Dissertation

on

Migration and Urbanization in India: An Empirical Study

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ABSTRACT

Urbanization is an important factor of economic growth. The contribution of this sector to GDP is much higher than other sectors. It contributes 63% to GDP of India (GOI, 2011). But in India the rate of growth of urbanization is very less than other developed countries. To increase the growth of economy it is necessary to focus on the urban growth. There are four source of growth of urbanization; natural growth, net rural to urban migration, net reclassification and expansion of land. Rural to urban migration is an important factor to increase the growth of urban sector. Urban growth significantly influenced by rural to urban migration. Migration of disguised labour from rural area to urban area increases the supply of labour in urban sector, the rise in labour supply increases the production level in urban sector. Thus an increase in urban growth is an incentive to the GDP of nation. This study focuses on the promotion of rural to urban migration so that this could be helpful to attain high growth rate of urban sector

Rural to urban migration is indirectly put a positive impact on the growth of economy. Firstly, tends and pattern of rural to urban migration shows the variations in rural to urban migration in different time periods. These trends has been shown in different levels, all India rural to urban migration, state level rural to urban migration and city wise trends in rural to urban migration. These trends have been shown through descriptive statistics. On the other hand this study also reveals the effective factors of rural to urban migration. These factors have been examined through two ways; state wise and city wise. The other part of study shows the positive impact of rural to urban migration on economic growth.

By using the simple regression model it has been predicted that there are some pull and push factors which put effect on rural to urban migration and on other side by using regression model it has been observed that there is a positive impact of rural to urban migration on Gross state domestic product. For this study data has been collected from different sources like; Census of India, Ministry of Statistics, NSSO, Planning Commission, GOI etc. The entire study indicates that economic growth can be increased by the increases in rural to urban migration. The increment in rural to urban migration promotes the growth of urban sector. Thus the promotion of urban sector will provide an efficient gain in growth of economy.

On the basis of these finding, this study provides some policies to promote rural to urban migration. First to encourage urban growth by promoting rural to urban migration, transforming of disguised labour from rural to urban area and secondly provide facilities to low income groups like; housing, water supply, safety and security which are included in urban infrastructure. Other policies are related to the expansion of local bodies and to provide financial services.

Key Words: Urbanization, rural to urban migration, economic growth, India.

CONTENTS

Migration and Urbanization in India: An Empirical Study

CHAPTER-1

INTRODUCTION

1.1 Introduction:

India is experiencing rapid urbanization. Urbanization refers to the process of transformation of traditional economy into modern economy. Urbanization is recognised as an engine of economic growth. In India according to the census of India, the area is considered as an urban area with having 5000 or more population size, 75% of the male population is working in non agricultural sector and the population density exceeds 400/sq.km.

Urbanization rate is increasing continuously after independence. In 1901 the urban population in India was 11.4% which were increased by 28.53% in 2001. In 2011 it becomes 31.16% (Bhagat, 2014). The contribution of urban sector in GDP of India is greater than other sectors. Recently 31.16% population is residing in urban sector contributes 63% of India's GDP (census, 2011).

On the basis of historical facts and statistical information, it is found that developed countries having high Gross Domestic Product and also the level of urbanization is higher than other countries. According to the census of 2011 in India 83.3 crore people are living in rural areas and 37.7 crore population lives in urban areas. On the other hand the percentage of population residing in urban area in developed countries is greater than India.

On the basis of World Urbanization Prospects (WUP, 2014) the rate of growth of population residing in urban area in developed countries in 2015 has shown in Figure1.1. The rate of growth of urban population of Sweden in 2015 is 85.8%, Germany having 75.3% growth rate of population in urban area. In Ireland, there is 63% growth rate of urban population. Canada having 81% growth rate of urban population, New Zealand 86%, U.S.A 81.6%, Netherlands 90.5%, Australia 89.4%, Norway 80.5%, and U.K 82.6%.[1] This indicates that the population in urban area in India is less (32.7%) than the urban population residing in developed

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[1]Though different countries follow different definitions to measure urbanization still we can say India's urbanization rate is much lower than other developed countries

countries. Thus from the above study it is clear that in developed countries the urban population is greater than rural. These countries are developed because of high rate of urbanization growth which leads to economic growth. Most importantly, increasing urban population of India is also associated with rising contribution to national GDP. In 1981 when urban population of India was 23.3 % its contribution to nation income was about 47% but in 2011, 31.2 % of urban population has contributed about 65% of national income (Government of India (GOI), 2007).

Figure 1.1: Rate of growth of urbanization in different countries
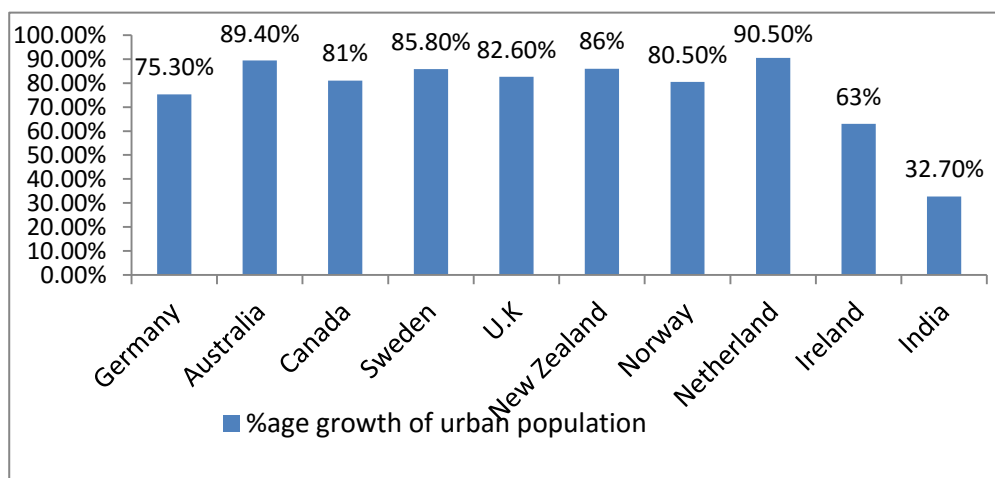
Source: WUP (2014)

This figure1.1 indicates that increasing urbanization is the major cause of higher national income of Indian economy. Urbanization is the main engine of higher productivity and higher economic growth so its contribution to national income is increasing. The urbanization growth occurs due to national growth rate of population, emergence of new cities, rural to urban migration, and reclassification of rural areas into urban. Urban area more closely refers to industrial existence that increases the economic growth and development. Thus the mentioned factors play an important in the growth of urbanization.

Source of growth in urban population: Urbanization depends on four sources, the first source is natural growth rate in which both rural and urban population increasing and there is no effect on the ratio of rural and urban population. Second source of urbanization is rural to urban migration which refers to an increasement in urban population due to shifting of rural population to urban

area, so the rural population will decrease and urban population will increase. Third reason of growth in urbanization is expansion of boundaries refers to expand urban area. Fourth, Net reclassification refers to reclassify the urban area or re-establish a place into urban form or the reformation of backward area into urban area.

Figure 1.2: Sources of growth of urbanization
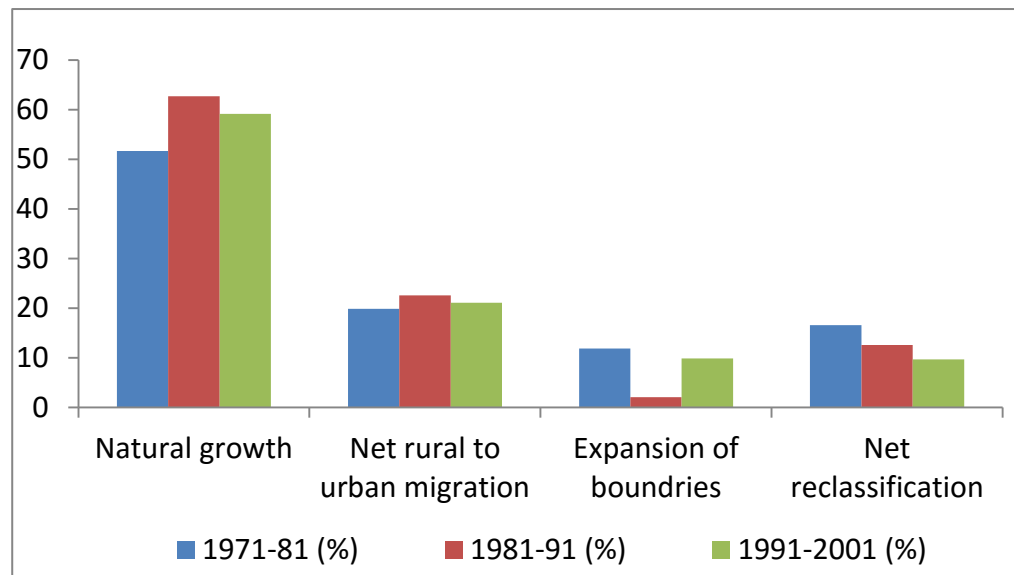
Source: Census of India (2001)

The figure1.2 shows that in India the large part of growth of urban population is due to natural growth. In 1971 natural growth rate of urbanization was 51.7%, net rural to urban migration was 19.9%, 11.9% growth was because of expansion of boundaries and the net classification was 16.6%. During 1991-2001natural growth rate become 59%, net rural to urban growth rate 21.1%, expansion of boundaries 9.9% and net reclassification growth rate become 9.7%. Rural to urban migration is one of the main factors to increase the growth of urbanization. But in this figure rural to urban migration is less than natural growth. This growth will occur due to decrease in rural population and increase in urban population. If the population of both areas are increasing then there is no migration. Migration is the transfer of population from one area to another.

According to the census (2011) migration stands close to 30% in India. The term migration on the basis of census of India refers that a person who shifted from one administrative area to other administrative area. In the context of India areas are classified into two parts rural or village and town in urban. The casual

movements of migrant are not considered as migration. Migration refers to the permanent shifting. The main causes of migration of rural to urban area are: employment, marriage migration, business, education etc. The labour migration from agricultural sector to non-agriculture sector in 2007-08 is 66% in India (NSSO 64th Round), where 63% of migrants were male. The migration of male population is greater than female. According to NSSO 64th round survey on 'Employment & Unemployment and migration particulars' conducted in 2007-08 migrant is termed as a household member whose previous usual place of residence any previous time, is different from current area of enumeration.

Migration leads to the growth of urbanization but the migration rate is very low in India. To increase the growth rate of urbanization we need to promote rural to urban migration. Migration depends upon many factors like job opportunities in urban area, population growth, poverty, labour migration due to high wage rate in urban area. But there are some obstacles behind the less rural to urban migration rate which is a researchable issue, why rural to urban migration rate is low in India? Migration put a positive effect on growth of economy indirectly. The process of rural to urban migration leads to the growth of economy through the growth of urbanization.

On the basis of this issue, there is a need to study the various concepts of migration. Firstly the direction wise migration can be divided into four parts; rural to rural, rural to urban, urban to urban and urban to rural. These migrations can be happened in different streams with respect to distance inter-state migration. Movement of people from one state to another is known as inter-state migration. On the other hand the migration intra state migration refers to the movement of people within the state. This migration can also be divided into two categories; inter district and intra district migration. There are also two more types of migration; international migration and national migration or internal migration. International migration shows the movement of people from one country to another. This migration held outside the boundaries of country. . The internal migration refers to the migration held inside the country. This type of migration can be described through: migration stream and distance categories. This study focuses on rural to urban migration. Rural to urban migration increase the supply of labour in urban area. The supply of labour will raise the production level of urban sector. These

increases will raise the economic development and growth. This type of migration is responsible for the growth and development of urban sector.

Figure 1.3: Migration streams
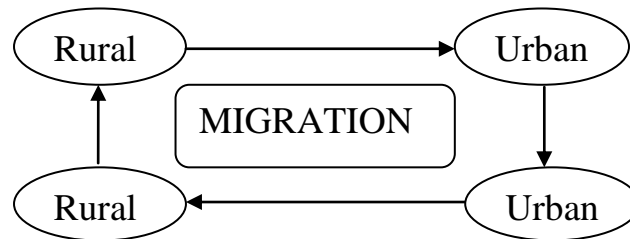
Source: Author

1.2 Gross and Net Migration

Gross migration refers to the total migrants moving in and moving out of place. On the other hand net migration is the difference between migrants moving in and moving out of a place.

To measure the net migration we use the following equation:

$(I-O) = (P_t - P_o) - (B-D)$ -------- (1)

Or, (Population growth between two points) = natural increasement

Where,   I = number of in migrants; O = number of out migrants; Po =   population at time o; Pt = population at time t; B = number of births; and D = number of deaths.

There are several reasons behind the migration of population. These reasons are divided into two categories; push migration or voluntary migration and pull migration or involuntary migration. These categories are based on the willingness of migrants.

(1) Push migration (Forced migration) - In this type of migration people have to move from one area to another not by their own will but because of some troubles. These troubles can be economic, political, natural or social. Migrants do not move with their own choice, but some factors force the migrants to do so**.**

(2) Pull migration (Voluntary migration) -   Pull migration refers to the positive attitude of people towards another area. In this type of migration migrants move from one place to another by their own choice. This can be happened due to the (job opportunities, education etc.) better living resources in another area. These factors can be divided into two parts:

Table1.1: Factors of voluntary migration & Factors of forced migration.

Push forces (involuntary migration)	Pull forces (voluntary migration)
1. Job opportunities	1. Drought
2. Education	2. Political fear
3. Better medical care	3. Poor medical care
4. Securing family links	4. Loss of wealth
5. Industry	5. Less chance of finding courtship
6. Income	6. Slavery etc.
7. Better chances of finding courtship etc.	

Source: Kumari, S. (2014)

In voluntary migration these above factors pull the migrants to move towards another area. And the forced migration is also called push migration in which the migrants have to move because of the above force factors. The voluntary factors are considered as positive factors and the involuntary factors are considered as negative factors. These factors are responsible for the growth of rural to urban migration.

1.3 Need of Rural to Urban Migration for Economic Development in India

In rural area people have to face many problems, which force them to migrate in urban cities like:- lack of medical care, low income level, less opportunities of employment, transport cost, illiteracy, backwardness, poverty, livelihood, and others. In rural area more population depend upon agriculture, the more dependency on agriculture leads to disguised unemployment in rural area. If the disguised unemployed population is migrated to urban then the supply of labour and demand of consumer goods in urban area will increase. That will cause rise in production and with this process per capita income will also increase. And this increasement will promote the investment that will lead to economic growth. So, the economic growth in India can be increased by the growth of urbanization through migration. But there are some issues regarding the policy formation for the promotion of rural to urban migration. There is not any policy formulated by government of India to increase rural to urban migration.

1.4 Research gap

The study of review of literature in Chapter-2 shows that rural to urban migration has a significant role on the growth of urbanization. From the theoretical study it is observed that migration is an important factor of urban growth. The process of rural to urban migration provides benefits to both rural and urban sector. But there is less study has been done on migration and economic development through urbanisation. The main factor of growth of economy is urban sector, so the main focus of this study is on the growth of urbanisation through rural to urban migration. This process will increase the supply of labour in urban sector. Higher the labour supply will lead to higher production level of urban sector. Thus due to growth of urban sector, economic growth will also increase. This study provides the role of rural to urban migration not only in urbanization but also in economic development and growth.

1.5 Objectives

1. To analyze the trends and patterns of rural to urban migration in India.

2. To investigate the relevant determinants of rural to urban migration in India

3. To establish the link between rural to urban migration and economic development.

4. To prescribe the relevant polices to promote rural to urban migration lead urban growth in India.

1.6 Research methodology

The research methodology of this study is based on the objectives of the study. The first objective is related to the time to time variations in rural to urban migration in India. these ups and downs in rural to urban migration can be describe through trends and pattern of rural to urban migration in India. This objective has been analyzed through the descriptive analysis.

The second objective is to examine the relevant factors of rural to urban migration in India. For this objective OLS model has been used to find out the main factors of rural to urban migration and to examine the impact of these factors on migration.

Third objective to show the link between rural to urban migration and economic growth Simple regression has been used to check the dependency of urban economic growth on rural to urban migration. The economic growth can be measured through the national GDP level.

Sample Size

The first objective is based on the variation in rural to urban migration. In this study country level trends of rural to urban migration, state level changes in rural to urban migration and city level variations in rural to urban migration are described.

In the second objective the examination of relevant determinants of rural to urban migration would be covered by taking 51 cities with having million plus population[2] (named as "million plus cities"). This fact is observed that large cities are generally more efficient or able to generate growth and to attract investment, so these cities are attracting more people due to these qualities. On another hand the largest part of urban population is covered by these cities. These cities are the main indicators of economic development of the country.

For the third objective regression analysis is used that could estimate the impact of rural to urban migration on economic development. For this purpose the sample of 32 states are taken. This study measured the rural to urban migrant's impact on GSDP.

Source of Data

To cover the first objective of the study 'Trends and Pattern of Rural to Urban Migration' data has been taken from census of India 2001 (city level data) which provides the total migration rural to urban, on the basis of last residence, the migration on the basis of duration and also provide the reasons behind the rural to urban migration, census of India 2011 (state level data and India level data) provide

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[2]Agra (Agra), Aligarh (Aligarh), Allahabad, Amritsar, Asansol, Aurangabad, Bangalore Urbane, Bareilly, Bhiwandi, Bhopal, Bhubaneswar (Khordha), Chennai (Chennai). Coimbatore, Delhi, Dhanbad, Durg-Bhilainagar (Durg), Guwahati (Kamrup), Gwalior (Gwalior), Hubli-Dharwad (Dharward), Hyderabad, Indore, Jabalpur Jaipur, Jalandhar, Jamshedpur, Jodhpur, Kanpur, Kochi, Calcutta, Kota, Kozhikode, Lucknow, Lucknow, Ludhiana, Madurai, Meerut, Moradabad, Mumbai, Mysore, Nagpur, Nashik, Patna, Pune, Raipur, Ranchi, Salem, Solapur, Thiruvananthapuram, Tiruchirappalli, Varanasi, Vijayawada, Vishakhapatnam, Vishakhapatnam.

the reasons of rural to urban migration and NSSO 64th Round for migration 2007-08. This data give the information state level and country level with the different aspects of the migration in different streams.

The second objective has been done through the data taken from NSSO 61th Round Employment and Unemployment Situations in cities and towns in India (2004-05). It provides the gender level data of rural to urban migration and employment. Census of India 2001 gives the information about the reasons of migration on the basis of time duration of rural to urban migration in the context of last residence of migration. The data for third objective is taken from census, 2011 state level data of migration on the basis of reasons of migration, last residence of migrants and the duration of migration and GDP data is taken from Planning Commission of India (2005-06 to 2011-12).

1.7 Chapter scheme

The study is divided into six chapters that can be shown as below:

Chapter 1st describe the introduction of the study, in which the importance of the rural to urban migration is provided. Also the Need, Research gap, Objectives of the study and Research methodology on the basis of objectives are described in the first chapter.

Chapter 2nd belongs to the review of literature. The second chapter is done in thematic format. The review of literature has been mentioned according to the objectives of the study. These reviews belong to empirical, descriptive and theoretical studies.

Chapter 3rd covers the first objective of the study 'Trends and Patterns of Rural to Urban Migration in India'.

Chapter 4th is related to the second objective of the study 'To investigate the relevant determinants of rural to urban migration in India'. This chapter provide the fulfilment of the second objective of the study

Chapter 5th covers the third objective of the study which is 'Establish the link between rural to urban migration and economic development'. This chapter provide the results of third objective by using regression model.

Chapter 6th provide the empirical analyses of determinants of rural to urban migration India state wise.

Chapter 7th gives the detail conclusion of the whole study and findings of the study.

Chapter-2
Review of Literature

2.1 Introduction

Review of literature describes the studies, which have been already done by different authors. This chapter consists of various aspects of migration. The entire study has been done on the basis of these reviews. First sections of second chapter discuss the descriptive studies of rural to urban migration. Second part of this chapter includes the theoretical study of rural to urban migration, done by several authors. These theories describe the process of rural to urban migration and its impact on different sectors of economy. Empirical studies are reviewed in the second section of the chapter, in which authors used different models to cover the objectives of their study. The empirical review part is further divided into two parts; international reviews and national reviews. Further, part of this chapter provides the descriptive reviews. The review of these entire studies indicates the importance of rural to urban migration and its impact on economy. In this chapter, the structure of reviews is collaborated in thematic form. Entire chapter provide the various analysis of rural to urban migration.

2.2 Theoretical Reviews

Theoretical studies have been provided the base to this study. The various theories of rural to urban migration create the fundamental understanding of this process. There are a number of studies concerned with the process of rural to urban migration and shows the impact of this process on economy. These theoretical studies describe mainly the process of rural to urban migration in the context of different sectors of economy. The theoretical approaches have been given the idea that rural to urban migration increase the employment level as well as growth level of economy.

In the context of development and growth of economy, Lewis (1950) stressed on the labour migration in the "Theory of unlimited supply of labour". He examined that the both traditional and modern economies will develop with the migration of disguised unemployed labour (unlimited supply of labour) towards modern sector or industrial sector. Disguised unemployed labour's marginal productivity is zero. So there is no contribution of disguised labour in the production of goods in traditional or agricultural sector. This dual sector economy can be developed by transformation of this disguised unemployed labour from agricultural sector to non agricultural sector.

There are wage differences in industrial sector and agricultural sector, industrial sector have higher wage rates than agricultural sector. So the labour having zero marginal productivity will be ready to work in industrial area at high wage rate. But the wage rates given to this labour force will be higher than agricultural sector but this wage rate will be lesser than the prevailed wage rate in industrial sector. Thus this transformation will lead to increase in the growth of both sectors. A theory by Fei-Ranis (1961) showed the extension of Lewis model, surplus labour is considered as a factor to increase the growth of dual economy. This theory is divided into three phases; stationary situation, transfer of surplus labour to industrial sector and commercialized agricultural sector. In Lewis model the remaining concept is that the agricultural sector plays an important role in boosting the growth rate of industrial sector. This model state that the transfer of surplus labour from agricultural sector to industrial sector will decrease the actual wage rate in industrial sector and there will be decrease in the supply of food product, so for increase in the production the surplus labour will be used by industrial sector that will lead the development or growth of economy. Lee (1966) gave the theory of migration. This theory is based on three elements; place of origin, place of destination, intervening obstacles. There are main two factors that affect the decision of migration; pull factors and push factors. Sometime there are push factors that force migrants to move. And there are also some pull factors that attract people to move there. Pull factors are simply positive factors of migration and Push factors are negative factors. Pull factors are; high income level, employment opportunities, and other educational and progressive factors. Push factors are; political disputes, climate, inequalities etc. Thus when people move from one area to another with their own wish, this migration is called voluntary migration. When people move from one area to another not by their will, then this migration is called involuntary migration. Todaro (1969) studied that the decision of migration is an economic decision; individual will prefer to migrate from rural area to urban area even if the urban unemployment exist. The main cause of migration is expected income comparison by both actual and potential labour force at a given time period in urban area with the current average rural incomes and the people will migrate if the former increase the latter. But in actual situation some developing countries are facing chronic unemployment. So it is not possible for migrants to expect high income level, migrant will not be rational toward the decision of migration. Todaro shows that migration will be favourable for migrant if he (migrant) gets a formal job where the value of his

expected income is greater than the value of his actual income which is prevailed in rural area.

2.3 Empirical Reviews

This section of review provides the statistical studies of migration. The empirical studies indicate the impact of migration at international level as well as national level. A large section of literature estimated the impact of rural to urban migration on urbanization and economic development. This study is a significant part of this chapter. The empirical part of review is dived into two parts; international and national.

2.3.1 International Reviews

International studies are important to know the migration situations and its impact in other economies. This section of literature is helpful to do comparison of different economies. To know the historical and global aspects of this study it is important to do the study of international papers. These reviews provide the proper direction to further study and different methodologies and methods of data collection in similar issues. A huge study of international papers stressed on the impact of migration on economic growth and development.

A large part of literature focused to analyze the impact of migration on economic growth and development. An important study by Amare, et al, (2012) examines the effects of rural to urban migration on economic development with the reference of employment. This case study refers that the migration is a beneficial way for rural households to increase income but it has less effect in reducing inequality and relatively poverty in rural areas. Thus migration has positive as well as negative effects on economy. Some negative factors put an inverse effect on economy that creates obstacles in the growth of economy. Byerlee, (1973) studied the theoretical aspect of rural to urban migration in Africa and provide the policy and research implications of rural to urban migration. This paper indicates that rural to urban migration is an important part of growth of economy. From this study it is observed that rural to urban migration play a significant role to accelerate economic growth. So there should not be the restriction on the mobility of labour from one place to another. Deshingkar and shaheen (2009/13), examine that there are some policies which are

formed to control or reduce the migration because it is assumed by the police makers that migration put a negative impact on the growth of economy and increases the poverty. This paper shows that migration has a positive impact on economic development but there are some other factors which are parallel to migration, these factors put negative effect on economy like inaccurate policies, political commitment is less in the aspect of living and working conditions of migrants. The author's estimation indicates that 100 million migrants contribute 10% to national GDP of India. There is also a factor which is also making the migration process inaccurate for economy that is child labour. Thus there should be formation of that policies which help to reduce the other negative factors rather than migration which is beneficial for economic growth and development.

A huge portion of international empirical studies estimated the factor effecting migration. Uddin and Firoj, (2013) examined the causes and consequences of rural to urban migration in Bangladesh. This paper also describes the main factors effecting rural to urban migration. These determinants of rural to urban migration are divided into two parts; push factors and pull factors. The pull factors are voluntary factors and push factors are involuntary factors. Author fined that there are some pull and some push factors that affect the decision of migrant. To estimate the factors of income of migrants before and after migration OLS mode is applied. Through this model author find the income level of migrants before and after their migration. On the other hand, Faggio and Silva, (2014) described that the business creation, innovation and self employment increase the growth rate of urban areas. This study describes the impact of business creation, innovations and self employment on the growth of urban areas by using OLS model. These are the independent variables and urban growth is dependent. The growth of business creation, innovation, and self employment leads to the growth of urban areas. Due to the development of these factors the job opportunities and the industrial development also increases. Thus this process increases the urban growth. This urban growth is responsible for the growth of whole economy.

To create a link between migration and urban growth Saracoglu and L. Roe, (2004) studies the internal migration in economy and the contribution of capital market segmentation and non capital market segmentation by using regression analysis. This study describes the internal migration and the linkages between rural segmentations and capital market segmentations in urban, with a high rural

population, regional economic development and migration rural to urban in developing countries. There are some policies formulated by some counties to reduce rural to urban migration. Taxes are imposed on labour transformation to urban area. But these policies reduce the rural to urban migration. Rural to urban migration provide the massive supply of labour. Thus the production and growth level of urban sector increase. Bilsoborrow, R. E. (2002), has discussed the migration from and to rural areas and linkages between rural population and also study the role of international migration environment in internal migration. This study shows the effects of international migration and rural environment on internal migration in developing countries. The rural environment conditions play an important role in internal migration, due to the lack of education and others. Uncertainties like flood soil erosion and other natural disasters influence the migration. McCatty, (2004) Described the rural-urban migration process in developing countries. This article describes the process of rural-urban migration in developing countries. The migration held in these countries due to migration forces. These forces are of two types: involuntary and voluntary. Involuntary force refers to the migration not done by choice of migrants. And voluntary force refers to the migration done by the choice of migrants. The causes of migration are: political strife, family disagreement, fighting with neighbours etc these are involuntary forces. Voluntary forces are: job opportunities, housing conditions, rural land tenure, rural social structure etc. To analyze the impact of rural to urban migration on urban population and urban growth, a study by Tacoli, et al, (2015) described the contribution of rural- urban migration to urbanization and urban population in the context of poverty explain the risks regarding migration. This paper describes the contribution of migration in urbanization and urban population. The main problem of poverty in urban area is not migration but the low income residents in urban area the migrants all are not poor so the reason of poverty in urban is not high migration of people rural to urban. And there are some risks in urbanization like constructing new home and lively hood, unsafe jobs etc. A good study by Gimba and Kumshe (2011) examined the causes and effects of rural to urban migration in Borno state. The analysis describes that the main reasons of rural to urban migration are; search for better education, employment and business opportunities. There are also some negative factors that are the reasons of migration like; unemployment, poverty and inadequate social amenities in rural area. This paper describes the positive and

negative effects of rural to urban migration. Mere (2007) studied the influence of migration and remittance on income and production. This study provides general information of the population dynamics and the economic affect of rural migration. This paper also highlights the factors of rural migration. Arzaghi, (2011) Discuss the rural and urban migration with diversification under uncertainty condition in U.S. This article shows that the migration of rural urban occurs due to diversification. The migrants get opportunities to migrate due to correlation of income between origin and destination as a measure of diversification for US. Thus the migration occurs due to the different income levels in both the places origin and destination. Molaei (2008) did a study on rural to urban migration and examine the main factors of rural to urban migration. In this paper it has been observed that the main reason behind migration is high income expectation in urban areas.

Author	Objective	Methodology	Data Source	Conclusion
Zohry, (2005)	To analyze the causes and consequences of migration in Egypt.	descriptive	Source: UNPD (2012)	This paper describes the internal and international migration in Egypt. This study also explains the characteristics of internal and international migration. The main cause of migration in Egypt is not income level or other factors, but the high rate of population and the political disputes.
Katseli, et al. (2006)	To examine the impact of migration on sending countries and on receiving countries.	Descriptive		This study analyze that migration put a positive effect on both the sending country and the receiving country. The empirical part of this study indicates that migration could generate direct and indirect gains to sending countries through employment, human capital and accumulations.
Lall, et al, (2006)	To study the impact of migration in the context of consequences in income level of different countries	regression model, logit model		This paper provides different aspects of migration and used some simple dynamic formalization. This paper shows that there are consequences in income level of different sectors or different countries that is the main cause of migration in developing countries. To earn more income people move from one area to another. There is also production level of origin place that put impact on people to take decision of migration. Another one is human capital and growth level in origin place

Abdul-Azeez, et al, (2011)	TO describe the main factors influencing rural to urban migration in Nigeria. by using	Logistic regression model.		This study shows that migration having effect on both destination of urban area and rural community. And there are some factors that affect the migration like employment, education, family reasons, inadequate amenities in rural community avoidance of boredom in agriculture and other health reasons. So migration influenced by these factors strongly.
Dollar, (2015)	Discuss the effect European's mass migration during nineteenth century to Argentina. And describe the effect on GDP	OLS Model	Censuses (1895-1914)	This paper shows that migration in rural to urban areas increase the growth rate of country. On the basis of historical migration a large number of migrants from Argentina to Europe were skilled and educated and that time the GDP of Europe increased by high rate. Thus migration induces the growth of economy. So the migration is an important aspect to increase the growth of an economy.
Young, (2013)	To analyze the impact of migration on employment and the factors effecting rural to urban migration.	OLS Model	Demographic and health surveys of 65 countries.	This study measured the link between inequality and migration for 65 countries, in which there are some poorest countries are included. Migration occurs on the basis of skill and human capital. This paper shows the method of product sampling and measurement of inequality. By using OLS model it is observed that the efficient allocation of labour is reflected by rural to urban gap. This gap occurred due to the different features of counties that pull or push the people to migrate.

2.3.2 National Reviews

National reviews refer to the domestic level study which has been already done. This part of reviews shows the internal migration in India. National empirical studies indicate the different aspects of rural to urban migration that provide a lot of relevant information to this study. Several national empirical studies focused on the impact of rural to urban migration on urban growth and figure out the main factors of rural to urban migration. Thus this source provides a proper direction to this study.

To analyse the trends and pattern of rural to urban migration in India, a good number of descriptive studies describe the trends and pattern of rural to urban migration. Census of India, (2011), provide a migration report, which states the reasons of migration in India like; work employment, business, education, marriage, moved after birth, moved with household and others. Thus these factors influence the migration in India. this report also discuss the migration within the states and India level data, which shows the internal migration gender wise, age wise, duration wise and also provide the reasons of migration in states and country. According to the census (2001) of India the person is recognised as a migrant who has left his previous resident place and continuously living in different place with same administration for 9 or 9+ year's duration of time. And he/she is considered as a permanent migrant. The temporary movements are not considered as migration. A report by NSSO 64th round, (2007-08) conducted a survey on 'Employment, unemployment and migration Particulars'. This report shows the trends of migration in 2007-08. The person is considered as a migrant whose current residing place is different from previous resident and his/her residing continuously for six or more than six month's duration (NSSO). Also the NSSO report 2004-05 provides the data on employment and unemployment. Mitra and Murayama (2001) examine the intra- state and inter- state rural to urban migration on the basis of gender in the context of poverty. This paper shows that the migration of rural to urban held greater in poor areas than others. On the basis of gender the migration of male is larger than females, where the intra-state migration is larger than inter-state migration. The main cause of migration is employment. Rural people migrate to urban for jobs.

To examine the reasons behind rural to urban migration, a paper by Ratha and Mohaptra,(2011) studied that the big cause of migration is climate change.

However there are also some other reasons of migration like; political disputes, income level and other pull and push factors that force people to move from one area to another. The impact of migration of people from one country to another is favourable to both receiving and sending countries. The both counties get direct and indirect benefits from migrants like; receiving country will get great supply of labour and in sending country the level of poverty will decrease. It is also done an approximate prediction by authors that 200 million people would be forced to move from their area to another by 2050. This would be happen due to the climate changes. On the basis of dynamic conditions and reasons of migration Iversen, V. (2006), studies the rural urban migration concept with reference to social network multipliers, caste, and spillovers by using dynamic model in South-Asia. This article refers to the rural urban migration in dynamic conditions. The reasons of migration are social network multipliers spillovers and caste. In spillover the adult and autonomous child labour migration occurs. And will also induce migration the job's caste prearrangement. For the estimation of determinants of rural to urban migration Agasty and Patra, (2013) described the influence of micro and macro both variables on rural-urban migration by using linear regression model. This paper describes the impact of macro and micro variables on rural-urban migration in Orissa. The migration rate of young population is greater than others. Because of less attachment with family in young age, raise the ability to take risk. So it is cleared that the more migration held in early age. Akram, (2015) discussed about the rural to urban migration of labour on the basis of scheduled castes and schedules tribes and describe the push factors of this migration by using simple OLS model. This analysis shows the labour migration rural to urban in India on the basis of scheduled caste and scheduled tribes. This migration occurs due to some push factors which are poverty, income, illiteracy, proportion of SC population, per capita net domestic product, population size or these are gravity variables. Tripathi and Mahey, (2016) described the trends and patterns of urbanization in Punjab from medieval 20th centaury to the beginning of 21st century. The fluctuations in urbanisation put effect on economic development or growth. This link is examined through OLS model. These papers show that the fast growth of urbanization leads to the fast growth of GDP. This growth also leads to the modernization of economy. There is a positive relation between urbanization and economic growth. So there should a proper urbanisation planning in India for data creation, urban

financing, investment, slum dwellers. Devedi, (2013) examined that migration has positive impact on economic growth but there is also a negative fact of this migration in the context of improving livelihood status due to the challenges faced by migrants in urban area. This problem discourages the growth of standard of living.

Author	Objective	Methodology	Data Source	Conclusion
Bhagat, (2014)	Discuss the ups and downs in economic development due to evolution of migration of urbanization in India.	descriptive	NSSO, 2007-08 Census of India, 2001	Due to evolution of migration of urbanization in India the economy has faced many ups and downs regarding its growth and development. This paper also highlights the historical aspect of the migration in India and its importance in the growth of urban areas and economy.
Roy and Debnath, (2011)	To examine the pull and push factor of migration and effect of migration on economic development.	OLS Model	Census 2001	The pull factors which are estimated through this model are PCI and level of infrastructure these factors put a significant effect on migration. On the other hand push factors unemployment and cost of living put are significant. They also studied the impact of migration on economic development by using simple OLS model. Thus the study provides the idea that migration put an important role in economic development.
Kumari, (2014)	Discuss the main factors and determinants that influence rural to urban migration.	Regression model	NSSO 64th Census 2001	This study points out that rural population percentage and rate of literacy are very significant. The rural and urban wage difference, rural poverty ratio and employment are in significant. There are also social factors that affect migration process like origin and destination places and the place distance.

Razi, et al, (2014)	Discuss the effects of migration on migrants and casus of migration and use pull push factor model for dynamics of migration	Pull push factor model	Census, 2001 and NSSO, 2007-08	This study shows the problems faced by migrants in urban area. These obstacles are like livelihood, and other survive problems. On the other hand the main migration reason is increase in income level and the one more factor is recently included by this study which is Environment refugees. Because of natural disasters like drought and flood etc.
Kumar and Sidhu, (2005)	Explain the effect of pull and push factors on migration of labour in the context of Brick-Kiln workers in Punjab.	Factor analysis method	Primary data	This study shows that migration is highly influenced by better employment factor. This is recognised as a pull factor of rural to urban migration. And lack of jobs in origin place is a push factor of rural to urban migration. And another factor observed from this study is the preference of labours to nuclear family, which prefers to live in small family, so that they can get freedom from the burden of depth.
Harris and Todaro (1970)	To describe the rural to urban migration for economic development.	Theory		This theory describes that the transformation of labour from one traditional sector to another modern sector will increase growth of both economies rural as well as urban. There would be decrease in disguised unemployment in rural sector and increases the labour supply in urban sector. thus the economic growth will increase with the increase in rural to urban migration

CHAPTER-3

Trends and Pattern of Rural to Urban Migration in India

3.1 Introduction

This chapter analyse the time to time fluctuations in rural to urban migration in India. Trends of rural to urban migration serve the basic information to this study. Base of this study is strongly depending on this chapter. The historical aspect of this study is helpful to do further study with a proper direction. In this chapter, the available data census of India 2011, census of India 2001 and NSSO 64th Round (2007-08) has been taken to study the time to time variations in rural to urban migration in India. Pattern of migration can be shown through different streams of migration in India like; Rural-Rural, Rural-Urban, Urban-Rural and Urban-Urban. This study deals with rural to urban migration as the transformation of labour with having zero marginal productivity will increase the productivity of that labour in advanced sector. Thus this process related to the development aspect of economy. This chapter present the national level trends in rural to urban migration in India, rural to urban migration in states of India and provides the city level rural to urban migration.

Million plus cities are also called metropolises. The cities having population more than one million are called million plus cities. The largest part of Indian urban population is residing in these cities. Since 1901 the population of these cities has been increased rapidly.

Table 3.1: Number and percentage population residing in million plus cities (1901-2011)

Year	Population(in millions)	Percentage of urban population
1901	1.51	5.8
1911	2.76	10.7
1921	3.13	11.1
1931	3.41	10.2
1941	5.31	22.2
1951	11.75	18.8
1961	18.10	22.9
1971	27.83	25.5
1981	42.12	26.4

1991	70.66	32.5
2001	107.88	38.6
2011	160.6	42.6

Source: Bhagat (2005); census of India 2001

Table3.1 presents the number of people residing in million plus cities. According to the census of India 2011, 53 million plus cities are contributing 160.6 million urban populations, which is 42.6 percent of total urban population of India. The table3.1 shows the contribution of these million plus cities to the total urban population of India since previous ten decades.

3.2 Rural to Urban Migration in India

From the both reports of census of India 2001 and 2011, it is easy to analyse the increases in rural to urban migration from 200 to 2011. This level of migrants in 2011 is quit greater than given report by census 2001. Thus it has been observed that the migration from rural to urban area in India increases with 5 percent growth rate. This migration can be shown as following table:

Table 3.2: Number of rural to urban migrants in India on the basis of gender.

	2001	2011
India	5,30,19,371	8,26,11,203
Male	2,52,27,770	3,76,63,110
Female	2,77,91,601	4,49,48,093

Source: census of India 2001, 2011

Table 3.1 shows the rural to urban migration in India on the basis of gender. The report of census (2001) provides the result that the migration of females was higher in 2001 compare to male migration. female migration also rise from 2001 to 2011 with the growth rate of 5%, while the growth rate of rural to urban male migrants is 4%. Thus the overall migration growth of rural to urban migration in India from 2001 to 2011 is 5%.

On the basis of Census of India 2011, in India 8,26,11,203 persons moved from rural to urban area, in which the large part of migrants is female 54% and male migrants are 46%.The figure3.1 indicates that in India the large part of migrants belongs to the duration category of 10 year and above which is 61% and

the 1-4yr category (18%), 5-9yr (17%). And very less migrants observed in less than one year time duration (4%). Thus the greater part of migrants observed from the category of 10 year and above time duration. There are very less migrants in the category of less than one year. Thus this report indicates that in India the level of permanent migrants is higher than the other temporary migrants. The migration level of year category of 1-4 and 5-9 is also higher than the category of less than one year, but this level is below to 10year's migrants and the above time duration.

The all India level migration on the basis of time duration of migration can be shown through the following diagram:

Figure 3.1: All India rural to urban migration in 2011 on the basis of different durations of time.
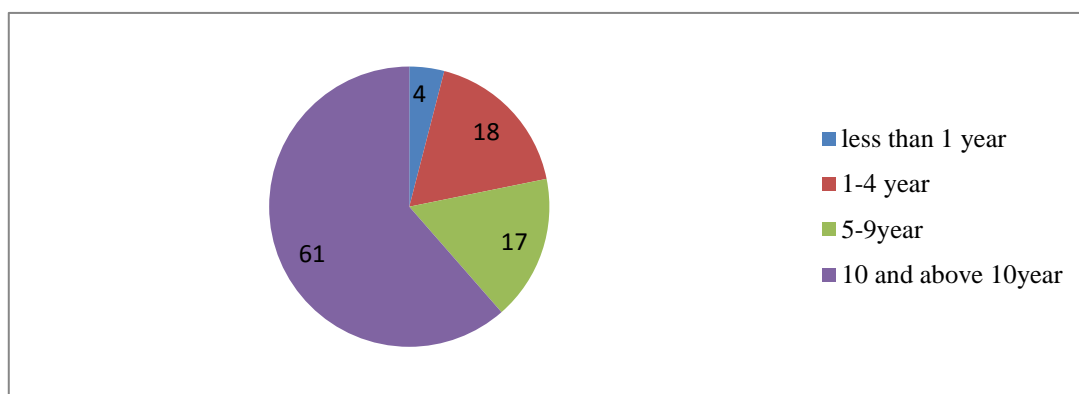
Source: Census of India 2011

On the basis of time duration of migration the level of migrants can be shown in the context of other aspects. On the basis of gender the estimation of female migrants and male migrants on the basis of time duration can be shown as below:

Figure 3.2: Percentage of rural to urban migration in India on the basis of gender
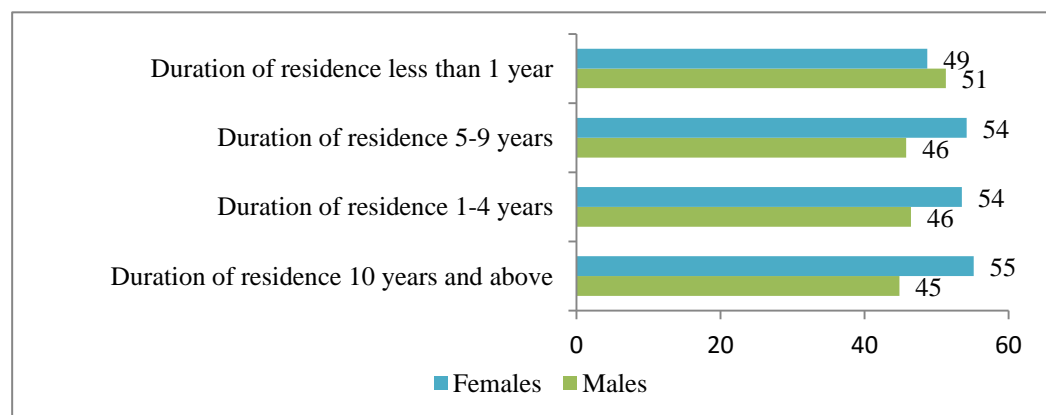
Source: Census of India 2011

The figure 5th shows the rural to urban migration gender wise on the basis of time duration of migration. From this figure it could be observed that the female migration is greater in 5-9yr, 1-4yr and 10 and above yr compare to male migration. The male migration is greater in one year's time duration and female migration in this duration category is less (49%) than male migration (51%). Thus it can be said that the female migration is greater than male migration in India.

3.3 State wise migration in India

Based on the 64th cycle of the Office of the National Survey of India (NSSO) on "Employment and Unemployment and Data Migration" from 7 July to 8 June with a sample of 1.25.578 households and 5.72.254 persons. It was found that 30% of this sample was the state that migrates between 85% and 15% throughout the state, where most displaced migrants to rural areas. Women's migration has found more than men. This migration can be described by the following table in which the states having the minimum and maximum percentage migration in different streams represented: the migration of the different streams can be illustrated by the diagram below. This shows the percentage of migration across India and within states (in states and between states as a dual aspect).

Thus from this diagram3.3, it is cleared that in internal migration the maximum percentage of migration occurred in the stream Rural to Rural. Rural to urban the maximum migration found in Delhi that is 54%. Sikkim having the minimum percentage value 12% of migration rural to urban. The percentage migration Urban to Urban is higher in Chandigarh which is 44%. Manipur found with higher percentage value of migration urban to urban. Thus from this figures we can show that the migration of rural to urban is less than rural to rural in India. So, there is a lack of economic growth because of less growth of urbanization. The growth of urbanization can be increased by the increasing population migration in rural to urban stream.

The top five states, which have high rural to urban migration, are Maharashtra, Gujarat, Uttar Pradesh, Andhra Pradesh, and West Bengal. This migration is shown according to the time duration of migrants, which has been divided into four time duration categories; migrants with less than one year duration, migrants with the time duration of one to four years, next category of migrants is five to nine year duration and the last category belong to the

permanent rural to urban migrants have duration of time ten years and more than ten years. Thus the migration within the state reported higher in these states.

Figure3.3: **Migration percentage in different streams (state wise internal migration).**

Legend: ■ Rural to Rural% ■ Rural to Urban% ■ Urban to Urban% ■ Urban to Rural%
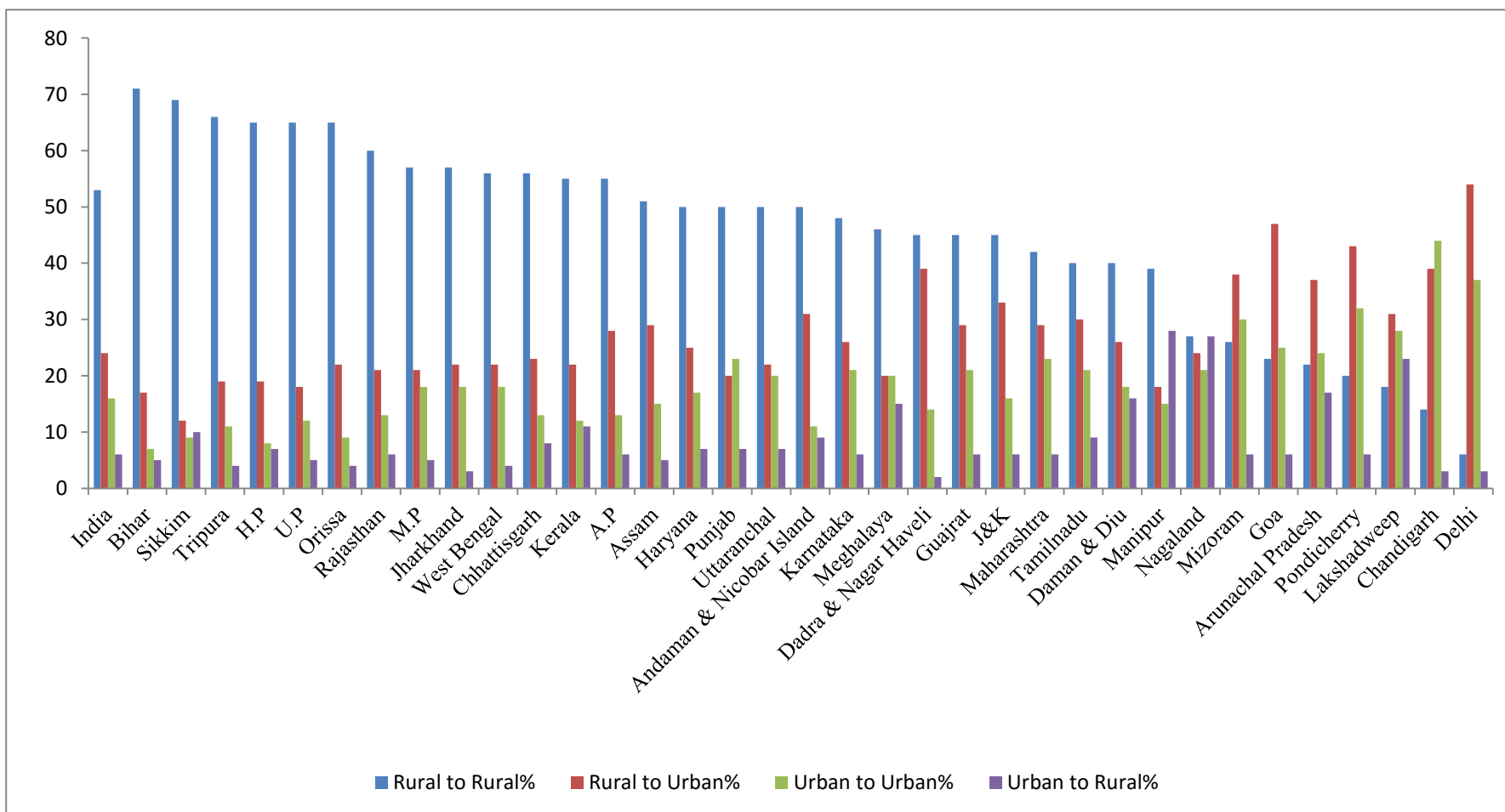
Source: NSSO64th Round (2007-08)

These states are also high populated states. The migration of rural to urban in these states has been shown through a diagram:

Table3.4: Rural to urban migration in top five states with high migration level on the basis time duration
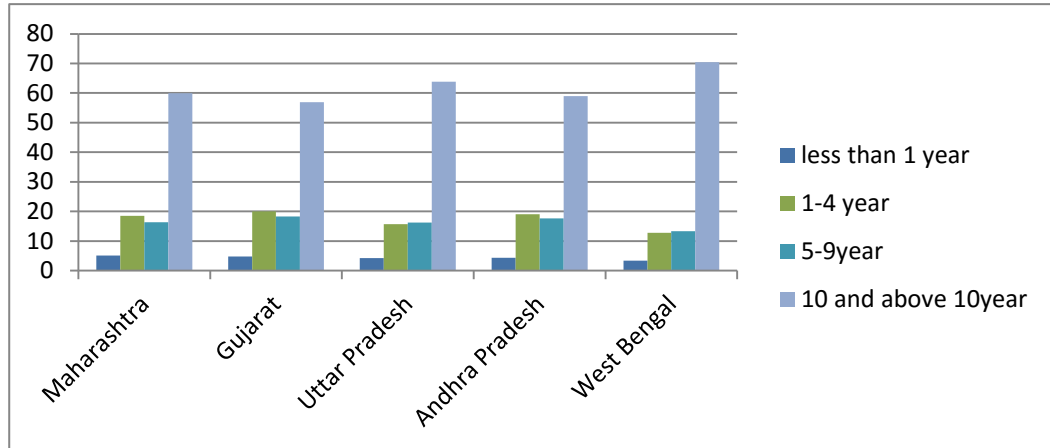
, *Source: Census of India 2011*

The diagram 3.4 shows the level of rural to urban migration in top five states with high rural to urban migration level on the basis of duration of time. The state which is ranked first is Maharashtra, in this state the great part of rural to urban migrants are occurred in the category of duration 10 years and above 10 years. Like Maharashtra in other four states there is high level of migrants belong to the migration category of 10year and above.

The largest part of rural to urban migration within state migration reported in Maharashtra state. In this state the Mumbai city is highly populated. This rural to urban migration has been taken from census of India 2011, which provide the results of rural to urban migrants occurred in the stream of intra state migration. This migration has been shown through a diagram:

Figure3.5: State wise percentage of rural to urban migrants in India
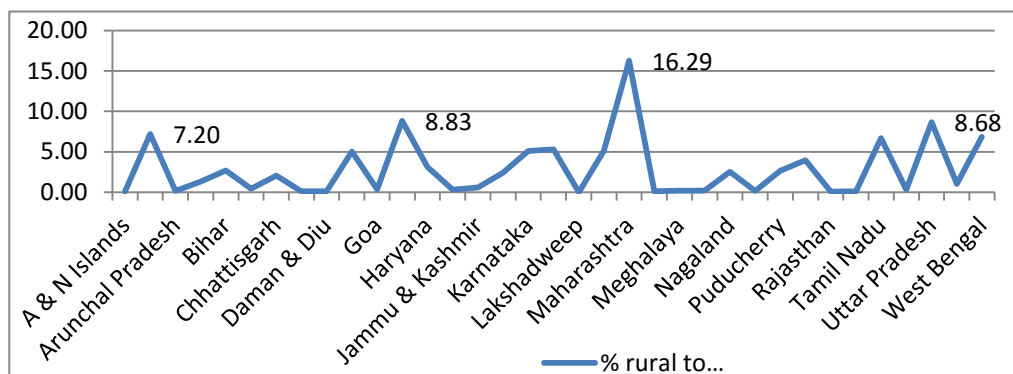
Source: Census of India 2011

This diagram shows high rural to urban migration in Maharashtra which is 16.02%. On the other hand Gujarat, Uttar Pradesh and west Bengal also having high percentage level of rural to urban migration.

Figure3.6: Growth rate in rural to urban migration state wise from 2001 to 2011
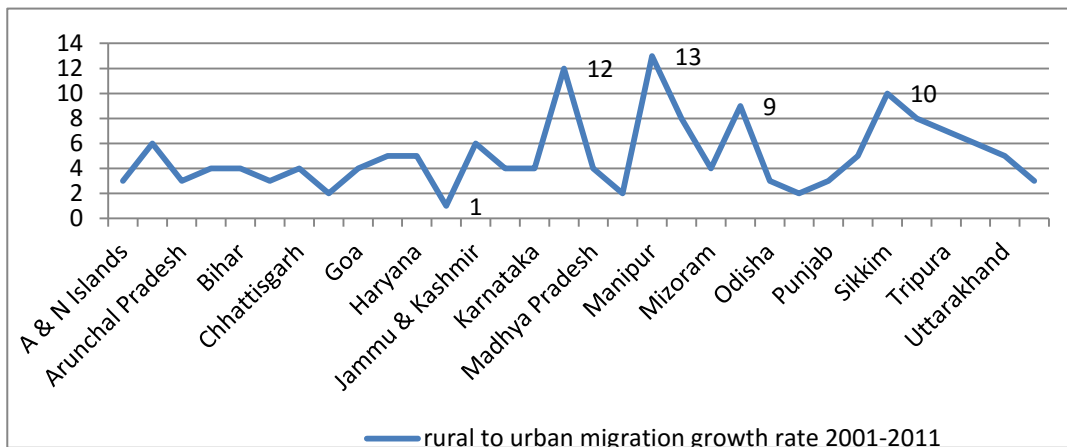
Source: Census of India 2001 & 2011

Figure3.5 indicates the decadal growth rate of rural to urban migration state wise in India from 2001 to 2011.the growth rate of rural to urban migration in Manipur, Kerala, Sikkim and Nagaland is higher than other states. On the other hand this growth rate is very less in Himachal pradesh, which is only 1 percent.

Figure3.7: Reasons of migration state wise
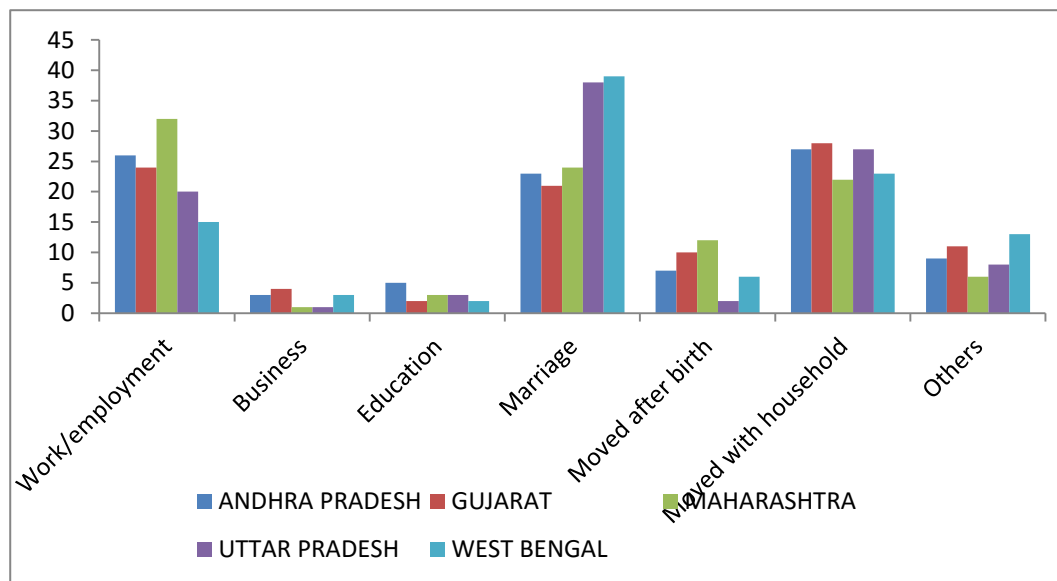
Source: Census of India 2011

The figure3.7 presents that high portion of rural to urban migration occurs due to the reasons of work employment, marriages and moved with households. The

percentage of marriage migration is very high in West Bengal and Uttar Pradesh, which is 39 and 38 percent respectively. In Maharashtra large part of rural to urban migrants shifted from rural to urban sector due to the reason of work and employment. 32 percent people in Maharashtra moved from rural to urban area for work and employment. In Andhra pradesh also a good section of people migrated from rural to urban due to the reason of work and employment. In this state migrants also belong to the category of moved with households. There are also some other reasons which are unexplained and highly effect the rural to urban migration. Thus from this figure it can be observed that people migrated from rural to urban area mainly because of marriage aspect and for work and employment. There is also a reason behind high rural to urban migration, which is moved with households.

3.4 City wise migration

Given the present focus on smart cities/million plus cities, it is necessary to consider India specific data on migration, particularly rural-urban migration, leading to a significant conclusion. The diagram below shows migration trends in the five million plus cities based on the 2001 India Census, on a time scale of 10 years and more than 10 years. Mumbai shows 17.32% of the population as migrants, which is significantly higher than in other cities in millions and over. The second-tier city, Delhi, declared 13.82% as a migration of the population. The figure below shows the level of migration to cities of 5 million. These cities are developed cities and indicate the large urban population. The proportion of these cities in the total urban population of India is very high. You can view the migration level of these cities as follows:

Figure3.8: Percentage of rural to urban migration in top five (as per population size) Million plus cities.
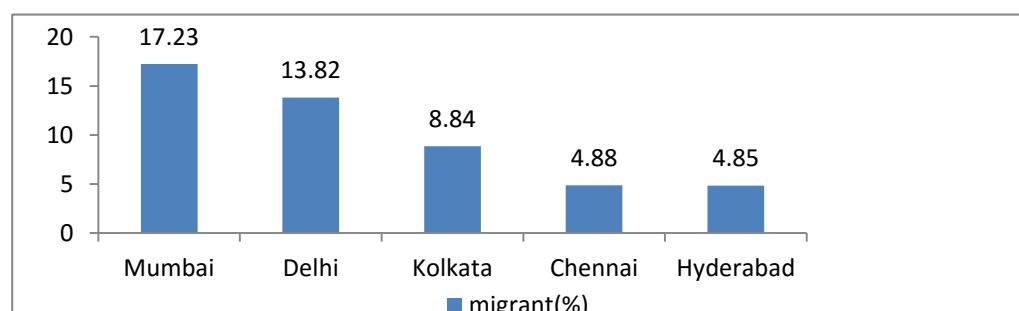
Source: Census of India 2001

The Census data also provides enough clues about the reasons for rural to urban migration in these cities. Figure3.5 shows the percentage of rural to urban migrants on the basis of reasons of migration in top five million plus cities with the time duration of ten years and more than ten years.

Figure3.9: Percentage of rural to urban migrants on the basis of reasons of migration in top five million plus cities
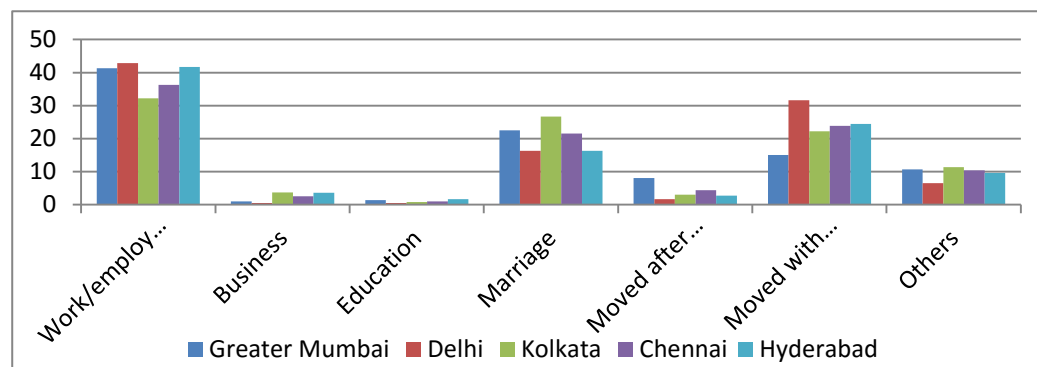
Source: Census of India 2001

The figure indicates that the main reasons for the migration of the population are labour and employment. Much of the migrants moved from backward to modern areas because of the attractiveness of employment opportunities. It should be noted that the largest rural-urban migration was Mumbai (28.47.510 persons), 41% of whom cited work and employment as reasons for migration; 22% of those migrated because of marriage where the percentage of women was higher than men. The migration to Delhi, Chennai and Hyderabad also shows the same pattern. Most migration from rural to urban areas has been dominated by employment and employment in these cities. Marriage and the subsequent location of households are also cited as causes of rural-urban migration.

3.5 Conclusion

This study indicates the variations in rural to urban migration in different time period. This chapter provide the trends in rural to urban migration India level, state level and also city level. From these descriptive analyses, it has been observed that the maximum migrants move towards rural to urban area only because of work and employment. In India high migration of females occurred due to marriage and the large portion of migrants belongs to the migration duration of 10 year and above 10 year.

CHAPTER-4

Empirical Framework and Results of the Estimation of Determinants

4.1 Introduction

This chapter of the study deals with the analysis of determinants of rural to urban migration in million plus cities**.** This study shows the main factors' affecting rural to urban migration in India. There are some negative factors in rural area and some positive factors in urban areas, which are the main reasons of transformation of people from rural to urban sector. For this estimation census of India 2001 is used as a source of data. Through OLS model the analyses indicate the factors, which put negative effect and positive effect on rural to urban migration. The pull push factors which has been collected through the review of literature in 2nd Chapter. Further this analysis provides the all relevant factors of rural to urban migration.

4.2 Analyses

To empirically investigate the determinants of rural to urban migration in large agglomeration in India, the following OLS regression model is used for estimation.

$$\text{Migrant} = \quad \alpha_0 + \sum_{i=1}^{5} \alpha_i X_i + \epsilon \dots\dots\dots\dots\dots \text{(1)}$$

In this case, the dependent variable "Migrant" in equation 1 has two different forms; First, it is measured by the percentage of rural migration to the large urban agglomeration in India and, secondly, measured in terms of the total number of rural migrants to urban areas. X are independent variables, to say that the city wise total self employed male, female self employed in city, inequality, the distance of the fixed lane of the city, the total number of electrical connections, male not in labour force, Casual workers male, output of city, poverty gap, indices of poverty between towns and cities, no. of Medical facilities, average rainfall of the city, the total receipts and city wise total number of colleges.

Table 4.1 explains the means, standard deviations, minimum, maximum, and coefficient of variation (CV) values for the variables used for the regression analysis. Most importantly, the CV aims to describe the dispersion of the variables in a way that does not depend on the variable's measurement unit. The higher values of CV for railway station distance from the city in and total number of electricity connections indicate a greater dispersion in these variables. On the other hand, city output, city

wise average rain fall and city wise total number of self employed male show a lower dispersion in these variables. On the other hand, Table 2 presents the row correlation coefficients.

Table 4.1: Description of data used in the regression equation

Variables	Mean	Std. Dev.	Min.	Max.	C.V.
Percentage of rural to urban migration in 2001 (prum)	18.6	12.2	2.7	47.4	65.7
Total number of rural to urban migrants (trum) (in thousands)	383.1	794.9	25.7	4651.5	0.21
City wise total Self employed male in 2004-05 (selfm)	328.4	94.6	188.8	615.8	28.8
City-wise self employed female in 2004-05 (self𝑓)	91.0	71.8	7.4	348.2	79.0
Level of inequality in 2004-05 (Gini)	0.3	0.1	0.1	0.6	28.7
Railway Station distance from the city in 2001 (rail dist)	0.4	1.4	0.0	8.0	383.6
Total no. of electricity connection in 2001 (elect) (in thousands)	461.4	1222.2	0.0	8560.3	0.26
Not in male labour force in 2004-05 (nlfm)	215.1	64.2	72.3	439.2	29.8
City-wise total number of universities in 2001 (univ)	1.1	1.2	0.0	5.0	105.0
Casual worker male in 2004-05 (casualm)	104.3	60.4	9.3	300.9	57.9
City output in 2001 (ddp)	16597.8	7614.6	797.2	38412.6	45.9
City-wise poverty headcount ration in 2004-05 (fgt0)	12.2	12.5	0.2	57.8	102.4
City-wise poverty headcount ration in 2004-05 (fgt1)	2.3	3.1	0.0	16.1	132.7
City-wise total no. of medical facilities in 2001 (medi)	187.4	213.8	2.0	781.0	114.1
City wise average rain fall in 2001 (rain)	1075.3	570.2	266.0	3053.0	53.0
City-wise total receipt through taxes and revenue derived from municipal properties (trmp) (in lakh) in 2001	14.9	53.2	0.0	380	0.004
City-wise total no. of colleges (ctc) in 2001	41.5	49.0	1.0	195.0	118.2

Source: Calculated by author by using 51 observations

Table 4.3 presents the estimated regression results from Equation (1). Regression 1 reports the full model where all the independent variables for OLS estimation are considered. On the other hand, regression models 2-4 represent the parsimonious model by excluding the explanatory variables that did no to show statistically significant results or match with the expected sign conditions. Regression models 1-5 consider the robust standard errors (to control for heteroskedasticity). The significant values of F statistics for Regressions 1-4 indicate that the overall model is statistically significant. The higher values of R^2 indicate that Regression 1 explains a good percentage of total variation in the dependent variable.

Table 4.2: Correlation Coefficient of Determinants of rural to urban migration in large cities in India

	prum	trum	Selfm	Selff	Gini	Raildist	elect	Nlfm	univ	casualm	ddp	fgt0	fgt1	Medi	Rain	trmp	ctc
Prum	1																
Trum	0.39	1															
Selfm	-0.16	-0.09	1														
Selff	0.33	0.16	0.54	1													
Gini	-0.23	0.08	-0.20	-0.09	1												
raildist	0.03	-0.03	-0.04	-0.22	-0.04	1											
Elect	0.15	-0.05	-0.16	-0.21	-0.16	-0.07	1										
Nlfm	-0.03	-0.02	-0.46	-0.34	0.16	0.37	0.24	1									
Univ	-0.14	-0.15	-0.05	-0.04	-0.06	-0.23	0.11	-0.11	1								
casualm	0.09	0.20	-0.26	0.03	-0.14	-0.19	0.22	-0.17	0.24	1							
Ddp	0.04	-0.03	-0.28	-0.22	0.01	-0.01	-0.07	-0.17	-0.12	-0.03	1						
fgt0	-0.11	0.08	-0.10	-0.08	0.17	-0.06	-0.07	0.12	-0.13	0.28	-0.18	1					
fgt1	-0.05	0.08	-0.18	-0.09	0.15	0.06	-0.05	0.20	-0.15	0.30	-0.12	0.93	1				
medi	0.06	-0.03	-0.17	-0.23	-0.11	0.29	0.10	0.04	0.02	0.04	0.22	-0.08	0.01	1			
Rain	0.03	-0.19	-0.09	-0.19	0.10	0.06	-0.03	0.03	-0.03	-0.21	-0.03	-0.15	-0.14	0.03	1		
Trmp	0.08	-0.03	0.08	-0.08	-0.16	-0.07	0.27	-0.19	0.13	0.06	-0.01	-0.06	-0.08	0.32	0.26	1	
Ctc	-0.03	-0.08	-0.11	-0.19	-0.13	-0.11	0.61	0.06	0.17	0.19	0.11	0.02	0.04	0.48	0.04	0.50	1

Note: See Table 1 for variable definitions. The correlation coefficients are based on 51 observations.
Source: Authors'.

Table 4.3: Determinants of rural to urban migration in large cities in India

	Dependent variable:				
	Percentage of Rural to Urban Migration				*Total Migrants from Rural to Urban*
Independent variables	(1)	(2)	(3)	(4)	(5)
City wise total no. of self employed male	-0.081** (0.031)	-0.092*** (0.027)	-0.094*** (0.027)		-0.006*** (0.002)
City-wise self employed female	0.117** (0.048)	0.123*** (0.045)	0.123*** (0.044)		0.006* (0.004)
City-wise level of inequality	-23.74 (19.69)	-31.714* (16.61)	-30.98** (14.39)		-0.447 (1.59)
Road distance to nearest railway station from a city	0.817 (0.847)	1.761* (1.02)	2.091** (0.782)		0.192 (0.109)
City-wise total no. of electricity connection	6.48*** (2.23)	0.276*** (0.081)	0.279*** (0.087)	6.01*** (1.48)	0.005 (0.007)
City-wise total no. of persons not in labour force	-0.005 (0.032)	-0.051* (0.028)	-0.054* (0.029)		-0.003 (0.003)
City-wise total number of universities	-0.855 (1.42)	-1.387 (1.162)		-1.93 (1.621)	
City-wise total no. of casual male worker	-0.033 (0.035)	-0.036 (0.030)	-0.048* (0.028)		
City wise per capita income	-6.284* (3.61)	-0.189 (1.908)			-0.054 (0.283)
City-wise poverty headcount ration	-0.024 (0.265)	0.032 (0.134)	0.051 (0.122)	-0.549** (0.263)	0.026 (0.046)
City-wise squared poverty headcount ration	0.216 (1.35)			2.12 (1.35)	-0.077 (0.194)
City-wise total no. of medical facilities	0.006 (0.008)	0.001 (0.008)			
City wise average rain fall	0.0004 (0.003)	0.002 (0.002)			
City-wise total receipt through taxes and revenue derived from municipal properties	0.056 (0.018)			0.028*** (0.009)	
City-wise total number of colleges	-0.069* (0.039)			-0.122*** (0.037)	
Intercept	56.39 (52.67)	61.405** (27.289)	62.96*** (14.38)	45.83*** (16.45)	14.59** (3.64)
No. of observations	51	51	51	51	51
R square	0.51	0.46	0.44	0.19	0.18
Adjusted R^2	0.28	0.29	0.33	0.08	0.003
F Statistics	4.59***	7.42***	9.65***	7.79***	1.74
Mean VIF	3.62	1.57	1.59	4.07	3.47

*Note: Figures in parentheses represent robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. Source: Estimated using equation 1.*

The study has also calculated the adjusted R^2, as it adjusts for the number of explanatory terms in a model, i.e., it incorporates the model's degrees of freedom. The multicollinearity problem does not seem to be troublesome, as the mean VIF values do not exceed 10 for Regression model 1-5.

Regression *1* shows that city-wise total self employed male population puts a negative effect on the percentage of migration from rural to urban areas. It can be shown from the analysis of the relevant data that the 100 percent increase, in city-wise total self employed males, will result to decrease of 8% of rural to urban migration. On the other hand, percentage of total self employed female in the city has a positive impact on the percentage of rural to urban migration. This analyses shows that cities having higher percentage of self employed females attract higher rate of rural to urban migration whereas cities having higher percentage of self employed males, discourage the urban migration. This may be the case that the women sector of the society thinks that if they would have the chance to make them self employed in the urban city areas then more rural women from rural households will be willing to migrate to urban areas to earn more, provided that their male partners of the family would also find jobs in the same city. The possibility of the increase in income of the households i.e. the persons would make rural to urban migration easier and also attractive.

On the other hand, city-wise availability of higher number of electricity connections and also the supply of the electricity has a positive impact on migration rate from rural to urban areas. The estimated result shows that a little part of 10 percent increase of total number of electricity connection, in the host city, increases 65 percent of the migration from the rural to urban. It is important to indicate here that availability of electricity connections stand as the availability of infrastructure facility. The result indicates that infrastructure facility has a positive impact on migration rate of rural to urban areas. Finally, regression 1 shows that city wise per capita income also has a negative impact on percentage of rural to urban migration. This means that if a city has higher per capita income (i.e., richer city), it discourages rural to urban migration. It is therefore indicator to the fact that a richer city may be more expensive for a common person to migrate from rural to urban areas which would ultimately affect his living cost. City-wise total number of colleges also has a negative impact on percentage of rural to urban migration. This indicates that the educational facilities do not attract higher percentage of rural to urban migration. The other independent

variables i.e., city-wise level of inequality, road distance from a city to nearest railway station, poverty ratios, medical facilities, number of universities, average rain fall, and total receipt through taxes and revenue derived from municipal properties do not show any statistically significant effect on the percentage of rural to urban migration.

Regression 2 shows very relevant results; it shows that competition level and inequality in a city amongst people has a negative impact on the percentage of rural to urban migration. On the other hand, road distance from the nearest railway station to a city exerts a positive impact. In particular, one percent increase in level of inequality (or road distance from nearest railway station to a city) results in decrease (or increases) 32 (or 2) percentage of the rural to urban migration. The results also indicate that if a city has higher level of inequality among people, it discourages the aspirants of rural to urban migration. On the other hand, if a city has higher road distance from the nearest railway station, naturally indicates the lower economic potential and therefore it encourages rural to urban migration. This means that cities having lower economic potential i.e if less expensive, attracts higher rural to urban migration. Similarly, cities having lower percentage (number) of persons those are not in labour force attract lower percentage of rural to urban migrations. This shows that employment potential in the host city is one of the main factors behind the thinking of the individual and which will surely effect the rural to urban migration. People moves from rural areas with the expectation of getting absorbed in the urban areas. City wise total number of self employed male or females, and total number of electricity connections of the host city has a similar impact on percentage of migration rate of rural to urban areas as explained in regression 1. However, city-wise total number of universities, number of male casual workers, poverty head count ratio, medical facilities, and average rain fall again do not show any statistically significant effect on percentage of rural to urban migration. Most importantly, city wise per capita income lost its significant level in regression 2 compared to regression 1.

Regression 3 study shows that city-wise total number of male casual worker has a negative impact on migration to urban areas. If 100 percent increase in total number of casual workers than it will decrease, rural to urban migration by about 5 percent. This clearly indicates that cities need to provide formal regular jobs and more employment opportunities than making the migrants casual workers. This will effect to attract higher level of rural to urban migration. City-wise total number of self employed males or females, level of inequality, road distance from nearest railway

station to a city, availability of electricity connections and number of persons not in labour force show a similar impact on percentage of rural to urban migration. However, city-wise poverty situation does not have any significant impact on rural to urban migration.

Regression 4 shows that city-wise higher poverty ratio (measured by poverty head count) also has a negative impact on city-wise rural to urban migration. A 10 percent increase in poverty head count ratio decreases city-wise rural to urban migration by about 5.5 percent. This indicates that poorer cities discourage rural to urban migration. On the other hand, city-wise higher total receipt received through taxes and revenue derived from municipal properties, also have a positive impact on rural to urban migration. This indicates that strong economic conditions encourage higher rural to urban migration. The availability of electricity connection in a city shows a positive impact on rural to urban migration as explained in regression 3. However, city wise total number of universities and squared poverty gap ratio again do not show any statistically significant affect on city-wise rural to urban migration.

Finally *regression 5* considers the total numbers of rural to urban migrants as the dependent variables. The estimated results show that city-wise total number of self employed males has a negative impact, and city-wise total number of self employed female has a positive impact on city-wise rural to urban migration. These results are identical to the results obtained in regression models 1-3. However, other independent variables do not show any statistically significant effect on city-wise rural to urban migration. It also indicates that the data considered in this study does not fit properly when the total number of rural to urban migrants is considered as a dependent variable.

4.3 Conclusion

This study is based on 2001 data analysis, to investigate the determinants of migration from rural to urban in large cities of our country i.e. India. To do the analysis, data from various sources has been collected for the study like Census of India, unit/individual level data of National Sample Survey data on employment and unemployment and consumption expenditure data. Due to lack of city-wise data, the district level data is used by considering urban sample located in that particular district as a proxy of the city. OLS regression method is used in the doctrinal analytical study. City wise migration statistics rate from rural to urban and total

number of rural to urban migrants are considered as dependent variables in the present study.

The descriptive analysis of the abovementioned data analysis, shows that the rate of urbanisation in India is much lower than other developed countries. Natural increase in population is one of the major factor and the main source of increase in the urban population in India. The net rural to urban migration from 1991 to 2001 is recorded about 21 percent. The States having developed economy have been witnessing higher migration rate from rural to urban areas than economically underdeveloped states. In our country, amongst the metro cities, Mumbai has recorded the highest migration rate (i.e., 17.32%) from rural to urban areas, in the time span of ten years and more, among all other large agglomerations. The major reportable factors of migration of population from rural to urban places are marriage and work or employment opportunities according to the City-wise data analysis.

The OLS regression results show that the city-wise total number of male self-employment, inequality amongst the opportunities in city, male population which is not in labour force, casual labour sector of the male population, city-wise per capita income, poverty at city level (measured by poverty head count ratio) and city wise total number of colleges are the reasons having a negative effect on city-wise status of rural to urban migration. On the other hand, the positive factors in the migration are recorded to be city wise total number of self employed females, the distance to nearest railway station via road from a city, the total of number of electricity connections and increase in the supply of electricity approach to rural areas and city-wise total receipts through taxes and revenue derived from municipal properties. On the other hand, city-wise total number of self employed male has a negative and city wise total number of self employed female has a positive impact on city-wise total number of rural to urban migrants. These results clearly indicates that apart from the other factors the city level employment situations, city level inequality level among people, city level poverty and infrastructure facilities and arrangements play an important role in rural to urban migration.

It is quite obvious from the complete analysis that the developed country needs more urban classified population i.e. rural to urban migration, for larger economic development in India. In rural areas, more population is dependent upon agriculture, and the higher dependence on agriculture leads to disguised unemployment in rural areas and also the less scope of individual development.

Hence if the unemployed population or the unwanted population is relocated to urban areas, then the supply of labour for work opportunities and demand of consumer goods in the urban population will increase in urban areas also. This will in turn lead to more production, higher level of economic activity and also higher per capita income. The level of job opportunities in the cities will also increase in this process. And this increase will promote investments which will in turn lead to further economic growth. So, the economic growth in India can be catalyzed through urbanization resulting from rural to urban migration growth.

In this perspective we suggest the following policies for the ultimate benefits of the raising of the economic growth;

Firstly, we need to increase the job opportunities i.e. more employment in the urban areas for higher rural to urban migration.

Secondly, level of urban poverty and urban inequality has to be controlled for this purpose and concepts of equal opportunity and equal wages be promoted.

Thirdly, basic urban infrastructure facilities such as road, electricity, education etc has to increased not only to make and seek more investments but also making the investors friendly to promote rural to urban migration which would ultimately create the interest of the rural population to get migrated in the more facilitated and easily approached urban areas for better living.

Finally, living cost such as urban housing prices has to be controlled for making Indian cities migrant friendly for higher and sustainable economic growth.

CHAPTER-5

Empirical estimation of impact of rural to urban migration on economic growth

5.1 Introduction

This chapter analyse the impact of rural to urban migration on economic growth of states. The previous studies have shown the positive impact of rural to urban migration on economic growth. In this chapter this impact has been estimated through simple regression model, where the migration is dependent variable and Gross State Domestic Product (GSDP) is dependent variable. This estimation provides the significant results. From the predicted results, it has been observed that rural to urban migration put a positive impact on GSDP. Thus this migration increases the economic growth of an economy. This empirical part provides the information that migration increases the urbanization and this urbanization increases the economic growth of state. Urban sector contribute a large part to GDP of economy, thus this aspect has been cleared by this model. This estimation covers the all assumptions of regression model. Table5.1 indicates the summary of data. It provides the mean, standard error, minimum and maximum of variables. In table 5.2 correlations in all the variables has been mentioned. The table5.3 shows the results of this prediction.

For the estimation of impact of rural to urban migration on growth of economy 32 states has been taken as sample. The data has been taken from census of India 2011, which provides the state level migration with reasons of migration on the basis of age sex and duration of migration. Data for the state level GDP at constant prices has been taken from planning commission, government of India (2011-12).

5.2 Analysis

To check the impact of rural to urban migration on economic growth, the following simple regression equation is used to predict the results.

$$\text{GSDP} = \alpha_\text{o} + \sum_{i=1}^{5} \alpha_i X_i + \epsilon \dots\dots\dots\dots\dots (1)$$

In this equation (1) GSDP is dependent variable, which shows the gross domestic product of states. The X_i indicates the independent variables which are; rural people migrate to urban sector for employment, migration of people from rural to urban for business, migration due to the reason of education and the people moved with households.

To analyze the relation and impact of migration on GSDP, the sample of 32 states has been taken[3]. In table5.1the analysis provide the description of data. This table shows the mean, standard deviation of variables, maximum, minimum and coefficient of variation (C.V) values for the variables used for the simple regression model. CV describes the dispersion level of variables in a way that does not depend on the variable's measurement unit. The higher value of CV indicates the greater dispersion in these variables. In table5.1 the CV of employment reason and CV of business reason having high dispersion.

Table 5.1: description of data used in the regression equation

Source: Calculated by author by using 32 observations.

Variable	Obs	Mean	Std. Dev.	Min	Max	C.V
Gross state domestic product in 2011-12 (GSDP)	32	155916.3	179060.3	3733	777791	114.8
Total rural to urban migrants in 2011 (RUmig)	32	2575879	3026278	46525	1.35E+07	117.4
Rural to urban migrants for employment in 2011(empReason)	32	608844.3	852996	7911	4256082	140.1
Business reason behind rural to urban migration in 2011 (bsnsReason)	32	44840	68205.18	1249	313266	152.1
Moved for education purpose in 2011 (eduReason)	32	75654.44	92459.04	1720	386777	122.2
People moved with households in 2011(househldRsn)	32	673841.3	745500	9054	2970220	110.63 44

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[3] Arunachal Pradesh, Assam, Bihar, Chandigarh, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Pondicherry, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, Uttarakhand and West Bengal.

Table5.2: Correlation coefficients of variables to estimate the impact of rural to urban migration on states' GDP.

	GSDP	empRea~n	bsnsRe~n	eduRea~n	househ~n	RUmig
SDP	1.0000					
empReason	0.9381	1.0000				
bsnsReason	0.6968	0.6448	1.0000			
eduReason	0.9111	0.8890	0.6296	1.0000		
househldRsn	0.9642	0.9385	0.7130	0.8642	1.0000	
RUmig	0.9847	0.9512	0.7079	0.8910	0.9819	1.0000

Source: Author.
Note: Table5.1 defines the variables. The correlation coefficients are based on 32 observations

The table no.5.2 indicates the correlation between the variables. The predicted results show that there is a positive relation between all the variables thus the migration put a positive impact on gross state domestic product of economy. An increase in rural to urban migration, raise the GSDP of economy. The migrants who moved for the reason of employment/work, business purpose, for education reason and moved with households put a positive impact on gross domestic product of states. The GSDP and total rural to urban migrants are highly correlated with the value of correlation 0.98 On the other hand there is also high degree correlation GSDP and employment migrants, GSDP and migrants moved with households, GSDP and migrants moved for education purpose, which is 0.938, 0.96 and 0.93 respectively. Thus the impact of these variables on GSDP is positive. This prediction shows that the rural to urban migration raise the economic growth by increasing the urbanization.

Table5.3 indicates the estimated regression outputs from equation (1). This model analyzes the impact of rural to urban migration in two aspects. Firstly, the regression model (i) predicts the impact of total rural to urban migrations on gross state domestic product. On the other hand the regression model (ii) and (iii) shows the impact of categorised migrants on GDP of states of India. Model (ii) presents the full model, where all the independent variables for regression analysis are considered. It shows the impact of all variables on GSDP. Further the parsimonious model (iii) predicts the significant level by dropping an explanatory variable, which didn't show statistical significant results. The predicted output of model (iii) presents the overall significant results.

Table5.3: Impact of rural to urban migration on gross state domestic product (GSDP).

Independent variables	Dependent variable Gross State Domestic Product(GSDP)		
	(i)	(ii)	(iii)
Total rural to urban migrants	0.058*** (0.001)		
Rural to urban migrants for employment		0.02 (0.03)	0.12*** (0.02)
Business reason behind rural to urban migration		0.04 (0.18)	0.33** (0.16)
Moved for education purpose		0.53** (0.15)	0.65*** (0.21)
People moved with households		0.14*** (0.03)	
Intercept	5834.3 (3252.2)	440.5 (4698.6)	20609.8** (9502.8)
No. of observations	32	32	32
R	96.7	0.95	0.92
Adj R	95.6	0.94	0.91
F statistic	1180.4***	185.2***	103.5***
Vif	1.00	7.00	3.9

Note: Figures in parentheses represent robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. Source: Estimated using equation 1.

The regression models (i) to (iii) consider the robust standard errors (to control the heteroskedasticity). Model (i) present the impact of total rural to urban migrants on GSDP. Here, GSDP is dependent variable and total rural to urban migration. The significant value of F statistics for model (i) indicates that the model is fit. The higher value of R^2 presents that the regression model (i) explains that there is good level of variations in dependent variable. Adj R^2 shows the variations in dependent variable due to unexplained variable. Thus the both R^2 and Adj R^2 describe the total variations by total rural to urban migrants in dependent variable (GSDP). There is no multicollinearity problem occurred due to the VIF value does not exceed more than 10 for the regression model (i).

Regression model (ii) and (iii) predict the impact of reason wise rural to urban migration on GSDP. These variables are; migrants moved to urban sector for

employment, rural to urban migrants moved for business purpose, migrants moved due to education reason and the migrants moved with households. The present output in model (ii) provides the full model by considering the all variables of regression equation. The predicted output indicates the significant results. The model (iii) analyzes the impact of independent variable by parsimoniously excluding the explanatory variable that didn't provide the significant results. Model (ii) presents F value statistically significant. The overall model is significant due the significant value of F. The provided value of F by regression (iii) also shows that the overall model is significant. The higher values of R^2 of both models (ii & iii) indicate that the variation in independent variables shows a good percentage change in dependent variable. As the value of VIF doesn't exceed 10 for regression ii & iii, it implies that there is no multicollinearity problem occurred in model.

The regression model (i) shows that total rural to urban migrants has a positive impact on GSDP. In particular, 100 percent change in rural to urban migration increases the GSDP by 5 percent. However, in model (ii & iii) 100 percent change in rural to urban migration for employment raise the GSDP by 12 percent. Similarly the 100 percent change in other variables migration for business, migration for education and moved population with household increases the GSDP by 33%, 65% and 14%. Rural to urban migrants moved due to educational purpose create higher variations in dependent variable. The higher the migration due to business purpose increases the GSDP with high percentage of variations. Thus the overall prediction provides the positive impact of rural to urban migration on Growth level of sates. The all variables show a statistically significant impact on economic growth of states. Regression (iii) shows a parsimonious model by excluding an explanatory variable to get the significant results of that variable which didn't show the significant value. This model presents the output, where all the variables are significant. Thus the overall prediction provides a effective output.

5.3 Conclusion

This empirical chapter analyzes the impact of rural to urban migration on economic growth of states by using simple regression model. First section of analysis examines the impact of total rural to urban migrants on growth of states. And the next section of analysis estimates the impact of reason wise migrants on GSDP. The predicted results show a significant impact of these independent variables on GSDP.

Higher the rural to urban migration raises the growth level of states. The regression results show that there is a positive impact of all the variables on growth of economy. The persons migrated for education purpose highly creates positive variations in growth of states. Thus the rural to urban migration raise the economic growth. as this prediction shows positive impact of migration on state's growth, this rural to urban migration could also put a positive impact on whole economy. To increase economic growth there is a need to increase rural to urban migration in an economy. The increases in rural to urban migration, decreases the disguised unemployment and illiteracy in economy. Thus the economic growth and development will increase with increases in rural to urban migrants.

Figure5.1: Histogram to check Normality
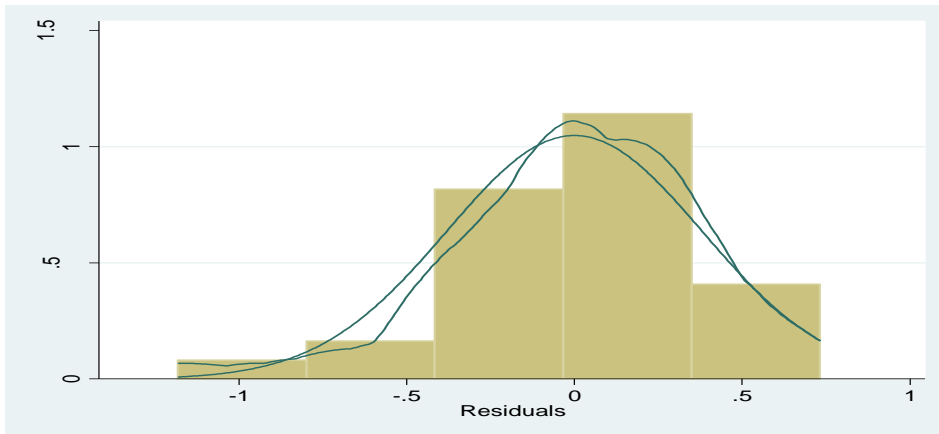
Figure5.2: Plot to check the heteroskedasticity in variables
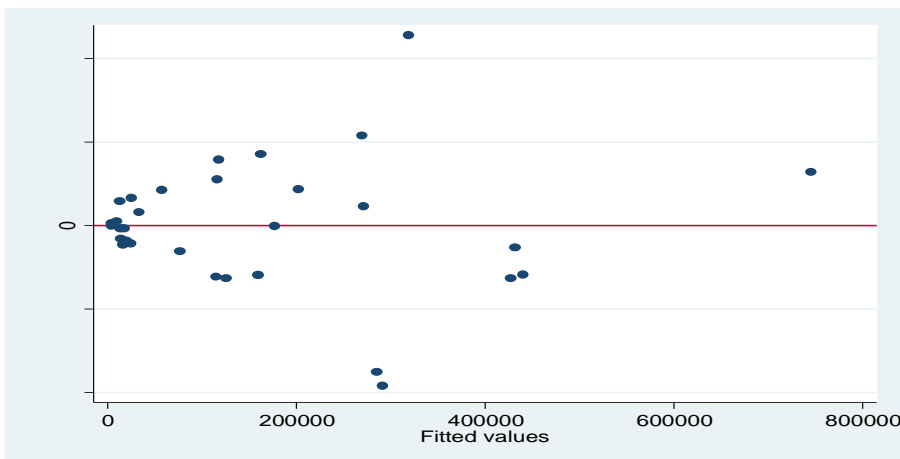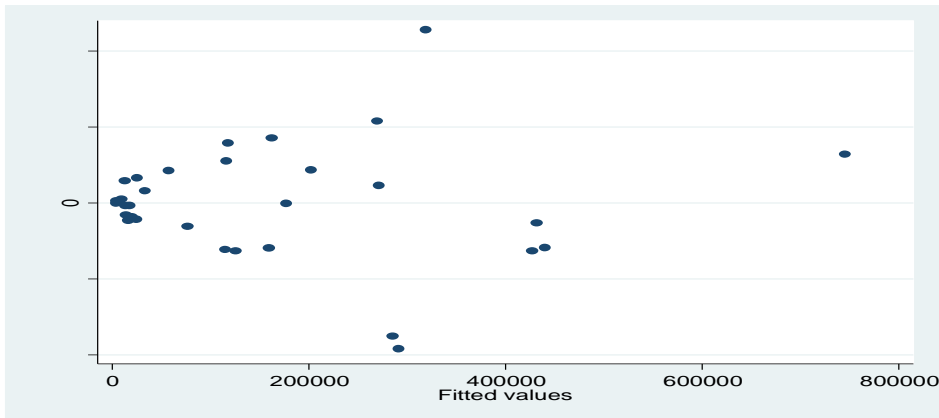
CHAPTER-6

State wise Empirical Estimation of Determinants of Rural to Urban Migration

6.1 Introduction

This chapter reveals the factors affecting rural to urban migration state wise in India. To analyze these factors, simple regression model has been adopted. The predicted result shows the significant impact on rural to urban migration by using parsimonious model. There are some negative factors from rural area that put positive impact on rural to urban migration and there are also some positive factors in urban area that attract people to move from rural area to urban area. Thus this study provides the impact of these factors on rural to urban migration. These factors are also known as pull and push factors. Thus this study helps to examine the factors effecting rural to urban migration.

6.2 Analyses

To examine these determinant 32 states has been taken as a sample of study[4]. Nine independent variables have been taken to check the impact of this variable dependent variable which is rural to urban migration[5]. Thus the predicted results show the significant results. The data has been taken from census 2011, which provide state level rural to urban migration on the basis of duration of movement of people, age and last residence. It also provides the reasons behind rural to urban migration in these states. To do this study, following Regression equation has been used:

$$\text{Migration} = \alpha_{\text{o}} + \sum_{i=1}^{9} \alpha_i X_i + \epsilon \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Here, rural to urban migration is dependent variable and X_i indicates the independent variables, 9 independent variables has been taken in this study: Self employed in rural sector per 1000 persons, self employed in urban sector per 1000 persons, total casual employed in rural sector per 1000 persons, total casual employed in urban sector per 1000 persons, literacy ratio per 1000 persons, marginal per capita expenditure in

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[4] Arunachal Pradesh, Assam, Bihar, Chandigarh, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Pondicherry, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, Uttarakhand and West Bengal.

[5] Self employed in rural sector per 1000 persons, self employed in urban sector per 1000 persons, total casual employed in rural sector per 1000 persons, total casual employed in urban sector per 1000 persons, literacy ratio per 1000 persons, marginal per capita expenditure in urban sector, total number of colleges, total number of universities, persons below poverty line in rural area

urban sector, total number of colleges, total number of universities, persons below poverty line in rural area.

Table6.1: Description of data used in regression equation.

Variable	Obs	Mean	Std. Dev.	Min	Max	CV
total rural to urban migrants(Trum)	32	2575879.00	3026278.00	46525	1.35E+07	117
self employed in rural area(slfRemp)	32	536.47	148.70	253	800	28
casual labour in rural area(cslRemp)	32	241.44	143.96	4	512	60
self employed in urban area(slfUemp)	32	341.84	88.70	166	582	26
casual labour in urban area(csulUemp)	32	107.50	54.00	30	251	50
literacy ratio(literatePrs)	32	750.41	87.07	597	892	12
MPCE in urban(MPCEurb)	32	2644.09	668.49	1483	4642	25
persons below poverty line in rural(prsBPL)	32	67.98	104.21	0.04	479.35	153
no, of colleges(colgs)	32	1018.63	1378.10	6	4780	135
no. of universities(unis)	32	20.00	16.53	2	59	83

Source: Author's calculations by using 32 observations

Table 6.1 shows the summary of the data, which provide the mean, standard deviation, minimum, maximum value and CV (coefficient of variation). CV shows the dispersion level in variables that these variables don't depend on variable's measurement units. The higher value of CV indicates the higher dispersion level in variable. Total rural to urban migration, persons below poverty line, number of colleges and number of universities has high CV value which indicates the high dispersion in these variables. In table 6.2 the correlation between these variables has been shown. From the table 6.2, it is clear that self employed in rural area put negative impact on rural to urban migration. On the other hand self employed in urban, casual labour in rural, number of universities, number of colleges, persons below poverty line in rural area and marginal per capita expenditure in rural area put a

positive impact on rural to urban migration. In the context of literacy rate, it was expected that it put positive impact on rural to urban migration, but the predicted results shows the negative impact of literacy rate on rural to migration. The main reason behind this aspect is high competition in urban sector due to high literacy rate. Rural literate persons would be unable to survive in urban sector because they would not be agreed to do any kind of job below their education level. They would prefer jobs on the basis of their education level. Thus third put negative effect on rural to urban migration.

The table 6.3 indicates the results predicted from regression equation (1). To get appropriate results log has been taken for all the variables. Regression report (i) present the full model where all the independent variables for estimation are considered. On the other hand regression model (ii) to (iv) provide the parsimonious model by dropping the explanatory variables that didn't show the significant results. The value of F is statistically significant, which shows that the overall model is significant. The higher value of R^2 indicates that the high variation occurs in dependent variable due to change in independent variables.

The Adj R^2 shows the variations in dependent variables due to changes in independent variables. The value of Adj R^2 is also quite good. Thus this shows the degrees of freedom. The value of VIF is less than 10, which shows that there is no multicollinearity in variables.

To check the heteroskedasticity Breusch- Pagan/ Cook- Weisberg test has been applied, the predicted value (0.179) shows that there is not any heteroskedasticity in variables. Therefore these all results indicate that the all models are statistically significant and appropriate. The regression model (i) predicts the results by considering all the variables. This prediction indicates that self employed in rural area pit a negative impact on rural to urban migration. on the basis on predicted results, a 100 percent increase in rural self employment will decrease rural to urban migration by 15 percentage.

Table 6.2: Correlation coefficients of variables used in regression equation.

	logTrum	lo~fRemp	lo~fUemp	logcsu~p	loglit~s	logMPC~b	logcolgs	logunis	logprs~L	logcsl~p
logTrum	1									
logslfRemp	-0.1622	1								
logslfUemp	0.3738	0.3692	1							
logcsulUemp	0.302	-0.238	-0.3025	1						
logliterat~s	-0.58	-0.154	-0.3689	-0.3668	1					
logMPCEurb	-0.0694	-0.4986	-0.6514	0.0463	0.3739	1				
Logcolgs	0.8457	-0.0508	0.3101	0.3511	-0.5626	-0.1359	1			
Logunis	0.7993	-0.0796	0.1464	0.3833	-0.5819	0.0791	0.7614	1		
logprsBPL	0.7753	0.2223	0.5532	0.3683	-0.7213	-0.5131	0.748	0.5789	1	
logcslRemp	0.5341	-0.2817	0.1077	0.6913	-0.5435	-0.0495	0.5864	0.5119	0.584	1

Source: Author

Note: See Table 1 for variable definitions. The correlation coefficients are based on 51 observations.

Table 6.3: Determinants of rural to urban migration in states of India.

| Independent variables | Dependent variable (Total Rural to Urban Migration) | | | | Expected signs |
	(i)	(ii)	(iii)	(iv)	
Self employed in rural area	-1.5*** (0.45)	-1.45** (0.55)	-1.27** (0.52)		(-)
Self employed in urban area	1.14 (0.74)		1.46** (0.72)	2.73** (1.08)	(+)
Casual urban labour	-0.01 (0.36)	-0.57* (0.31)			(-)
Literacy ratio per 1000 persons	0.12 (1.47)	-1.17 (1.78)		-5.77** (2.49)	(+)
Casual labour in rural sector	-0.29 (0.17)			0.41* (0.23)	(+)
MPCE in urban	1.57** (0.75)	2.46*** (0.76)	2.96*** (0.18)	2.59** (1.20)	(+)
No. Of colleges	0.19* (0.11)				(+)
No. Of universities	0.05** (0.19)				(+)
Persons BPL in rural area	0.47*** (0.11)	0.75*** (0.10)	0.68*** (0.57)		(+)
Intercept	1.37 (13.38)	11.79 (14.5)	-11.82 (10.33)	13.68 (21.15)	
No. Of observations	32	32	32	32	
R^2	0.90	0.81	0.18	0.52	
Adj R^2	0.87	0.77	0.78	0.51	
F Statistic	24.51***	22.12***	29.12***	7.52***	
VIF	3.45	1.75	1.75	1.72	

*Source: Estimated using equation 1. Note: Figures in parentheses represent robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.*

Thus rural self employment discourages rural to urban migration. if the people are getting jobs in rural area or doing own business then they will not prefer to leave their own home. The decreases in self employment in rural area will increase the rural to urban migration. On the other hand MPCE in urban sector put positive impact on rural to urban migration. If MPCE increases by 10 percent then rural to urban migration will increase by 15 percent. If the marginal per capita expenditure increases then demand for consumer goods will increase. This increase will raise the demand for labour to increase production.

So, it is clear that the labour demand will provide more job opportunities to rural people and it will encourage people to move from rural area to urban area. There is also positive impact of number of colleges, number of universities and people below poverty line in rural area on rural to urban migration. 100 percent increase in number of colleges raise rural to urban migration by 19 percentage points. Due to 100 percent increase in number of universities, rural to urban migration will increase by 5 percent. Also an increase in rural poverty will increase rural to urban migration. From the predicted result it has been found that a 100 percent increase in rural poverty ratio, will increase rural to urban migration by 47 percentage points, which is quite higher. Thus the poverty in rural sector and MPCE in urban sector highly influence the rural to urban migration. These all factors are statistically significant and provide the appropriate results.

In second regression model (ii) some factors are dropped to make other variables significant. This model is known as parsimonious model, in which some non significant variables have been dropped to get all the variables significant. In this model, casual labour in urban sector become significant and put negative impact on rural to urban migration. A 100 percent rise in casual labour in urban sector will decrease rural to urban migration by 57 percent. It is because people don't prefer casual work they prefer salaried job or self employment in urban area. The next model (iii) shows that self employment in urban area has positive impact on rural to urban migration. An increase in self employment in urban area will rise rural to urban migration positively. The increase in self employment in urban sector by 10 percent, rural to urban migration will increase by 14 percent. Thus rural to urban migration highly influenced by self employment in urban sector. In last model (iv) the other two variables get statistically significant. The literacy ratio put negative effect on rural to urban migration and casual labour in rural sector put positive impact on rural to urban migration. An increase in literacy rate will decrease rural to urban migration.

A 10 percent increase in literacy ration, will rise rural to urban migration by 25 percent. Due to increase in education level, competition in urban sector will also increase. Thus rural people will be qualified more and they will not get job easily in urban sector at the level of their qualification. It could be difficult for rural people to compete with urban qualified people. Thus this factor decreases the rural to urban migration. On the other hand the casual labour in rural sector put positive effect on

rural to urban migration. As the casual labour increase by 100 percent, rural to urban migration will increase by 41 percent points. Thus in this chapter all the relevant determinants of rural to urban migration has been predicted. This prediction provides some factors which put negative effect on rural to urban migration. On the other hand there are also some factors that put positive impact on rural to urban migration.

6.3 Conclusion

This chapter provide the estimation of factor effecting rural to urban migration by using simple regression model. For this analyse data has been collected from various sources like census of India 2011, planning commission and NSSO 68th Round. To estimate these aspect 32 states has been taken as a sample of study. Rural to urban migration is dependent variable and nine variables have been taken as independent variables.

From the review of literature it has been observed that there are some pull an push factors which effects the rural to urban migration. Push factors are negative factors in rural area and pull factors are positive factors in urban area. The negative factors like; poverty, unemployment and lack of educational institutes highly put effect on rural to urban migration. On the other hand the positive factors in urban area attract rural people to migrate from rural area to urban like; employment, high income level and other educational facilities. Thus rural to urban migration highly effected by these variables. The predicted results show that self employed in rural area, casual labour in urban area and literacy ratio put negative effect on rural to urban migration. An increase in these factors will decrease rural to urban migration. On the other hand, self employment in urban, casual labour in rural area, MPCE in urban area, number of colleges, number of universities and people below poverty line in rural area put positive effect on rural to urban area.

CHAPTER-7

CONCLUSION & POLICY IMPLICATIONS

7.1 Introduction

This study reveals the different aspects of rural to urban migration in India. The main aim of this study is to show the impact of rural to urban migration on economic growth through urbanization. The contribution of urban sector in national GDP is very high, so to create more increases in urban growth there is a need to increase rural to urban migration. The study of literature review in second chapter provides that there is a positive relation between rural to urban migration and economic growth. This study estimates the empirical aspects of rural to urban migration, which reveals the factors effecting rural to urban migration state wise and city wise. On another hand one empirical study shows the impact of rural to urban migration on economic growth. On the basis of literature this study also provides that there is a positive impact of rural to urban migration on economic growth. The growth of urban sector leads the growth of economy. Thus to increase the growth of urban sector there should be an increase in rural to urban migration. There are many negative factors in rural area, which encourage people to move towards urban sector.

This study is mainly based on four objectives. The first objective of this study analyzes the trends in rural to urban migration. For this purpose the data from census of India has been taken and this objective has been covered by using descriptive statistic. Secondly, the objective of this study examines the relevant determinants of rural to urban migration. This objective has been conducted by considering not only states but also cities. Thus this objective is based on pull and push factors observed from the study of literature in second chapter. Third objective indicates the link between rural to urban migration and economic development. This objective has been done by using simple regression model. The results shows that there is a positive and statistically significant impact of rural to urban migration on gross domestic product of states. Thus this overall study is based on shows the process of growth of urban sector through rural to urban migration and this growth will increase the economic growth.

7.2 Main findings

On the basis of first objective of the study trends in rural to urban migration has been described through descriptive statistics. For this objective data has been collected from different sources like; census of India 2001, census of India 2011 and NSSO 64th Round. From this study it has been observed that the main reason behind male migration is employment and work. On the other hand a large part of female migration occurred due to marriage reason. On the basis of duration of migration large part of migrants belongs to the duration of 10 year and above

The second objective of this study is to examine the relevant determinants of rural to urban migration. The empirical estimation provide these factors of rural to urban migration by using simple regression model, which provide the state level and city level factor effecting rural to urban migration. The city level predicted results shows that self employment male, level of inequality, casual male labour, poverty head count ratio and number of colleges put negative effect on rural to urban migration. Other factors significantly put positive effect on migration. State wise self employment in rural, literacy rate, casual urban labour put negative effect on rural to urban migration and other factors significantly put positive impact on rural to urban migration

In third objective, to estimate the impact of rural to urban migration on economic growth, regression method has been used. The result shows that economic growth is highly influenced by rural to urban migration. The increases in rural to urban migration rise the growth of economy.

Lastly, it has been found that there is a need to formulate a policy by government to promote rural to urban migration. Because from the overall study it has been observed that the main factor of growth of urbanization is rural to urban migration and the contribution of urban sector to economy is very high. So the increase in growth of urban sector will increase the economic growth. Thus increases in rural to urban migration increase the economic growth indirectly.

7.3 Main Contribution

The overall study provides the different aspects of rural to urban migration. The first chapter of this study describes the meaning, importance and effect of migration on urban sector. This chapter provide the basic information of migration. The main types of migration direction wise, stream wise and season wise has been

described in first chapter. In this chapter by using descriptive statistic the growth of urban sector in India has been compared with other countries. This comparison presents that urban growth rate of India is very less compare to other developed countries. Thus by increasing this growth economic growth will be increased. And the source of growth of urban sector is rural to urban migration

On the other hand second chapter provide the literature reviews of this study, which shows the study of rural to urban migration in different aspects. From this chapter it has been observed that there are two types of migration which is push migration and pull migration these factors affect the rural to urban migration. The literature review provides the direction to the further study. Chapter 2nd has been divided in two categories; theoretical reviews and Empirical reviews. Further these categories has been divided into two parts; international study, which provide the study of different aspects of rural to urban migration in other countries and second part is national reviews, which provide Indian level empirical and descriptive studies of rural to urban migration

Chapter third covers the first objective of the study by analyzing trends in rural to urban migration in India by using descriptive statistics. This chapter reveals the time to time variations in rural to urban migration in India, in states of India and in the context of 51 metropolis cities.

In forth chapter the next objective of the study has been analyzed through regression model. Thus this chapter provides the determinants to rural to urban migration in 51 million plus cities. There are some negative factors in rural area and some positive factors in urban area, which promote people to move from rural area to urban area.

Fifth chapter shows the link between economic development and rural to urban migration. The results are predicted by using regression analyses. This estimation presents that there is a positive impact of rural to urban migration on growth of economy.

The chapter sixth provides the state level determinants of rural to urban migration in India. The overall model shows the statistically significant results. Thus due to increase in rural to urban migration GSDP will also rise.

The last chapter shed light on main conclusion of the study and provide the policy implications to promote rural to urban migration.

7.4 Conclusion

Urbanization is an important source of economic growth. Developed countries have high urban growth rate as compare to India. Thus it can be observe that urbanization lead to economic growth or to increase the growth of economy, there is a need to rise urbanization. Migration is a significant source to increase urbanization. Transfer of disguised labour to urban sector will increase the supply of labour in urban sector. The increase in supply of labour will raise the urban productivity. Thus the growth of economy will increase due to increases in urbanization.

This study firstly, describes the importance of migration and how it could contribute to urbanization, so that it could raise economic growth. Urban sector contribute a large part to GDP of India. So, to get high economic growth there is a need to promote urbanization. From review of literature, the studies have been provided the information that rural to urban migration is an important factor to increase urbanization. It put a significant impact on growth of urban sector. The transformation of rural people to urban sector would increase the standard of living of people and will increase the marginal productivity of labour in urban sector as compare to rural sector.

First objective of the study analyses the trends and pattern of rural to urban migration in India. To estimate this objective data has been taken from various sources like; census of India (2001&2011) and NSSO round 64th . Thus this study examines the status of rural to urban migration in previous two decades and during the NSSO round (2007-08). From these analyses it has been observed that the higher part of migration occurred in Andhra Pradesh, Gujarat, Maharashtra, Uttar Pradesh and West Bengal. On city level migration large part of migrants has been observed in Delhi, Mumbai, Kolkata, Chennai and Hyderabad. The high part of migrants moved due to the reason of work and employment, marriage and moved with households. On the basis of gender, female's main reason of migration is marriage and male's main reason of migration is work and employment. From the aspect of duration of migration, it has been examined that large part of migrants belongs to the category of duration 10 year and above. The number of permanent migrants is higher than temporary migrants.

The next second objective of the study analyses the effective determinants of rural to urban migration. This objective has been done by using two aspects of

sampling; factor effecting rural to urban migration in million plus cities and determinants of rural to urban migration state wise. By using regression model, it has been predicted that urban self employed and rural casual labour put positive impact on rural to urban migration. At state level self employed in rural area and casual labour in urban area put negative impact o rural to urban migration. On the other hand the push factor like poverty in rural area put force on people to move from rural to urban area so that they could earn their livelihood.

The entire study shows that rural to urban migration put a positive effect on growth of economy. To analyze this impact of migration on economic growth regression model has been used. The prediction shows the positive impact of rural to urban migration on GSDP. Rural to urban migration has direct positive impact on urban growth and urban sector has direct positive impact on growth of economy. Thus rural to urban migration indirectly put positive impact on economic growth.

7.5 Policy Implications

Recently, government of India has launched several policies and programmes to encourage the growth and development of urban sector in India, as urban areas have traditionally constitutes higher level of GDP than rural areas. Among the various policies, 100 Smart Cities Programme, AMRUT (Atal Mission for Rejuvenation and Urban Transformation), PPP (Public Private Partnership), NUIS (National Urban Information System), NERUDP (North Eastern Region Urban Development Programme), JNNURM (Jawaharlal Nehru National Urban Renewal Mission), Capacity Building for Urban Local Bodies, Lump Sum Provision Scheme for the benefit of North East Region (NER) including Sikkim, Brihan Mumbai Storm Water Drainage (BRIMSTOWAD) project at Mumbai, UIDSSMT (Urban Infrastructure Development Scheme for Small and Medium Towns), Clean India Mission are the major programme and policies introduced by governments in recent years to promote urbanization in India.

The above discussion clearly indicates that India is experiencing a higher level of urbanization and its contribution to national income is also high. This in turn indicates that Indian economy is going through a transformation from an agricultural based rural economy to an industry and service lead urban economy. In fact, recent years government has initiated and implemented various urban related policies and programs to promote urbanization in India. However, the country needs still better

policies in the days to come to promote planned urbanization in India and to absorb the maximum economic potential that urban areas can provide for sustainable economic growth in India. Given the importance of knowing the factors which contribute to rural to urban migration in India, it is imperative to systematically study the determinants of rural to urban migration in India. It is only fair to that rural to urban migration will lead to future rapid urbanization in India which in turn will lead to higher and sustainable economic growth. It is hoped that the findings of this study will help policy makers to formulate effective policies in India to promote urbanization through rural to urban migration. The overall study indicates that rural to urban migration is an important source of increase in growth of urbanization. Urbanization contributes a large part to GDP. Thus the growth of urban sector will raise the growth of economy. However, many policies have been formulated by government o0f India to promote urban growth and development. But there is lack of policies to promote rural to urban migration. On the basis of main findings of this study, some policies and suggestions been presented below:

- **Encourage growth of urbanization by promoting of rural to urban migration**

  From the whole study, it has been observed that urban sector is a main source of growth of economy because the contribution of manufacturing sector and service sector in national GDP is higher than other sectors. These sectors occur only in urban areas. The economy with high rate of growth of urbanization is considered as rich economy. Rural to urban migration is the main factor of growth of urban sector. The migration of population from rural area to urban area increases the demand of consumer goods and this increment raises the production level of economy. For the growth of urban sector government should promote rural to urban migration.

- **Transformation of disguised labour from rural to urban sector**

  By increasing the labour supply in urban sector, will increase the productivity in urban sector. This supply can be generated by transfer of rural disguised labour to urban sector. In urban sector the marginal productivity of labour will increase and this increase will lead to higher growth of urban sector. The growth of urban sector will raise the GDP level of economy. So to encourage

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the labour transformation in India government need to formulate policies in favour of this process.

- **Rural to urban migration has a positive link with economic growth**

  From the study of different aspects of rural to urban migration it has been found that rural to urban migration significantly put a positive impact on economic growth indirectly. The way to achieve high economic growth is urbanization. The rapid growth of urbanization can be attained through rural to urban migration. So there should be no barriers in rural to urban migration.

- **Provide housing facilities to low income groups in urban area**

  For the urban growth it is important to provide basic facilities to the people who are living in urban area. House facility is one of the main basic need of people. But people who have low income are unable to get house easily in urban sector. So government should provide facilities to these people at low rate or provide loan at low interest rate.

- **Social security services**

  It is important to provide social security to people residing in urban area for the growth of urbanization. These safety and security will provide comfort to people. So they could live in that area without any fear. This will attract rural people to live in safe and secure sector.

- **Reduce slums**

  Poor people are unable to earn their livelihood in urban sector they are lastly forced to move towards slums. So people in rural area prefer to live in rural sector rather to choose slum. So the reduction in slums will induce rural to urban migration for better standard of living.

- **Urban infrastructural development**

  People will be encouraged to move from rural area to urban if they get more facilities in urban sector. The development of urban sector will promote rural people to move in urban area.

  Urban infrastructure systems like water supply, sewerage, social waste, transport etc. put heavy impact on the development of urban sector. There is a need to improve the infrastructural system of urban area by using the advance

technology. Thus due to improve in urban sector people in urban area will be more facilitated.

- **Financial services**

  The availability of finance in urban sector will promote more investment and this investment will raise the employment opportunities. Bank services are the main source of finance. It provides the loan not only to public but also government. The both public and private service sectors provide the financial service to government and people. There is a need to promote not only government financial sector but also private sector also. Another source of income to government is tax. Government should provide facilities to low income groups in urban sector by reduction in tax. Tax should be imposed on the bases of income of households.

- **Expand of local bodies**

  To increase the development of urban sector, the expansion of local bodies is necessary. Municipal corporations are created to look after the administrative needs of large cities.

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