, frequent occurrence of drought due to inadequate irrigation facilities results in abrupt reduction of employment opportunities in this dominant sector. Besides, high cost of cultivation, scarcity of irrigation water, stagnation of productivity and price fluctuations of agricultural products results in loss of livelihood and a fall in income below subsistence level. Under such circumstances, the distressed rural populations in many instances are compelled to migrate to urban centers in search of employment and better livelihood.

**Place of birth:** It is the original place of birth the migrant and constitutes the basis of direct method of measuring migration. On the basis of the information obtained through this method, all enumerated persons in the population can be classified as either migrants or non-migrants. Migrants are defined as persons who enumerated in a place which is different from the place where they were born whereas non-migrants are defined as persons who were enumerated in the place where they were born. By place of birth statistics it is not possible to know that via how many places a person has reached to the present place, as there is no information related to the frequency of movements from any place to another.
Place of last residence: It is the place where the migrants had last resided before moving to the place of present residence. Data obtained through this method can be classified as: 1) migrants whose place of last residence and the place of present residence are different, 2) non-migrants whose place of last residence and the place of enumeration are same. Last residence statistics identifies all migrants and covers all persons who had migrated at any time during their lifetime including all lifetime migrants plus the return migrants. It reflects a direct movement from the place of origin to the place of destination.

II. THE HARRIS-TODARO MODEL

The study of migration, in general and rural-urban migration in particular, has for long been an important area of research in development economics. The Harris-Todaro Model (named after John R. Harris and Michael Todaro) has been a landmark model explaining the phenomenon of rural-urban migration. The Harris-Todaro Model attempted to explain the phenomenon of persistent rural-urban migration in developing countries despite the incidence of high unemployment rates in urban centers. In this model, individuals are assumed to base their decision to migrate on considerations of their potential wage maximization as a difference between what they perceive to be their expected wage streams in urban centers and the wage they get in rural areas. To explain the accelerated rural-urban migration in the face of rising urban unemployment, this model postulates that ‘the migration decision is primarily an economic one, and that it responds to differences in expected earning between rural and urban areas’ (Harris & Todaro, 1970). In other words, this model asserts that rural-urban migration will continue as long as expected wage rate in the urban sector is greater than the wage rate in the rural sector, i.e., $W_u^e > W_r$. 
As articulated by Todaro (2004), “The fundamental premise is that migrants consider the various labour market opportunities available to them in the rural and urban sectors and choose the one that maximizes their expected gains from migration”. In developed countries with near full employment economies, the decision to migrate is simple one, i.e. the rural workers migrate to take up higher paid urban job in the face of rural-urban wage differentials, which continues until the wage differential is erased. But the urban sectors of the developing countries are beset with substantial unemployment. So a potential rural migrant by comparing expected urban wage in a particular time period to the rural income, will weigh the rural-urban wage differential with the possibility that he may remain unemployed for a considerable period of time before he finds more lucrative urban employment. If the expected urban wage (the product of the actual urban wage and the probability of success in securing an urban job) exceeds the rural wage, the decision to migrate would certainly be rational despite the existence of urban unemployment. Thus, implicit in the Todaro model is the hypothesis that migration to the urban area is a positive function of the expected urban- rural wage differential.

Hence, the ongoing rural migration to urban areas is rising continuously despite high level of unemployment, because the decision to migrate does not depend solely on the unemployment rate, rather it is significantly influenced by the various labour market opportunities available to them. Again, it is asserted that the migration decision is also affected by the age of the potential migrant, with younger people have a higher propensity to migrate as they would have a longer working lifespan and the subsequent higher present value of expected future earnings. Though expected earning is the central variable in the Harris-Todaro model, other factors such as transportation costs, expected cost of living and psychological costs are also considered to affect the decision of the migrants.
The Harris-Todaro model which explains the phenomenon of rural-urban migration in terms of differential in expected urban wage and rural wage is adapted and applied to existing rural-urban migration data in Guwahati in an effort to explain the phenomena on the basis of the model.

The basic Harris-Todaro model (H-T model) used in the research is

\[ M_R = f (P, Y_u - Y_r) \]

Where

- \( M_R \) is the Migration ratio.
- \( P \) is the probability of getting an urban job
- \( Y_u \) and \( Y_r \) are urban wage and rural wage respectively.

III. ANALYTICAL METHODS

Regression analysis: It is a statistical technique which estimates the relationship between a dependent or explained variable and one or more independent or explanatory variables. Although regression analysis deals measures the intensity of the relationship between the two sets of variables, however that does not necessarily imply causation. It is used to estimate the mean value of the dependent variable, given the values of the independent variables and also to test hypothesis (hypothesis suggested by the economic theory) about the nature of dependence. The regression model that concerns with the relationship between one dependent variable and one independent variable is known as simple or two variable regression model while a regression model with more than one independent variable is known as multiple regression model as the dependent variable is affected by multiple influences (i.e. variables).
**Methods of regression:** While constructing the model, great care should be taken in selecting predictors as the values of the regression coefficients depend upon the variables in the model. To construct a simple or complex model with single or several predictors, it must be decided which predictors to use, as the predictors included and the way in which they are entered into the model can have a great impact. When predictors are all completely uncorrelated, the order of variable entry has very little effect on the parameters calculated. However, the sequence of predictor selection is very crucial in social science research as existence of correlated predictors have a significant impact on the outcome.

**Stepwise Backward method:** The stepwise backward method as available in the Statistical Package for Social Sciences (SPSS) software, is a method where the model is tested in several stages. In this method, initially all predictors in the model are tested for significance. The results are assessed in terms of a removal criterion and predictors which are non-significant are successively dropped from the model as it is progressively tested. The final model that is accepted consists of only those predictors which are significant. In this study, this method is adapted to test the two models which defines migration ratio as a function of a number of independent variables.

**1.3 REVIEW OF LITERATURE**

**Definitions of Migration**

Migration is the movement of people from one place to another within the country or outside it. The United Nations Multilingual Demographic Dictionary defines migration as “a form of geographical mobility or spatial mobility between one geographical unit and another, generally involving a change in residence from the place of origin or place of departure to the place of destination or place of arrival” (Bhende & Kanitkar, 2001).
Formally, “migration means a change in, or shifts, other than casual, or residence from one location or settlement to another involving movement across an administrative border such as a village, a district, a state or a nation” (Sinha & Zacharia, 2005).

The study of migration occupies an important place in population studies as it determines the size, structure, characteristics and the rate of population growth of an area. It has also an important bearing on the labour force both in quantitative as well as qualitative terms. Commenting on the falling significance of birth rates and death rates as factors affecting growth of population in urban areas, Bhattacharyya (2004) opines, “the striking feature of the study of migration is that while changes in population size and structure caused by mortality and fertility are never drastic, migration may increase or decrease the size and change the structure of any population drastically at any point of time”.

In recent years migration affects economy, sociology, human geography, politics, public administration, implementation of policy and planning etc of any state or nation very significantly. The study of migration attracts economists as it is related with business cycles, supply of skilled and unskilled workers, growth of industries and occupational status of migrants. Policy makers and planners are concerned with migration as it is associated with the socio-economic development of the country. Unprecedented population growth as well as industrialization and economic development are the outcomes of rapid increase in internal migratory movement in case of all the developing countries. “The emergence of such massive population phenomenon, especially that of rural-urban migration, has attracted the attention of planners and policy makers to the problems arising out of migration” (Bhende & Kanitkar, 2001). Data related to age, sex, mother tongue, occupation and education of the migrants are very much useful to
sociologists as well as psychologists in order to solve the problems arising out of migration that are social and psychological in nature. “Migration movements are, therefore, a product of the social, cultural, economic, political and physical circumstances in which individuals and societies find themselves. Thus, it is a response of human organisms to economic, social and demographic forces in the environment” (Bogue, 1969).

**Migration and Migrant Behaviour**

In the study of migration, one of the critical point of research is how potential migrant takes the decision to migrate. Many studies have focused on how internal migrants behave at different stages of the migration process. As far as the preparation phase is concerned, studies show that potential migrants invest in education before migrating, anticipating that human capital will be needed or better rewarded in the city (Kochar, 2004). They may also gather information about prospective jobs from existing migrant networks (Roberts, 2001) or search for a job from their rural base (Banerjee, 1991), which reduces both the risk of temporary unemployment and the uncertainty on the returns to migration.

Sometimes, the migration has been revealed to be selective. In most developing countries including India, internal migration concerns young men because urban job markets usually offer a large share of occupations available to rural male migrants, or because men bear lower risks of vulnerability than women when migrating. Migration mainly concerns young adults who are more likely to have a positive net expected return on migration due to their longer remaining life expectancy, or because social norms require that young adults migrate in search of a better life (Haan and Rogally, 2002). Family strategies can also involve sending young adults to the city and investing in a potentially remitting child (Lucas and Stark, 1985). Both low and high skilled
individuals are more likely to migrate but usually for different reasons: “surplus” low-skilled individuals have strong incentives to move to the city in search of a manual job which they may not find in the rural area, while “scarce” educated workers may find that their human capital is better rewarded in cities than in rural areas (Lanzona 1998, Agesa 2001).

The decision to migrate also involves contextual factors, such as ‘push factors’ which force migrants out of rural areas and ‘pull factors’ which attract migrants to urban areas. These factors typically reflect the relative strength of the local economies such as the availability and remuneration of jobs, the existence of local amenities, the cost and availability of public goods or even institutional factors. For instance, the introduction or enforcement of a system of land property rights might act as a push factor and encourage migration from rural areas for workers that are displaced, as well as for the new land owners, since owners can leave their properties without the fear of losing their assets and can even sell them or use them as collaterals to finance migration (Lall et al, 2006). The absence of a rural credit market may also act as a push factor when migration of a family member is used to generate remittances in order to overcome credit constraints and finance rural productive investments (Katz and Stark, 1986). The migration decision may also depend on its monetary and non-monetary costs where distance to potential destinations has been shown to deter migration (Greenwood et al, 1981). While a few other studies suggest that migration is facilitated by the concentration of a pool of migrant from the same origin, in the area of destination (Mora and Taylor, 2005). Again, a few studies shed light on the assimilation of migrants to the urban labour-market. However, the first concern of migrants when arriving in a city is, often to secure a job, which can prove difficult as migrants are confined to limited information about the type or quality of job opportunities they face (Banerjee, 1984). In order to find a job, they often resort to informal channels such as friends and networks (Banerjee and Bucci, 1994). Finding a job is facilitated when the same-origin network at destination is larger but this
does not preclude the existence of a congestion effect if migrants compete with one another for jobs. In a dynamic perspective, it has also been found that education enhances migrants’ learning from their experience in the labor market of destination and thus accelerates the convergence of migrants’ earnings towards natives’ earnings (Yamauchi, 2004).

At the same time, the difficulties faced by migrants of rural origin after arrival in the place of destination are numerous. In particular, they might be discriminated against and can have difficulties gaining access to credit and local public goods (Assaad, 1997; Meng and Zhang, 2001). But, once settled in a city, migrants often remit to their families in the rural area of origin and the motives of sending remittances are diverse in nature (Rapoport and Docquier, 2005). Interestingly, remittances sent to rural areas might benefit different income groups depending on the context, which implies that remittances do not systematically benefit the poor or the rich. The diversity of contexts also explains that remittances serve a variety of uses. Remitting might serve to take care of the migrants assets and relatives back home (Cox, Eser and Jimenez, 1998), to invest in one’s parents to secure potential bequests (De la Brière, Sadoulet, Janvry and Lambert, 2002), to insure one’s family against volatile incomes or to repay a loan. Remitting can also be justified by sheer altruism or social norms (Gubert, 2002). They can be used for consumption, for housing investments when anticipating the event of return migration as well as capital expenditure (Osili, 2004).

**Demographic and Socio-economic impact of Migration**

The study of migration occupies a position of significance in social science, particularly in population studies. The importance emerges not only from the movement of people between places but also from its influence on the lives of individuals and urban growth. *Rural-urban* migration among all types of
migration streams dominates the domain of research and planning as its role in changing the lives of migrants both at the place of origin and destination. By making a micro-level study of rural-urban migration in Bangladesh, Hossain (2001) analyzed various push and pull factors of migration process. In the study, poverty, job searching and family influence were found as the main push factors for out-migration while better opportunity, prior migrant and availability of jobs were the main pull factors behind migration. Education of the migrant and their occupation at the place of origin was found to be significantly related with the push factors of the migrant. Poverty was found to be the main push factor for illiterates while search for livelihood was found to be the main push factor for the migrants having higher educational attainment. Besides, poverty was the most important push factor for the migrants who were engaged in business, working as agricultural labourers or are currently unemployed. On the other hand, search for livelihood was the primary inducing factor for the migrants who were engaged in agriculture (land owner), or were working as employees or those who were studying, at the place of origin.

By explaining rural-urban migration in Bangladesh, Kuhn (2004) opined that with the social, demographic and economic changes of the post-liberation era, migration in Bangladesh has developed a momentum of its own, penetrating every social stratum and most geographic regions. He characterized migration into two waves of rural-urban migration – first, households with insecure or threatened rural livelihoods use migration, particularly individual and circular moves, to supplement and enhance income from rural economic activities. Secondly, households with devastated rural livelihood use migration, particularly permanent family moves, to find new sources of income and security.
Through the *rural-urban* migration process, Kumar (2003) tried to examine the changing status in the process of migration, problems and adjustments of rural migrant youths in a town in Tamil Nadu, India, where he found that migrant move from rural to urban areas primarily for the seeking of employment and for having other income enhancing opportunities. As a result, the rural migrant shift to a new environment where they find a different socio-cultural and economic set-up. However, shifting their families from one place to another at a time of migration is a strainful job. Ultimately, most of the rural migrants leave their families in their native places at the time of migration as they move into urban areas.

Kundu and Sarangi (2007) analyzed the pattern of rural migration into urban areas and its socio-economic correlates. According to them economic deprivation is not the critical factor for migration decisions, even for seasonal migrants. They believed that migration emerges as a definite instrument of improving economic wellbeing and escaping poverty for the adult population in large, medium and small towns. People migrate out of both poor and rich households, although the reasons for migration and the nature of jobs sought by them are different. Rural-urban migrants have a greater risk of being below the poverty line than the urban-urban migrants as the probability of person being poor is low in a larger city compared to any other urban center, irrespective of the migration status, age, number of subsidiary activities undertaken etc.

Based on 2001 Census data, Mitra and Murayama (2008) analyzed the district level *rural to urban* migration rates for India (both intra-state and the inter-state) among males and females separately. They defined migration rates in terms of the gross decadal inflow of population as a percentage of total population at the place of destination, which did not seem to be high in a large number of districts. The intra-state rates were substantially larger than the
inter-state rates. The male and female migration rates were closely interconnected irrespective of whether they migrate from rural areas within the state or outside it, which would suggest that women usually accompany the migrating males. However, the fact cannot be ignored that like the migration of single males, single females are also increasingly moving out in search of jobs. The study also revealed that many of the relatively poor and backward states actually showed large population mobility, which is primarily in search of a livelihood, and the mobility of especially male population was also seen to be prominent in the relatively advanced states like Maharashtra and Gujarat. Again, the social networks, which play an important role in the context of migration are prevalent among the short distance migrants and tend to lose their significance with a rise in the distance between the place of origin and destination though there are some exceptions to this phenomenon (i.e. migrants from Bihar to Delhi or Maharashtra or West Bengal). The states which registered a high female population inflow from other states are mostly located in north India. Another finding of the study was the prospects for better job opportunities were a major determinant of migration.

Focusing on natural population growth, Agrawal (2004) revealed that rapid growth of cities depends in most countries on high birth rates and low death rates as well as on massive flows of urban migration. Natural population growth in cities reflects many of the same forces that condition it elsewhere. Migration, in particular, can be explained as a result of comparisons, implicit or explicit, of the total package of advantages of living in town with life in the countryside. One important part of this package is the differential in urban over rural income. If the differential is sufficiently high, it can overcome the disincentives to migration provided by open unemployment in modern urban industrial employment.
It is observed that *rural to urban* migration has a relation with economic growth and development. But, at the same time, it cannot be denied that increasing rural-urban migration may lead to growth of urban unemployment problem. Nanavati (2004) discussed the *rural to urban* migration concept from this point of view. In his article “Impact of Rural-Urban Migration on the Sustainability of Cities” (2004), he remarked “the *rural to urban* migration can no longer be casually viewed as a beneficent process necessary to solve problems of growing urban labour demand. On the contrary, today it remains as a major factor contributing to the phenomenon of urban surplus labour, a force that continues to exacerbate already serious urban unemployment problems caused by the growing economic and structural imbalances between Indian urban and rural areas”.

In a similar way describing rural migration to Delhi, Jhamtani (1992) considered this process as a no gain situation. She pointed out that the influx of migrants which continues unabated till date poses its own problems for both rural and urban areas and also affects very much the psyche of the men and women uprooted from their rural environs. She believed that no matter how fast is the progress in the fields of industry, power and communication etc. in cities, unless the rural areas progress at an equal pace, the country cannot make a real headway. To keep a check on the increasing migration from rural to urban centers, she urged for a reorientation of the development strategy in favour of rural areas so that it experiences industrialization in the real sense.

Looking at migration as a negative force and focusing on distress migration, Jacob (2008) examined that what happens when people have to go to cities to find work when they cannot survive on what they can earn in their own villages. To him, *rural to urban* migration is a response to diverse economic opportunities across space. Historically it has played a significant role in the
urbanization process of several countries and continues to be significant in scale, even though migration rates have slowed down in some countries. However, many urban problems like over-burdened infra-structure, urban poverty and crime, have been blamed on this ‘rural-spill over’. Though the migrants and their households might benefit greatly individually, it is seen that this individual benefit occurs at the cost of net loss to both rural and urban areas, and a decline in social welfare through overcrowding and increased population in urban destination areas and a greater regional concentration of wealth, income and human capital.

Environment is one of the most significant areas one has to talk about when it comes to rural to urban migration. In the name of environmental sustainability, entire rural set-up is being destroyed. By linking environmental issues with rural-urban migration in India, Pagadala (2011) revealed that in pretext of setting up Special Economic Zones (SEZs), the government has been on a land grabbing spree, promising to rehabilitate the displaced ones. Subsequently, people are displaced from their natural habitat and in this whole process, ecosystem people are converted into ecological refugees. Thus, the government in the name of development is distorting people’s lives and depriving them of basic rights they are entitled to. This deprivation leads to mass migration from rural to urban areas in search of dignified life by accessing better facilities, infra-structure and basic amenities. She also opined that as a result of rural-urban migration, urban poor population is increasing and many of these migrant labourers have to dwell in slums. Hence, in her opinion, rural-urban migration is not ideal and what is most urgently required is the proper implementation of schemes, planning and transparency and provision of basic amenities, improving the facilities etc., and above all making them available at minimal prices so that sustainable development is provided without displacing the rural people from their land.
Depicting migration and urbanization scenario in mega cities of India, Mamta (2004) also revealed that with the rise in the urban population due to uncontrolled rural to urban migration as well as immigration, the number of urban poor has also risen. As a result cities like Kolkata, Mumbai, Chennai have started dying gradually, unable to cope with the enormous problems they are facing in the form of air, water & sound pollution, inadequacy of water & electric supply, inefficient disposal of rubbish & sewage, congestion in transport, education, medical and recreational facilities, mushrooming growth of slums, high rate of unemployment and underemployment etc. She further suggested that migration can be checked by curbing the growth of metropolis and other big cities by taking necessary measures which may arrest the migration inflow from rural to urban areas and in the process to bring about balanced urban development.

Increasing urbanization is one of the most pervasive processes in developing countries which give rise to massive rural to urban migration flows and extreme problems of urban poverty and unemployment. It is commonly believed that improvement of conditions in rural areas will reduce rural to urban migration and consequently relieve some of the growing urban problems of poverty in urban areas. Rhoda (1990) believes that many rural development activities have been justified partly on the ground that they will reduce urban migration. He opined that most of the rural development activities tend to have a mixture of positive and negative impact on migration, and many of them appear to have a net positive impact on rural to urban migration. While a few types of activities may slow rural-urban migration in the short-run, their long-run impacts are generally mixed or perhaps even stimulating. With increased production, income and commercialization due to successful development in rural areas, the rural demand for urban produced consumer goods and for agricultural inputs tend to rise generating additional
economic activity and employment in urban areas and this can act as a stimulus to rural-urban migration.

Mukherjee (1993) was of the opinion that rural-urban migration occurred as spatial symptom of underdevelopment and spatial disorganization of the economy. According to him, a very complex scenario emerges with reference to rural-urban migration, especially to large cities, which he termed as “the phenomenon of poverty induced migration”. He stated that in most highly populous countries, in the rural sector, factors such as demographic explosion, increasing land inequality, continuous fragmentation of land-holdings and almost a total lack of rural industries and rural non-agricultural employment have virtually compelled the small farmers and landless agricultural labourers or other operatives to leave the tottering villages and to crowd in the cities. They increasingly gravitate towards larger metropolises as they know that employment opportunities are more available in the cities of larger size. But their dreams often unfulfilled and their lives end up in filthy slums and dirty pavements.

Though rural to urban migration leads to serious problem like unemployment in the urban areas, it may be regarded as a positive factor for growth and development. The Report of International Organization for Migration (2001) depicts a holistic approach towards a global scenario of migration which considers “migration as a positive phenomenon provided it is regulated and managed properly can reap in benefit for both sending and receiving regions”. Similarly, Modi (2010) argued that the balanced and planned migration has many advantages such as it reduces the burden of less developed places by providing employment opportunities at other developed places. The rural migrants become aware and acquainted of urban life, urban culture and advancements and as such they can derive benefit of migration in the form of
improving knowledge, efficiency and scope of employment and ultimately living standards.

Expressing his view regarding the rural-urban migration, Sen (1996) was of the opinion that next to any other major economic sectors, it is the construction industry in the rapid urbanizing India that is drawing vast numbers of rural migrants to the cities.

*Rural migrant labour is a universal reality and rural migrants in the recent time are a critical input in the development of the economy, more so the rural economy.*

The industrial town of every state is drawing outstation labour mostly from the rural areas of other states. The rural migrants send their children to well-off English medium schools and more important they, the migrant poor, also get good quality medicare in the corporate hospitals. So, after all rural migrant labour movement has done lots of good for the migrant families concerned. Hence, the rural migration is an economic activity of great significance and of course the central fact is well established that there is a growing rural migration and the Indian urbanization process is accelerated by the rural outward migration and we have to welcome it as a positive economic development.

In a similar way, Afsar (1995) argued that migrants often benefitted more than non-migrants because of their innovative, risk taking and desperate nature. The benefits included higher or regular income, gain in wealth, greater access to public services and education.

According to the Human Development Report (UNDP, 2009), “Migration can be a positive movement from the sending area to the receiving area contributing significantly to human development. Allowing for migration –
both within and between countries – has the potential to increase people’s freedom and improve the millions around the world. It is not only inevitable but also an important dimension of human development. It can enhance human development for the people who move, for destination communities and for those who remain at home. But to realize its benefit, there needs to be a supportive policy environment”. Indeed, migration can raise a person’s income, health and education prospects. Most importantly, being able to decide where to live is a key element of human freedom, according to the Report, which also argues that large gains in human development can be achieved by lowering barriers and other constraints to movement and by improving policies towards those who move.

Migration is attributed to have both negative and positive consequences at community, household and individual levels. The presence of seasonal and permanent migration from rural to urban areas mostly served as a safety net mechanism for poor individuals and rural households to earn cash income and transfer remittances used for coping with distress situations, paying annual land taxes, buying small stocks and obtaining better medications. Beyond serving as a safety net, the rural-urban seasonal migration among the interviewed individuals often did not bring significant change to the lives of the majority of the poor migrants. Out-migration also has negative economic and social effects on those who migrated, particularly for those engaged in domestic work with extremely low wages. Although these migrants manage to escape their serious economic problems in their rural homes due to the relatively better cash income they earn in the urban areas and the social support they obtained from their migrant associations, their individual wellbeing does not improve, rather it is sometimes reported to have exposed them to exploitation and abuse. The exploitation and abuse has been more serious among children and female migrants (Tadele, 2006).
Reduction and redirection of *rural to urban* migration are among the policy options suggested for reducing urban poverty and unemployment in LDCs. Policies to discourage rural-urban migration, in the interest of alleviating urban poverty, are often considered without regard to the migrant experience in cities. Yap (1990) examined the income gains associated with *rural to urban* migration in Brazil and the assimilation of migrants in the urban labour market. In the analysis, he utilized a sample of individuals from the 1960 population census and their estimated earning functions. The study showed that migrants have derived significant income benefits from moving, and that within a short period of time, their income and employment pattern were virtually indistinguishable from those of urban-born. Income levels in Brazil, therefore, seem to be more a function of an individual’s human capital endowments than of his migration status. Accordingly, strategies to alleviate poverty should place more emphasis on raising the skill levels of the urban population rather than on restricting migration to cities. Indeed, migrants seem to be an energetic part of the urban labour force. Migration may emerge as a strong positive force in a country’s development when the relationship between urban economic growth and the dual urban labour structure is better understood.

Similarly, Krugman’s (1979) theory of monopolistic competition and trade suggests another mechanism whereby densely populated areas tend to progress faster because they are better able to take advantage of economies of scale. In such a situation, then, *rural to urban* migration can be viewed as a desirable phenomenon in terms of efficiency. Rural development projects to decrease rural-urban migration may not be effective. Government efforts may be better directed toward mitigating the externalities caused by overcrowding, rather than attempting to influence population movements. On the other hand, in the face of the declining profitability of farming as a result of the resource allocation effect, government may want to undertake research
and development activities that aim to boost agricultural productivity. Krugman and Obstfeld (2006) have described such an effort in the U.S. and have suggested that it is appropriate because of the difficulty of appropriating innovative knowledge. A farmer who makes a major innovation can easily be imitated by others who derive the benefit without sharing in the risks. To solve this problem, government can support research in agricultural techniques and the dissemination of successful innovations. The basic contention is, however, policies to discourage rural to urban migration are not likely to succeed rather they tend to aggravate the problem.

Migration, Urbanization, Economic development and the Informal sector

Economic growth is often associated with an increase in the relative share of industry and services in the national income and it involves a movement of population from agricultural areas to industrial areas leading to rapid urbanization. From this point of view, migration and urbanization are an integral part of the process of development. Rural to urban migration is one of the major causes of urbanization and is the chief mechanism by which the world’s urbanization trends have evolved.

India has shared the growth pattern and urbanization rate with some of the fastest growing regions in Asia. The country has witnessed around 8% growth in GDP in the last couple of years and has targeted a 9% growth by the end of 11th plan period. India’s urban population is also increasing at a faster rate than its total population. With over 575 million people, India will have 41% of its population living in cities and towns by 2030 AD from the present level of 286 million and 28% (India: Urban Poverty Report-2009). In India, cities contribute over 55% to country’s GDP and urbanization has been recognized as an important component of economic growth. From this report it is found that the incidence of migration has shown an increase in 2001 as compared to
consistent decline during 1961-1991. Changes in administrative boundaries in various districts and states have also contributed to increase in percentage of migrants. Migration towards urban areas has increased in inter-state analysis and rural to urban migration shows a sizeable increase among both male and female migrants whereas urban to urban migration has shown a declining trend. The report also reveals the fact that the economic motive remains the main reason for migration among male inter-state migrants. Subsequently economically backward states keep losing people to developed states. Though the report could not establish a clear relationship between poverty and migration, but it had observed that middle and higher income groups show higher propensity to move. At the same time, poverty incidence was found less among migrants as compared to non-migrants but it was higher among the rural to urban migrants.

So far as the rural to urban migration in the developing countries is concerned, on the basis of FAO Report (June, 2006), it is estimated that worldwide almost 800 million people have moved from rural to urban areas in the last half century. Although the vast majority of migrants relocate internally to urban centers, a few relocate internationally (almost 191 million in 2005). Over the last several decades, significant population shifts have occurred mainly in less developed regions, where more than 90% of the world’s rural residents live. In 2007, 56.2% of the people in less developed regions live in rural areas; this figure is expected to fall to 44% by 2025 as urban populations continue to rise (Pruitt, 2009). In her opinion, Pruitt remarked that rural to urban migration is both a cause and consequence of urbanization. Many factors influence migration from the rural areas to the cities such as globalization, rural poverty and unemployment or underemployment in rural areas. She also asserted that rural to urban migration occurs “out of desperation and hunger in the countryside”. Unskilled workers move in search of manual labour positions that are not
available in rural areas. Similarly, educated workers may migrate because their human capital is better rewarded in cities. Inadequate investment in rural areas adversely affects livelihoods and provides an impulse to outmigration from rural areas. Again, high population growth in rural areas can increase pressure on land and other resources, creating a labour surplus that drives migration.

The study of migration in general and rural-urban migration in particular has long been associated with economic development and growth in the economic literature. Linking migration with economic growth, Pothana (1995) remarked that “rural to urban migration is by far the major component of urbanization and is the chief mechanism by which the world’s urbanization trends have been accomplished”. He further remarked that being the most pressing demographic issues in the developing countries, the rural-urban migration is both a symptom of profound changes in the productive structures and a contributing factor to such changes. The rural to urban migration is considered as an equilibrating force which facilitates industrialization, improves income distribution and also induces technological changes in agriculture. Thus, rural to urban migration has been viewed essentially as an equilibrating phenomenon in terms of allocation of labour from low productivity, low income occupations & areas to high productivity, high income occupations & areas. This movement reduces the income gap between the rural and urban areas with falling rural wages and rising urban wages. As against this view, it is argued that the departure of comparatively more resourceful, skilled and educated people from rural areas results in a loss of scarce entrepreneurial and innovative talent. Their movement involves a sizeable transfer of human capital out of the rural sector and this might be adversely affect the agricultural production and incomes which further increases rural inequalities (Connell, John, Lipton, Michael, et.al., 1976).
By stating migration as a development fostering process, Upreti (2002) observed that the significance of economic development has emerged in recent years and internal migration in general and *rural to urban* migration in particular is receiving favourable comment in the economic development literature. He also asserts that throughout the developing world, rates of *rural to urban* migration continue to exceed rates of urban job creation and to surpass greatly the capacity of both industry and social services to absorb this labour effectively. Rural-urban migration is not only an integral part of industrialization and economic development but it may become a major instrument of social change both at the places of origin as well as destination. The urban setting is the fertile ground for the generation of social and economic change and these are spread in rural areas by the process of *rural to urban* migration.

Migration has played a major role in the expansion of the urban economy, by increasing the labour supply as well as the labour force participation rate in the urban population. Focusing on labour migration in the industrial sector, Dupont (1992) examined the impact of in-migration on the industrialization process in the context of a middle-sized town, namely, Jetpur in Gujarat, where *rural to urban* migration is an important component of accelerating population growth. The predominantly regional as well as rural origins of the in-migrants show that the people in the town are deeply rooted to the countryside. The in-migrant entrepreneur’s contribution to industrial development is appreciable in terms of qualified human resources and transformation of capital. Thus, rural-urban migration has often been accompanied by a sectoral transfer of capital from agriculture to the urban industry.

Economic constraints at the native place of the migrants motivate or compel the people to leave their original place in search of livelihood or economic
betterment at different destinations in urban zones. Considering the fact Singh (1992) opined rural-urban migration as a very common phenomenon which could result from many causes such as socio-economic, political and cultural and so on.

Since European imperialist power viewed Third World countries as source of raw material and as an outlet for selling manufactures, they developed few port cities, which in turn attracted migrants in large numbers from less accessible and poor rural regions. In these countries rural to urban migration was also the outcome of an additional factor of colonial contacts. Thus, Findlay (1987) was of the opinion that in developing countries rural to urban migration was the outcome of the unbalanced strategy of development which overemphasized the development of industrial and service activities in urban areas.

Migration may also be considered as a symptom of basic social and technological change. Joshi (1974) revealed that due to undergoing technological changes, most of the developing countries are experiencing some type of migration from rural to urban areas, which have given rise to metropolitan cities.

Relating rural to urban migration with urbanization, Meshram and Gaur(2004) emphasized that urbanization and rural to urban migration is profitable, both for satisfying the basic and important needs which is quite necessary for the upliftment of rural centers and further progress of urban. They further depicted that urbanization and a great deal of rural to urban migration are inevitable consequences of economic development.

The urban informal sector plays a significant role along with the rural-urban migration process in an economy as the excess population migrating from
rural to urban areas cannot be absorbed by the urban formal sector alone. Discussing rural-urban migration and the informal sector, Bhattacharya (1998) tries to relate rural to urban migration in India to some of the broad economic changes in the country during the 1970s, when an occupational shift occurred out of agriculture with the share of agriculture in employment declining and that of non-agriculture increasing. The evidence suggests that the informal sector played an important role in rural to urban migration during the period and that, far from being passive absorber of labour; it was a dynamic and productive sector, attracting and sustaining labour in its own rights.

In recent decades, one of the most striking features of the development process in the developing countries is the high rates of rural to urban migration despite slow expansion of productive employment in the urban formal sector. The much celebrated Harris-Todaro migration model, which forms the basis of theoretical analysis of urbanization in most developing countries, also highlighted a third sector, more commonly termed as urban informal sector, which accommodates a sizeable portion of unemployed in a variety of self-employed activities. Hence, urban informal sector acts as a stepping stone to the migrants in the process of finding urban formal sector jobs. As a consequence, the open unemployment in urban areas appears to be much less than it is supposed to be (Chatterjee & Roychoudhuri, 2002).

Discussing the role of the informal sector in the migration process in Delhi, Banerjee (1983) revealed that a basic hypothesis of probabilistic migration models is the informal sector employment which is a temporary staging post for new migrants on their way to formal sector employment. He argued that there were no conclusive tests of this hypothesis in the empirical migration literature, and examined evidence from a sample survey to test if the informal sector in Delhi performs the role postulated in probabilistic models. He also tested some of the main hypotheses of the segmented labour market theory, a
popular alternative to neo-classical theory for analyzing the structure of urban labour market in developing countries. The empirical evidence indicates that the migration process postulated in probabilistic models does not seem to be realistic in the case of Delhi, and that the segmentation model is only partially valid. Thus, the conclusions drawn were-

- Over one-half of the informal sector entrants had been attracted to Delhi by opportunities in this sector itself.
- Actual and potential mobility from the informal to the formal sector was low.
- Education and urban experience were rewarded at the same rate in both sectors.
- Education was one of the important determinants of mobility between sectors.

Migration models in the Harris-Todaro tradition imply that urban informal sector earnings are less than rural sector earnings. These models also suggest that the appropriate response to rapid rural to urban migration is to initiate rural development projects in order to make rural areas more attractive, and in the extreme, restrictions on rural to urban migration may be mandated (Lee and Phillips, 1997). They have found evidence suggesting that at least in the case of Korea; both urban formal and informal sector earnings exceed earnings opportunities in rural areas, making rural to urban migration the best decision for the individual and for the Korean economy in terms of maximizing output. However, it may be argued that negative externalities generated by rural to urban migration must also be considered. A possible explanation for the robustness of informal sector earnings in Korea can be provided by turning to Dutch Disease theory. If the mostly urban export manufacturing sector is considered a boom sector, then the urban informal sector as a non tradable goods sector stands to benefit from the boom largely through the spending effect. Rural areas, on the other hand, lose out as agricultural profitability declines due to the resource allocation effect while
gaining little from the spending effect due to low income demand elasticity for food and food imports. If one considers the rural service sector, it will lose from both the resource allocation effect and the spending effect as rural population declines. These arguments can be joined with others to explain the rationality of rural to urban migration. For example, the “city lights” argument has been advanced, suggesting that the greater variety and better quality of urban services are a strong motive especially for rural to urban migration.

Examining the role of informal sector in the process of rural to urban migration in China, Meng (2001) found that higher quality individuals in terms of human capital are more likely to take a job in the self-employed group in the informal sector than to take a job in other groups. Wage earning jobs in the informal sector have acted as a temporary employment opportunity for rural-urban migrants but self-employment has attracted individuals with the highest quality and has generally acted as a long-term employment opportunity for migrants. Those who worked in the formal sector earned the least as the labour market in the formal sector is more regulated than in the informal sector. Interestingly, the study has revealed the facts that self-employed in the informal sector are more satisfied than the wage-earner in the informal and formal sector. The study has also drawn the conclusion that different institutional settings are important in determining the role of informal sector in the process of rural to urban migration. Meng opined that in case of China, due to the failure of the implementation of the minimum-wage law, the failure of social security system to cover the temporary employees in the formal sector and the more deregulated market situation in the informal sector, migrants who work in the informal sector are better off than those who work in the formal sector. However, the study further revealed that along with the process of economic reforms, the ownership structure of the formal sector will change and the labour market in the formal sector will
become more and more deregulated and hence the future role of the formal sector in attracting rural-urban migrants will also change.

Similarly, Choudhuri (2000) developed a theoretical model to show the simultaneous existence of the urban informal sector and open unemployment in the urban sector in a Harris–Todaro based model of *rural to urban* migration. The model suggested that a wage or a price subsidy policy to the rural sector, or a demand management policy like an export promotional scheme in the manufacturing sector, reduces the urban unemployment level, and provides a theoretical basis for the introduction of export promotional measures like the formation of duty-free Export Processing Zones (EPZs) to solve the urban unemployment problem.

**Theories of Migration**

The study of migration in general and *rural to urban* migration in particular has for long been an important area of research in development economics. In this context, a large body of literature has developed over the years in contemporary less developed countries (LDCs).

There are various models advanced by several authors to explain the causes and consequences of migration. Among them, one of the oldest models is the Ravenstein’s model (1885), which made an attempt to formulate generalization that describes the movement of people, at all times and at all places. He was the first to develop a theoretical basis to human migration. Some of the important assertions in the Law of Migration formulated by Ravenstein are –

i) Migration takes place from areas of low economic opportunity to those of higher economic opportunity.
ii) The decision to move and selection of the place of destination are influenced by distance, i.e. migrants from the rural areas generally showing a tendency to move first towards nearby towns and then towards large cities.

iii) Migration accelerates with development of the means of transport and communication resulting expansion of trade and business.

iv) Each stream of rural-urban migration produces a counter-stream of urban-rural migration where the former dominates the latter, i.e. the urban residents are less migratory than the rural.

Subsequently, Zipf (1949) made an attempt to draw upon physical settings to explain the movement of individuals. According to this model (also known as Zipf’s Gravity Model), people move as if drawn by a gravitational force that diminishes with distance; the number of persons who moved between any two areas is directly proportional to the product of the two populations and inversely proportional to the distance between them. But this theory was considered as unrealistic one as it assumed equal flow in both directions without specifying causes of such interactions. Besides it did not take into account the characteristics of places of origin and destination or of migrants that could influence both the volume and directions of movements. The model viewed that people prefer to settle down in big or intermediate cities ignoring the economic conditions.

Samuel a. Stouffer modified the Zipf’s Gravity Model with the theory of intervening opportunities which was later substituted by intervening obstacles by Stouffer himself. According to this model migrants were attracted by a set of positive factors at their place of destination while they were repulsed by negative factors in their place of origin. The migrants were more likely to overcome intervening obstacles with greater net attraction. The degree of migration would be inversely related to the distance between the two places as
also the extent of intervening opportunities but directly related to the opportunities in the two places. To move towards the attractive forces, migrants must overcome a series of intervening obstacles including cost or lack of transport, lack of integration with the national road system, closer acceptable destinations, limited information about potential destinations, no urban kin or other contacts to assist the migrant upon arrival etc. Over time, with less difference between sending and receiving areas, more kin in the place of destination and greater ease of access, it was assumed that intervening obstacles would be reduced resulting in less selectivity of migrants. This model was an extremely good fit for cities of developed countries like USA. However, the model did not hold good in developing countries like India because of the existence of excessive disguised unemployment and ignorance of intervening opportunities.

Through the theory of migration, Lee (1969) focused attention on individual behaviour and on the perceptions and decision-making process of the migrant. This model categorized forces exerting influence on migrant perception into ‘pluses’ and ‘minuses’. The ‘pluses’ pull individuals towards them while the latter tend to drive them away. Besides, there were ‘zeros’ towards which people were indifferent. The effects of these forces vary according to personal qualities of the potential migrant. Thus, Lee emphasized the role of pull factors or those associated with the destination areas, push factors or those associated with the place of origin, intervening obstacles such as ethnic barriers, distance and cost and personal factors. Lee’s theory was considered to be an over-simplification as these ‘pluses’ and ‘minuses’ factors were not interpreted in the overall demographic context. However, the importance of the theory is reflected in those studies dealing with migrant selectivity and push-pull factors.
When in the early 1950s economists turned their attention to the problems of population growth and economic development, in the LDCs, it was thus natural to think that policies which emphasized industrialization would not only increase national income, but also relieve the overpopulation of the countryside. The earliest leading model of *rural to urban* migration was the Lewis Theory of Development (1954) which was later extended by Fei and Ranis (1961). Both these theories viewed migration as a mechanism by which labour flows from areas with surpluses of labour to areas with labour deficits. This model was based on the concept of dual economy comprising a subsistence or agriculture sector (with unlimited supply of labour, which was available at the subsistence wage rate resulting unemployment and under-employment) and a capitalist or modern sector (with full employment). The withdrawal of this huge labour force from the ‘subsistence sector’ to the ‘capitalist sector’ resulted in capital formation and thereby economic development. Thus, the model explained *rural to urban* migration in terms of a flow of surplus rural labour to developing urban areas, which faces shortages. In this process, human resources were shifted from locations (the ‘subsistence sector’) where their social marginal product was often assumed to be zero to places (the ‘capitalist sector’) where this marginal product was not only positive but also rapidly growing as a result of capital accumulation and technological progress. However, during the 1960s this view came to be increasingly challenged when it became apparent that inequality and poverty persisted despite respectable growth in GNP. This challenge has led to the new orthodoxy in which *rural to urban* migration in the LCDs was viewed as “a symptom of and a contributing factor to underdevelopment” (Riadh, 1998). The new orthodoxy is due mainly to the Harris-Todaro model which has provided a widely accepted theoretical framework for explaining the urban employment in many LDCs. It is also evident from the past few decades that the developing countries have witnessed a massive rural-urban migration
despite rising levels of unemployment and underemployment which lessens the validity of the Lewis two-sector migration model (Bhattacharyya, 2002).

**Rural-Urban migration and the Harris-Todaro model**

Despite the existence of significant levels of urban unemployment, rural-urban labour migration not only continues, but exhibits signs of accelerating. Today, *rural to urban* migration is seen as both a symptom of and a contributor to unemployment (Todaro & Smith, 2004). An understanding of the persistence of migration even in the face of urban unemployment and underemployment requires a framework that models the migration decision process. As articulated by Todaro, “*Rural-urban* migration is predominated by economic factors which include the standard push from subsistence agriculture and pull of relatively high urban wages and the potential pushback toward rural areas as a result of urban unemployment” (Todaro, 1969). The Harris-Todaro model appears to be more realistic for developing countries like India as it can adequately explain the paradoxical situations of *rural to urban* migration in the context of rising urban unemployment in LDCs.

Reinterpreting Harris-Todaro, Ray (2003) analyzed the model in terms of the migration decision process. Several options are left open to a migrant as he leaves his rural hearth in search of an urban placement. Generally there are three primary options before the rural migrant each with their respective probability of access. He may be absorbed in the urban formal sector which pays high wage ($W_f$). The probability of obtaining such a job depends on ratio of urban formal sector vacancies to job seekers ($P$). In the event of there being no berth in the urban sector, the potential migrant can get absorbed in the urban informal sector for a wage ($W_i$). The probability of getting such a job depends on the ratio of urban informal sector vacancies to job seekers ($1-P$). Finally, those migrants who cannot even manage an informal sector
assignment are dumped as unemployed without any wage. Before taking a decision to leave his paddy field, the would-be migrant shall weigh his wage in the agriculture sector against the expected wage in the urban sector.

According to Ray, the expected wage in the urban sector \[ PW_f + (1-P)W_i \] is compared to the agricultural sector wage\( W_A \) by a potential migrant. If the urban formal and informal sector employments are taken as \( L_f \) and \( L_i \) respectively, the ratio \( L_f / (L_f + L_i) \) will be the probability of obtaining a job in the formal sector. The number of employed people \( L_f \) shows available jobs in formal sector while \( (L_f + L_i) \) measures the total number of potential job seekers. Hence, \( [L_f / (L_f + L_i)] W_f \) is the expected wage in the formal sector and similarly \( [L_i / (L_f + L_i)] W_i \) is the expected wage in the informal sector.

So, as per Harris-Todaro model, if

- \[ [L_f / (L_f + L_i)] W_f + [L_i / (L_f + L_i)] W_i = W_A, \] there will be no rural-urban migration
- \[ [L_f / (L_f + L_i)] W_f + [L_i / (L_f + L_i)] W_i > W_A, \] rural-urban migration will continue.

In connection with the Harris-Todaro migration model, Riadh (1998) made a study about rural-urban migration where he overviewed the Harris-Todaro model (H-T model) and discussed its various extensions and generalizations. He viewed that in the H-T model, migration is regarded as the adjustment mechanism by which workers allocate themselves between different labour markets, some of which are located in urban areas and some in rural areas, while attempting to maximize their expected incomes. He also asserted that from the empirical point of view, the H-T model generates unemployment rates which are implausibly high and from this perspective the model is compromised from the theoretical point of view, as expected urban wage now becomes equal or even less than the rural wage.
One of the conclusions of the Harris-Todaro model is that creating urban jobs is an insufficient solution to the urban unemployment problem as it induces massive rural-urban migration which neutralizes the positive effect of creating new jobs. To explain this Todaro paradox, Zenou (2009) developed an efficiency wage model characterized by the steady-state rural to urban migration equilibrium. Two policies were considered aiming at increasing urban employment - a supply-side policy and a demand-side one. In the first one, the government decreases the unemployment benefits given to urban unemployed workers while, in the second one, it subsidizes urban jobs. It was found that the unemployment benefit policy can be more effective in creating jobs without increasing urban unemployment than the employment subsidy policy. Indeed, the former policy has a direct positive impact on job creation since efficiency wages decrease following a cut in unemployment benefits. It has also another positive effect since it reduces the utility of urban unemployed workers, which, in turn, decreases the incentives for rural workers to migrate to the city because they need first to be unemployed before obtaining an urban job. As a result, when this policy is not financed, both urban employment increases and urban unemployment decreases. On the other hand, the employment subsidy policy only increases job creation in the city without affecting directly the rural-urban migration. However, because there are more jobs in the city, the expected utility of moving to the city increases for rural workers and thus rural-urban migration increases, which aggravates urban unemployment. In that case, increasing employment subsidies in the city can increase both urban employment and unemployment. When these two policies are financed by a tax on firms’ profits, there are general equilibrium effects due to the fact that the increase in the cost of the policy has to be financed by an increase in the tax on firms, which reduces job creation. Thus, it is observed that urban job creation policies can backfire by increasing rather than decreasing urban unemployment. One way out is to have a policy that simultaneously increases urban employment and reduces rural to urban
migration, such as the reduced unemployment benefit policy. Another possibility would be to combine two policies where government could subsidize the employment not only in the city (creating urban jobs) but also in the rural area (deterring rural to urban migration).

Bhatia (1979) has extended the Harris-Todaro model of rural to urban migration to an economy in which work-hours are flexible and there might be surplus labour on the farm. According to him this approach requires several modifications in the H-T equilibrium condition which is based on expected wage only. The basic H-T result that increases in urban minimum wage will cause out migration from the rural sector when wage elasticity of demand for industrial labour is less than unity is sustained in all cases. H-T model explicitly ruled out disguised unemployment and surplus labour from their model. By incorporating flexible work-hours and surplus labour in agriculture, he opined that migration equilibrium is characterized by equality of expected welfare rather than expected income in the two sectors.

It is noted that the developments of the Harris-Todaro model have been made within a static framework. Alternatively, Neary (1988) presented a dynamic analysis of the Harris-Todaro model in which capital is allowed to be mobile between the rural and urban sector. Here, he showed that when relative commodity prices are fixed and capital and labour are subject to constant returns to scale in agriculture, equilibrium is dynamically stable, if and only if, the urban sector is capital-abundant relative to the rural sector. When a third scarce factor, land, is explicitly introduced into the mobile-capital Harris-Todaro model, dynamic stability is more likely than previous thought (Funatsu, 1988). If capital and land are never technologically substitutes in the agriculture production, which is known as the normality property of factors of production, Neary’s condition that the urban sector is more capital-abundant than the rural sector is only a sufficient condition for local stability. Similarly,
Amano (1983) presented a dynamic, labour-turnover formulation of the Harris-Todaro model in which migration is governed by the H-T model, but unlike it, both the urban wage and urban employment are endogenously determined. In this formulation, despite the fact that labour is the only inter-sectorally mobile factor, a negatively sloped marginal productivity of labour curve in manufacture is not sufficient for stability. Assuming that the urban wage rate is always at least equal to that in the rural sector, he formulated the processes of labour turnover between urban firms and an urban unemployment pool, and of labour migration between the rural sector and the unemployment pool and also set up a dynamic system with a unique equilibrium (steady state) which contains either full employment with equal wage rates between the two sectors or urban unemployment with a wage differential. If the equilibrium is unstable, the system exhibits cyclical fluctuations in the urban employment rate and the wage differential around a less-than-full employment situation. Thus, he showed that when the Harris-Todaro model is extended to incorporate the endogenous wage rates and urban employment rate and the so-called equilibrating force of the migration mechanism may not always work.

Dasgupta and Sarkar (1988) analyzed the process of migration in West Bengal and its implications for rural-urban relationship. This exercise showed that the Harris-Todaro model based on rural-urban wage differential does not significantly explain the rural to urban migratory movements in West Bengal. This model fails when only the informal sector urban earning is taken into account. The additional explanatory variables in this model, i.e. the man-land ratio, is tested to be statistically insignificant however the percentage of landless agricultural workers is found to be a statistically significant factor affecting rural to urban migration. Again, in the model, literacy rate is confirmed as one of the major explanatory variables for migration and is treated both as a push factor (the rural areas having limited opportunities for job suitable for educated persons) and a pull factor indicating both a better
access to information on urban opportunities and also the fact of the urban areas having better job prospects for the educated.

Contrary to that, Chaudhuri (1992) has provided empirical evidence from Durgapur (a post-Independence, industrial new town of eastern India) which tended to support the Harris-Todaro model of migration. She demonstrated that the age of a town and growth of its indigenous population affects the potential migrant’s expected probability of finding a job. Thus, a new town like Durgapur can be expected to experience distinct phases of labour force migration associated with different types of employment opportunities, which in turn will shape the growth pattern of the town. In her study, Choudhury asserts that Durgapur has provided employment to a large number of migrants and correspondingly Calcutta’s population growth rate has declined to 4% for the period 1971-1981. The author predicts that in the absence of Durgapur the migrants would not have flocked to any other large city in search of employment from Calcutta thus decreasing the population growth rate in the metropolis of Calcutta. The author concludes that new satellite township tends to inherit the problems of the central metropolis and hence there emergence merely extends the ills of large cities to smaller towns.

Okpara (1985) demonstrated that most studies of rural-urban migration in developing countries are basically modeled after the European experience of rural-urban labour transfer during the Industrial Revolution where most rural-urban migrants of that time found wage employment in a rapidly growing modern industrial sector. He argued that the same process might not be fully replicated in most developing countries where the pace of industrialization appears to lag behind the rate of urbanization.

According to Wikipedia (accessed on 20/10/2011), the free encyclopedia, migration decision is based on expected wage differentials between urban and
rural areas. This implies that rural-urban migration in a context of high urban unemployment can be economically rational if expected urban wage exceeds rural wage. The model also asserts that equilibrium will be reached when the expected wage in urban areas, adjusted for the unemployment rate, is equal to the marginal product of an agricultural worker. The model assumes non-existent unemployment in the rural agricultural sector and rural agricultural production in a perfectly competitive labour market. It results in equality between agricultural wage and agricultural marginal productivity. In equilibrium, the rural to urban migration will be zero since the rural wage equals the expected urban wage.

The decision of an individual to migrate affects the well-being of all the other members of his household, because of the need to finance the cost of his migration. The fall in household income due to the loss of one of its members and the stream of future potential income generated by remittances from the migrant and new work opportunities abroad for the rest of the family constitutes the two opposing options available to the migrant. Moreover, allowing for the fact that migration may be a household rather than an individual decision greatly expands the range of determinants of such a choice (Daveri and Faini, 1999). In the traditional Harris-Todaro framework, agents are risk-neutral and migration is determined basically by differentials in income and employment opportunities. However, once the fact is allowed that potential migrants are risk-averse and insurance markets are incomplete, risk considerations are bound to play a significant role in affecting migration. Thus inducting risk factor into migration decision, Davery and Faini (1999) opined that when migration is an individual decision, risk will typically deter mobility. This is because migration is often a risky decision whereby the migrant exchanges a certain low income at home for an uncertain higher income abroad. In contrast, when the migratory choice is taken at a household level, risk factor can provide a further motive to migrate.
Beladi and Marjit (1996) developed a Harris-Todaro migration model with the urban manufacturing sector supplying a crucial input for the rural sector. According to them, capital is region specific but flows freely between two urban sectors. Final goods are traded and have exogenously fixed prices. If the economy imposes a tariff on the import-competing manufacturing sector, employment might go down even if the protected sector is labour-intensive. This model describes that inter-sectoral linkages can play a significant role in determining the employment effects of a tariff. By using a general equilibrium framework, they have shown that a tariff can reduce employment in a Harris-Todaro framework where the rural sector uses a non-traded industrial input which shares a common scarce input with the protected manufacturing sector. This may arise even when the protected urban manufacturing sector is labour intensive compared with the input producing manufacturing sector. The economy described here has an export sector that is not directly competing with the import sector for a common resource, but a tariff makes capital costlier for the agriculture input producing sector and indirectly harm exports.

Though initially research on migration in less developed countries (LDCs) was motivated by labour market postulates offered by H-T model built on general equilibrium models, however recent research on rural-urban migration by Brueckner and Kim (1999) was a partial equilibrium analysis which was based on an urban land model. Giving an additional perspective to the H-T model, they argue that a model where migration equalizes expected wages between city and countryside areas may overlook an important force that equilibrates the process of rural-urban migration and this force is the migration-induced rise in the urban cost of living, which occurs principally through escalation of urban land rents as the city population expands. Land-rent escalation, which tends to limit rural-urban migration, provides an important additional force that may help to determine city sizes in developing countries.
Santis (2003) provides a simpler alternative to the above analysis, by assuming that residents rationalize their income as they cycle between formal and informal employment and this allows migration decisions to be based on the expected wage, as in the usual H-T model.

By extending the Harris-Todaro model, Krichel and Levine (1999) explained rural to urban migration in terms of urban agglomeration effects, urban real wage flexibility and government budget constraint. According to them, without employment subsidies laissez-faire migration is excessive unless real wage flexibility and agglomeration effects are high. The model contrast laissez-faire migration with that chosen by a social planner with power to control migration but with no use of subsidies to affect employment. They conclude that in migration an urban bias exists and a lower level of rural to urban migration would be welfare-enhancing; but this result is critically dependent upon the degree of real wage flexibility. If real wages respond strongly enough to unemployment then laissez-faire migration is too low to realize the full potential benefit of a transfer of labour from the low-productivity rural sector to high-productivity urban sector. They also made a comparison between laissez-faire and a social optimum supported by employment subsidies in the two sectors and showed that a social optimum that increases migration above the laissez-faire outcome can be supported by equal subsidies in the two sectors.

Scovill and Due (1977) explained the rate of rural to urban migration on the basis of rural-urban income profile of Uganda, which is occurring in spite of limited urban employment opportunities. In the absence of family income data in Uganda, they used graduated personal tax data to estimate rural-urban incomes by district and found that urban incomes were almost five times as high as rural incomes in the country in 1972. Hence, they concurred with Harris and Todaro who believed that “in spite of the obvious existence of
limited urban employment opportunities, the lure of an ever increasing urban-rural expected real wage differential will continue to act as a magnet attracting unskilled rural workers from the farm in the expectation, however slight, of securing one of these high paying, prestigious urban jobs”. Accordingly, they drew clear policy implications to restrict rural-urban migration. For this they urged that rural life must be made more attractive which translated into the need of greater income and employment opportunities in the rural areas, improved agricultural product price incentives as well as better marketing, storage, and processing facilities, and quality health and education infrastructure.

Fields (2007) in his paper on the H-T model presented at Cornell University explained how the model was used to reduce urban unemployment problem in Nairobi and other major cities of Kenya. The H-T model induced the adoption of powerful policy concerned with formal sector job creation to employ the unemployed. However that increased the formal sector labour force by more than the number of new jobs created, thereby raising the number of urban unemployed. But the second policy option which was concerned with putting into place an integrated rural development programmes (to increase the rural traditional sector wage) resulted in a fall in unemployment in Kenya. Giving its due to the model, Fields observed that “the H-T model remains a part of intellectual toolkit today because of its basic insight and enduring analytical power”.

From the above analysis, it can be observed that a number of empirical studies have been attempted to verify the main hypothesis of the Harris-Todaro model, but their findings have been mixed in nature, which lead to a number of interpretation and generalizations of this model. Although studies relating to H-T model have been made in India, however no research have been undertaken to explain rural to urban migration especially in the context of
Harris-Todaro model, in Assam. Though the urbanization rate is not so spectacular for the state, but for Guwahati, a clear tendency towards concentration of urban population is discernable. Under the circumstances, this study attempts to examine the nature of rural to urban migration into Guwahati city and its relevance in the Harris-Todaro model framework.

1.4 PERIOD OF THE STUDY

The magnitude of rural to urban migration into Guwahati city is examined on the basis of census data of 1991 and 2001. The regression models were tested on the basis of data on sample migrants who had migrated to Guwahati on or after 2001.

1.5 OBJECTIVES OF THE STUDY

The following objectives are set for the study-

1. To estimate the magnitude of rural to urban migration into Guwahati city and also examine the profile of the migrants.
2. To test the relevance of the Harris-Todaro model in the context of rural to urban migration into Guwahati.
3. To determine factors affecting rural to urban migration into Guwahati.
4. To assess the socio-economic impact of rural to urban migration on the economy of Guwahati.

1.6 HYPOTHESIS AND RESEARCH QUESTIONS

The study tests the following null hypothesis-

*Rural-urban migration into Guwahati is not affected by expected urban-rural wage differentials.*
The study also seeks to pursue the following research questions-

1. **What induces in-migration to Guwahati city despite its high incidence of unemployment?**
2. **Is the dynamic growth experienced by Guwahati’s informal sector significantly attributable to the large scale rural-urban migration?**

### 1.7 METHODOLOGY AND DATA SOURCE

**Data coverage**

The study explores the extent of intra-state and inter-state *rural to urban* migration into Guwahati city and hence, the research covers in-migrants from both Assam as well as other states of India. For the present study, Guwahati city of Kamrup district of Assam has been chosen as the place of destination. This is because Guwahati is the most urbanized city and migration has always been an important and contentious issue here. Guwahati, which is considered as the gateway to the north-east, has been able to attract migrants from all parts of Assam as well as other states of the country as it is the state capital hosting a large number of State Government, Central Government and Semi Government Offices. Besides being the dominant city in the north east, it houses the regional Headquarters of a large number of private companies. Guwahati also has a large number of formal and informal sector ancillary industries which have been set up in and around the city.

Being the largest educational center in the north east, Guwahati has a large number of recognized educational institutions which induce a large inflow of students. The recent infra-structural development of Guwahati had been attracting greater investments in the corporate sector which subsequently generate...
employment opportunities. Greater livelihood opportunities facilitate migration not only from within the country but also from abroad.

**Data Source, Sampling Design and Line of Analysis**

In the study, both primary and secondary data are used. For collecting primary data, interview schedules are used to gather relevant information. The secondary data is sourced from relevant books, journals, seminar papers, websites, Ph. D thesis, Census Reports, Economic Survey of Assam, Statistical Handbook of Assam and NSSO Reports.

A multi-stage sampling design is used to collect the relevant migration data.

The first objective of the study, i.e. to estimate the magnitude and trends of rural-urban migration in Guwahati during the period 1991-2001, is calculated on the basis of secondary data. *Rural-urban* migration in the Guwahati city is estimated on the basis of Migration Table for Assam, Census of India, 1991 and 2001. Besides estimating the decadal growth rate, a profile of the migrants is also constructed in terms of place of origin, reasons for migrating, educational and skill attainment, sex and age profile etc.

The second objective of the study is to test the relevance of the Harris-Todaro model in the context of *rural to urban* migration into Guwahati. The estimation of the rate of rural-urban migration into Guwahati is based on primary data which were collected from the respondents with the help of interview schedules. Again, rural-urban wage differentials are estimated on the basis of primary data sourced from field survey. Wage rates in the place of origin and the place of destination are collected from primary sources. For this, initially a sample of post 2001 migrants into Guwahati is selected from the existing 60 wards in Guwahati. The sample consisting of 1000 individuals
from the labour-force is selected on the basis of random sampling. A conscious effort is made to ensure that the sample constitutes credible representative of the population. Besides, additional information regarding the research question of what causes in-migration to Guwahati city, have also been gathered from the same sample of migrants.

The probability of employment i.e. the probability of getting a job in the city (the place of destination) is calculated as a ratio of workforce and labour force which is estimated on the basis of the sample data.

SPSS software package is used to run a regression analysis on the basis of which the research hypothesis is tested. Besides, a simple linear regression equation is undertaken to identify and estimate the relationship between the migration ratio and differential in urban expected wage rate and rural wage.

The third objective of the study is to determine factors affecting rural-urban migration into Guwahati. Here also an interview schedule is used to estimate the rate of rural-urban migration while estimates of socio-economic and demographic variables are based on the 2001 census. A multiple regression equation is computed in order to identify the nature and intensity of relationship between the rate of migration and the relevant socio-economic and demographic variables.

To assess the impact of rural-urban migration in the city, those sectors are studied which have been most significantly influenced by migrants. In this context, the contribution of the migrants in the growth of these sectors is examined. Interview schedule is used to extract relevant information from various migrant groups to fulfill the above objective.
1.8 LIKELY CONTRIBUTION OF THE STUDY

This research study ‘An Enquiry into Rural-Urban Migration to Guwahati City: Relevance of the Harris-Todaro model’, highlights rural to urban migration into Guwahati city and also attempts to estimate the magnitude of the migration. Besides, it seeks to explore the Harris-Todaro model and attempts to evaluate its adequacy in explaining the phenomenon of rural to urban migration into Guwahati. The socio-economic effect of rural to urban migration is examined to assess the impact of rural migrants on the development, employment levels and rate of urbanization of the destination city, i.e. Guwahati. Such an examination also shed light on the problems of such a torrent flow of in-migrants which puts immense pressure on the existing social and economic infra-structure. It is envisaged that such an exercise would help policy makers to develop a clearer understanding of the factors that causes rural-urban migration and also the associated problems it causes. This would enable framing of policies that are more appropriate to the ground realities, which in turn, will enhance the probability of adequately addressing the challenges and opportunities presented by rural to urban migration.

1.9 CHAPTERISATION

The entire study is divided into five chapters as follows:

Chapter-1: Introduction
1.1 Statement of the problem.
1.2 Conceptual framework.
i) Basic concepts in migration.
ii) The Harris-Todaro model.
iii) Analytical methods.
1.3 Review of Literature.
1.4 Period of the study.
1.5 Objectives of the Study.
1.6 Hypothesis of the study and research question.
1.7 Methodology and data source.
1.8 Likely contribution of the study.
1.9 Chapterisation.

Chapter-2: Magnitude of Rural-Urban Migration in Assam and a profile of rural-urban migrants in Guwahati city.

2.1 Migration in Assam: Magnitude and Types.
2.2 Pattern of Migration Streams in Assam.
2.3 Sex Selectivity of Migration Streams.
2.4 Reasons for Migration in Assam.
2.5 Educational Attainment of the Migrants in Assam.
2.6 Profile of Migrants in Guwahati City: GUWAHATI - A brief profile.
2.7 Magnitude and types of migration in Guwahati.
2.8 Pattern of Migration Streams in Guwahati.
2.9 Reasons for Migration to Guwahati.
2.10 Educational Attainment of the Migrants in Guwahati.

Chapter-3: Rural-urban migration into Guwahati and the Harris-Todaro Model.

3.1 Introduction.
3.2 Application of Harris-Todaro model in Guwahati city.
3.3 Rural-urban migration into Guwahati as a function of socio-economic and demographic factors in the place of origin.
Chapter-4: Socio-Economic Impact of rural-urban migration in Guwahati city.

4.1 Introduction.
4.2 Rural-urban migration and the informal sector.
4.3 Socio-economic characteristics of the migrants.

Chapter-5: Summary of findings and Conclusion.

5.1 Summary of findings and conclusion.

5.1.1 Migration profile of Assam and Guwahati city.

5.1.1 (a) Magnitude of migration.
5.1.1 (b) Pattern of migration.
5.1.1 (c) Sex selectivity of migrants.
5.1.1 (d) Reasons for migration.

5.1.2 The Harris-Todaro migration model and its relevance to Guwahati city.

5.1.3 Impact of migration: Demographic and socio-economic analysis of migrants.

5.2 Policy implications.