Chapter 2: Literature Review on Rural Non-Farm Economy and Urbanisation

“Manu Shah’s 12-year-old son asked him, “whether we live in a village or a city?” After pondering Manubhai had to say neither. This is the plight of 2.5\textsuperscript{1} lakh residents of Census towns in Gujarat who are tangled in the same dilemma every time they have to print their visiting cards: what address should they give?”

“\textit{Unless there is a fundamental shift in the mindset away from one which separates the rural from the urban, Indian planning cannot address the challenges of urbanization in our present stage of development}” Ahluwalia, 2012.

2.1 World Scenario

Many different definitions of ‘rural’ are used in the collection of census and survey information, it is difficult to make comparisons across countries. In Mali and Zimbabwe an area with less than 3000 and 2500 inhabitants, respectively, is designated as rural. In Mauritania, settlements with fewer than 10,000 populations are designated as rural Haggblade \textit{et al.}, 1989. In Chile places, which have urban characteristics such as certain Public and Municipal Services are considered urban. In Panama, southern most country in Central America, a place which has localities of 1500 or more inhabitants and also has essential urban characteristics, such as streets, water supply systems, sewerage systems and electric light. Lithuania’s definition of urban is very much close to that of India, population areas with closely built permanent dwellings and with the resident population of more than 3,000 of which 2/3 of employees work in an industry, social infrastructure and business. Urban definition of India is very broad-based and closely reflects levels of development J.O. Lanjouw, P. Lanjouw, 2000; Gupta, 2013 and United Nations Demographic Year Book, 2005.

\textsuperscript{1} Complied and calculated from Census 2011.
The pie chart below represents the criteria of defining urban. Thirty-eight per cent of the world defines urban through administrative criteria, 35% considers a rural area as urban on the basis of population.

2.2 Evidences from Developing Countries

The recent years have witnessed an unprecedented growth in the scale and pace of urbanization the world over. It is a major change taking place globally and in India too. The urban global tipping point was reached in 2007 when for the first time in history over half of the world population i.e. 33 billion people were living in urban areas. According to estimates by United Nation within the next five years, more than half of the world population will be living in the urban areas. Interestingly Asia alone is expected to have about 2.7 billion urbanities accounting for over 50 per cent of its total population Sharma, 2014.

Driven by economic growth and industrialization, the urban population today is growing two to three times faster than the rural population; a greater part of it being in developed world. Rural-urban migration coupled with natural population growth in cities account for this rapid demographic transition Duijsens, 2010. However, according to Bhagat, 2011, states that the increase in urban population is also due to rural-urban classification rather than rural to urban migration.
Table 2.1: World Urbanisation Pattern

<table>
<thead>
<tr>
<th>Region</th>
<th>Level of Urbanisation (% to total)</th>
<th>Rate of Urbanisation (2005-30)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1950</td>
<td>2000</td>
</tr>
<tr>
<td>Africa</td>
<td>14.7</td>
<td>36.2</td>
</tr>
<tr>
<td>Asia</td>
<td>16.8</td>
<td>37.1</td>
</tr>
<tr>
<td>Latin America</td>
<td>42</td>
<td>75.4</td>
</tr>
<tr>
<td>Oceania</td>
<td>62</td>
<td>70.5</td>
</tr>
<tr>
<td>North America</td>
<td>63.9</td>
<td>79.1</td>
</tr>
<tr>
<td>Europe</td>
<td>50.5</td>
<td>71.7</td>
</tr>
<tr>
<td>World</td>
<td>29</td>
<td>46.7</td>
</tr>
</tbody>
</table>

Source: United Nations, 2006

The census data classifies individual settlements as urban on the basis of size of population and local administrative boundaries. Basant and Kumar 1994 adopted the definition of rural areas as a residual category referring to non-urban areas. The term ‘rural’ should be seen as a metaphor to and much beyond just a geographical space. The boundaries between rural and urban are getting indefinite as there is greater interaction between the two. Over time various places are classified as urban areas and some former towns are declassified also. The boundaries of cities also change to encompass surrounding rural areas. Thus, the reason of merging boundaries is better interconnectivity through road/rail transportation and infrastructure networks. Rural India is not homogenous as the villages vary in sizes, population is divided by castes and religions, and skewed distribution of land and assets, and a large gender divides all leads to varying impacts of apparently growing prosperity of rural India. In general, a rural area is a geographic area that is located outside cities and towns. The National Sample Survey Organisation (NSSO) defines ‘rural’ as follows:

- An area with a population density of up to 400 per square kilometer (1000 per square mile),
- Villages with clear surveyed boundaries but no municipal board,
- A minimum of 75% of male working population involved in agriculture and allied activities.

In India, a village is transformed into a town by satisfying 3 criteria’s

1) Size (Population of 5000 or more)
2) Density (at least 400 per sq. kms (1000 per square mile)
Nature of work (At least 75% of the male workers should be engaged in non-agricultural work) *Sivaramakrishnan, et al., 2005.*

Typically, the distinction between rural and urban is based on the place of residence of workers, so those who commute to a job in a nearby urban center are considered to be rural. If the settlement satisfies the demographic and economic criteria the census recognizes it as a ‘Census Town’. Urban areas are designated based on four criteria’s: first three are as mentioned above and when in such areas are designated as Municipality/Nagar Panchayat Municipal Corporation, outgrowth, area notified area documented by the government, the town is recognized as ‘statutory’ urban area. Other important concomitant of urbanization in India is that villages located outside the boundaries of cities get included in it over time as part of the urban agglomerations.

### 2.3 Pattern of Urbanisation

According to 2011 census, urbanization in India has increased in a remarkable way as share of urban population which stood at 10.83% in 1901 has increased to 31.16 per cent in 2011, roughly 377 million people are living in cities. The 2011 census data shows that out of a total population of 1210.2 million about 377.2 million (31.3 per cent) of the population lives in the urban area. The census decade 2001-2011 registered an annual addition of approximately 10 million persons to its urban population, 21st century is set to become India’s urban century with more people living in cities and towns than in the country side (rural areas). Increase of 91 million persons in urban areas stands in excess to expect by urban experts *Sen, 2014*.

History shows that economic development and urbanization are intimately associated and that the economic development process involves growth in urbanization. This may include occupational pattern, agglomeration economies and employment generation *Gupta, 2013*.

This increase in urban population can be decomposed into three major components of urbanisation: natural increase in urban areas, reclassification of rural areas as urban and net migration from rural to urban areas *Goldman Sachs, 2007; Sen, 2014* and *Bhagat, 2011*. 
Also, for the first time since independence, the absolute increase in the urban population was higher by nearly half a million than that in the rural population Bhagat, 2011.

Datta, 2006 adds ‘urbanization is an index of transformation from traditional rural economies to a modern industrial one’. Researcher has hypothesized that rural non-farm employment is a prerequisite for enhanced urbanization as the rural population has opportunity to diversify to secondary and tertiary sector Jayaraj, 1994. The linkages between agricultural prosperity, commercialization and urbanization (proximity to the town) on one hand and the growth of rural non-agricultural employment in census town on the other hand are quite complex. At micro level, village size, nature of the nearby township, land productivity and access to land become crucial to these linkages. In large villages or census towns the linkage between the growth of the rural non-agricultural sector which is linked to agricultural prosperity and commercialization is likely to be more significant R. Basant and H. Joshi, 1994.

Some of the positive impacts of urbanization on the rural non-farm sector is the proximity of urban areas provide growing opportunity for RNFE. The spread effect of infrastructure in urban areas will lead to RNFE. The proximity of rural hinterland and urban areas when combined with robust linkages of urban economy will have an impact on the economies of the rural areas. In this situation, rural areas become part of urban centres. In other words, as the non-farm sector grows much faster due to influence of the urban economy, the rural area develops into an urban unit Jayaraj D., 1994. Whereas, Basant and Kumar, 1994 suggest that the increase in urban areas are likely to lead to an apparent decrease in the magnitude of rural non-agricultural activities.

2.4 Defining the Rural Non-Farm Sector

The rural non-farm “sector” includes all economic activities except agriculture, livestock, fishing, horticulture and hunting Lanjouw and Lanjouw, 2001. Since it is defined negatively, as non-agriculture, it is a heterogeneous and not a homogeneous sector. Thus, the category of enterprises and individual workers in the non-farm sector needs to be distinguished. Mukhopadhya & Lim, 1985. Within the non-farm sector, researcher has three different sources of employment and earnings: non-farm self-employment, regular
employment and casual employment. Broadly, Non-farm includes activities related mining and quarrying, manufacturing, utilities, construction, trade, hosteling, transport and communication, community, social and personal service.

Regular employment includes service in the formal sector and also included regular employment in the informal sector like working in shops on regular and permanent basis. Casual employment included various kinds of jobs some of which lasted for fortnight to six months a year.

Manufacturing and construction activities are one of the most important and consistent components when discussing the non-farm sector Papola T. S., 1992. In post reform period employment increased in secondary and tertiary sector by 3.5% and 3% respectively. Construction and transportation has seen acceleration in rate of employment growth particularly in rural areas. Trade, transport and financial services also saw acceleration. However, in the post reform employment in agriculture did not increase Papola T. S., 2012.

The other important sectors in terms of employment shares were found to include retail trade, personal services, construction, road transport and textiles Bhowmick, 2012.

Estimates of labour force are more likely to be underestimated the extent of non-farm employment as these estimates generally provide a classification of workers according to their principal sector of employment as it is often a secondary source of income on a part-time or seasonal basis in rural areas Basant & Kumar, 1994.²

Rural Non-Farm Sector is a heterogeneous entity consequently there are two types of non-farm activities which also distinguish them in two different groups of occupation: first low labour productivity activities serving as a residual source of employment and high labour productivity activities Lanjouw and Lanjouw, 2001. Therefore, the income earned by these workers also differs. Income obtained through remittances from household member migrated to other cities states or countries contribute to rural income.

2.5 Inter sectoral linkages and determinants of Rural Non-Farm Employment

“One of the crucial problems of modern economic growth is how to extract from the product of agriculture a surplus for the financing of capital formation necessary for

² Multiple jobs in discussed in the next section
“Industrial growth without at the same time blighting the growth of agriculture.” Kuznet, 1964

In the traditional development theory like in Lewis Model, economic development is a process where labour is transferred from agriculture to the modern sector or urban industries; urban industries are considered as the main engine of economic development. This has been the dominant development strategy in most developing countries, particularly in Asia, during 1950s. For example, in India during the 2nd five-year plan, the policy of large-scale industrialisation received the top most priority.

However, since early 1960s, most developing countries found the Lewisian strategy ineffective in so far as generation of employment is concerned. Several studies conducted to understand the employment generation by urban industries in the Asian developing countries clearly shows the failure of Lewisian mechanism. For example, a study by Amjad, 1988 show that of the total increased workforce, hardly 2-3 percent got employed in large scale manufacturing sector from 1960s and 1970s in countries such as India, Pakistan, Bangladesh, Sri Lanka, Philippines, Burma, Indonesia, Thailand and so on. Therefore, the study envisaged the limited role of large-scale manufacturing sector in employment generation in a large number of developing countries.

In this situation, the emphasis has been shifted towards employment generation within rural areas. Thrust is on the generation of employment within rural areas. Since mid-1960s the policy of development of agriculture for expansion of both income and employment in the countryside was adopted through the introduction of green revolution technologies. The inadequacy of such a policy started becoming apparent since mid-1970s onwards. Study by Bhalla, 1993 on labour absorption in Indian agricultural employment with respect to output from mid 1970s onwards.

2.5.1 Employment diversification

In traditional development theory like Lewis model, economic development is considered as a process where labor is transferred from agriculture to the modern sector or urban sector; urban industries are considered as the main engine of economic development. In the process of structural transformation, labor is pulled out of agriculture; the speed of the
same depends on the dominance of industry and services and labour absorption in them. A turning point is reached when the share of labor in agriculture starts to decline faster than its share in output, and the productivity differential between the sectors starts to diminish. 


Employment diversification is the shifting of workforce from one sector to the other for employment. The proportions of this workforce engaged in different sectors of the economy constitute the structure of employment. One of the major failures of economic development in post-independent India remained its inability to significantly reduce the dependence of workforce on agriculture. This has led to widening gap between incomes in agricultural and nonagricultural sectors, which are perceived to be one of the major reasons for persistence of poverty in the country. Kumar, Kumar, Singh, & Shivjee, 2011. Therefore, alternate employment avenues, outside agriculture are needed and greater importance is given to the rural non-farm sector.

Occupational choice of an individual is influenced by several factors like the level of education, the assets possessed in household, land ownership, irrigated land, agricultural wages prevailing in the village, closeness to a town at a village level, communication and transportation facility at the district level, pressure of the population in the village and infrastructural facilities developed, as well as the demand for non-agricultural goods arising from higher income levels. Kashyap & Mehta, 2005. Other individual factors that also influence the choice of employment include age, sex, household size, and caste.

The introduction of new capital-intensive agricultural technology since the mid-1960s, and also with the liberalization of the financial sector making rural institutional credit scarce for small and marginal farms, agricultural operations have almost become nonviable commercially for the small and marginal farmers. All these have led to a selective withdrawal of the labour force from agriculture and a shifting of the same to non-agricultural activities either within the rural sector or to the urban and semi-urban areas through short-term migration.

The obtainability of better paid local jobs requires education in form of formal schooling usually beyond secondary school. Ferreira & Lanjouw, 2001. Education may lead to growth led diversification and also migration. As the level of education of an individual
rises the probability of employment as a regular salaried employee also increases Lanjouw, 1999a; Davis, 2003 and Eapen, 2005 States that literacy and numerous skills matter in majority of RNFE activities. Such positive correlation was found also in Kerala Eapen, 2005 and Tamil Nadu Jayaraj D., 1994 and Gujarat Basant & Kumar, 1994. Accessibility and availability of credit for investment becomes an important component to become self-employed entrepreneur, another important component which conjoint RNFE in census towns is availability of infrastructural factors. For instance, manufacturing units in the rural areas is induced by the electrification in rural areas.

All these factors conjointly influence RNFE. Thus, while making policy, the spatial distribution and sectoral linkages should be taken into consideration. Sometimes macro level trends can nullify/ mitigate the actual trend at the micro level. For the same regional level analysis, can prove to be helpful. It would be useful to know the strength of farm and non-farm linkages to develop RNFS. This study aims to analyses the trend, composition and determinants of RNFE and Census Towns in Gujarat that would inform us of the micro dimensions.

2.6 Theories on Rural Non-Farm Employment

The relationship between agriculture and rural non-agricultural activities is perhaps the most important in understanding the rural urban category of non-agricultural activities. The linkages between agriculture and industry have always been a subject of economic theorising, especially the issue of resource transfer across sectors and its role in economic development.

Broadly five kinds of linkages between agricultural and non-agricultural sectors:

1) **Capital Flows**: Agriculturalists sometimes invest their surpluses in non-agricultural activities relating to processing and trade. According to Basant and Joshi, the evidence of the same can be seen in agriculturally developed villages of Kheda district in Gujarat.

2) **Labour Flows**: A section of rural workers seeks non-agricultural work when employment is not available in the agricultural sector. It is primarily the casual workers who shift from agricultural workers to non-agricultural activities during slack agricultural seasons. In Gujarat, the employment structure of the self-employed in
agriculture were as high as those experienced by casual workers *Basant and Kumar 1990.*

3) **Production Linkages:** *Hirschman, 1958* emphasized on production linkages between sectors. Some enterprises (both in trade and manufacturing) supply inputs required by farmers. The type and magnitude of such backward linkages depend on agricultural technology, size of holdings, and type of crop and whether the cropped area is irrigated or rain fed. The potential for production linkages lies in the new technology which requires a variety of biochemical and mechanical inputs. Production linkages are of two types namely backward and forward linkages.

4) **Forward and backward linkages:** A sector is linked with others which supply input to it and also those which use its output as their own input *Mathur & Chand, 1998.* Among forward and backward linkages, agro-processing is perhaps the most important. The distribution of local agricultural produce is determined by the share of output marketed. Consequently, the cropping pattern and the extent of commercialization determine the nature and magnitude of these linkages.

5) **Consumption Linkages:** As per capita farm income rises, the demand for local services, housing and durables and other non-food items typically increases faster than the demand for food grains. The share of consumption expenditure on non–food items increased as we move from low to high expenditure groups.
<table>
<thead>
<tr>
<th>Need to find some other livelihood</th>
<th>Attractiveness of economic opportunities in non-farm activities</th>
<th>Weak pull: Low to moderate growth of agriculture, cities relatively remote and costly to reach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weak push: Agriculture (forestry, fishing) offers a reasonable livelihood</td>
<td>Strong push: stagnant farming, smaller farm sizes and growing population</td>
<td>Out-migration by educated persons for urban white-collar jobs and by the less educated to find jobs in construction, factories and the urban informal sector. Some migration, especially of educated youth. Jobs in agro-processing, rural services and recreation, etc., allow people to work full- or part-time off the farm. Those unable to migrate take up poorly rewarded local jobs such as cutting firewood. Some jobs in construction as remittances from migrants are spent on improved housing.</td>
</tr>
<tr>
<td>Strong push: vibrant agriculture and Good links with growing cities</td>
<td>Strong pull: Vibrant agriculture and Good links with growing cities</td>
<td>Some out-migration, but the prospects for those with little education and few skills are limited and they may have to take up badly-paid or hazardous work. Widespread resort to poorly rewarded crafts or carrying out local services for low returns —firewood, laundry and cooking snacks.</td>
</tr>
<tr>
<td>Jobs in agro-processing, rural services and recreation, etc., allow people to work full- or part time off the farm. Some migration, especially of educated youth. Commuting to nearby towns possible jobs in rural factories linked to urban industries</td>
<td>Widespread engagement in a range of low-paid activities to generate some earnings, but for limited periods.</td>
<td></td>
</tr>
</tbody>
</table>

Source: Steve Wiggins & Peter Hazell (2008) Access to rural non-farm employment and enterprise development
2.6.1 Inter-linkage hypothesis

The advocates of agriculture led growth theories visualize an important role for the rural non-farm sector in stimulating growth in agricultural sector through inter sectional linkages. They mainly refer to Mellor’s growth linkages theory (1976) which argued that as a result of development of green revolution demand led growth of both the agriculture and non-farm sector would take place, stimulating a virtuous circle of growth of food production and employment. The latter would occur through multiple linkages with the agricultural sector.

The demand for a wide variety of consumer goods, of which some might be produced by the local non-farm economy, is being stimulated by an increase in the farm derived from the agricultural sector. Backward production linkages would result from the expansion in agriculture that leads to a rise in the demand for inputs, which are either produced or distributed by the local non-farm enterprises. Forward production linkages would develop through the increased need for agro-processing activity. Samal, 1997 emphasis without having an equal distribution of rural income and assets there can still be growth through inter-sectoral linkages between farm and non-farm sector in rural areas. Such growth, however, can only be achieved by the development of capitalist agriculture through technological advance.

A number of Indian studies suggested growth of agriculture is likely to stimulate growth and development of the RNFE Papola T. S., 1992; Chadha, 1986 and Unni, 1998.

Using data from 16 states, Vaidyanathan, 1986 found a significant positive relationship between crop output per head of agricultural population and non-farm employment, while Dev, 1990 found agricultural productivity rather than crop production to be significant at a more disaggregated level. Chadha, 1986 in a survey of households across three states concluded that this linkage between the sectors can not be taken for granted. The findings of this micro-study in 18 villages indicated that an expanding agricultural economy could promote well-developed non-agricultural activities within the sector itself, but as the economy develops the proportion of non farm incomes increases in poorer households. Rayappa, 1986 finds a shift from traditional to modern occupation in rural areas. The study
reveals that agricultural density, literacy levels of the population, distribution of assets such as agricultural land, is positively associated with participation in non-farm activities. Papola T. S., 1992 discovered that in different states the performance of rural industrial sector is associated with agricultural productivity and has higher correlation with the growth rate of the agricultural output. He argued that rise in income levels, purchasing power and the surplus generated by agricultural growth improved the efficiency of the existing industries leading to the emergence of new and dynamic employment areas. Shukla, 1991 developed an econometric model for non-farm sector that takes into account its functional linkages with agriculture and urban activity through explicit recognition of their spatial dimensions. She found that in case of Maharashtra, consumption linkages were removed agricultural growth had little impact on the growth of non-farm sector. Chandrashekar, 1993 has found a weak positive relationship between the rate of growth of output per capita and the share of non-agricultural employment in total rural employment.

2.6.2 Distress driven diversification/residual sector

Distress factors like poverty, unemployment or under employment due to inability of agriculture to absorb the surplus labour, and even frequent natural calamities like drought have tried to push rural households to go in search of various non-farm activities to supplement their farm income and employment. Vaidyanathan, 1986 found a positive correlation between non-farm employment and unemployment rate, and postulated that non-farm employment absorbed surplus labour when the potential of agricultural employment was limited, suggesting distress-induced growth of the non-farm sector. Here, non-farm sector acts as a residual sector for employment. Vaidyanathan advanced the view that two conditions must hold to define a sector as a residual sector:

a) The unemployment rate should be positively related to Rural Non-farm Employment.

b) The unemployment rate should be negatively related to the wage ratio between non-farm and farm sector.
Secondly, according to *Visaria and Basant, 1994*, the residual sector hypothesis needs to be viewed:

1) The increase in the rural non-farm employment at the all India level is explained by the increase in the proportion of casual non-farm workers.

2) Seasonal fluctuations in rural non-farm employment can be explained by corresponding changes in the employment structure of rural casual workers who shifted back and forth between agriculture and non-agricultural work.

3) The casual agricultural workers report a much higher incidence of non-farm work as a secondary or subsidiary occupation.

4) There seems to have an inverse relation between participation in non-farm work and the size of landholding possessed by the households *Kashyap & Mehta, 2007*.

Therefore, the observed correlation between the rate of unemployment and share of non-farm activities is not surprising.

*Bhalla, 1993* has distinguished between two kinds of distress diversification. The first is the case of subsidiary workers who do not have any main occupation. The second is the case of persons with a main occupation who also engaged in secondary activity. In both these cases of ‘distress diversification’ non-farm wages are likely to be, lower than prevailing wage rates *Unni, 1998*.

There are two sets of arguments explaining the underlying forces aiding workforce diversification:

1) The pull factor (growth induced) diversification is found to be more than often co-existing with push factors (distress driven). To support the stated fact, it has been observed that real non-agricultural wages have always been higher than agricultural wages.

2) Additionally, push factor could be for three reasons: First push factor is

   The drop of seasonal income from farming to levels not sufficient for survival in the off season, which pushes households into non-farm activities to smooth their income and consumption inter-seasonally. This inter-seasonal smoothing of income is not actually a means of coping with a shock, because the shock is not unexpected, but is regular, and thus is a long-term factor in the climate for which farmers compensate with long-term ex ante off-season income diversification.
A second push factor is a transitory drop in income in a given year, say from a drought that forces farmers to cope ex post facto. A third push factor is a permanent drop in or chronic insufficiency of farming income, say for physical reasons such as environmental degradation, chronic rainfall, deficit, disease, or market or policy reasons *Haggblade, Hazell, & Reardon, 2007*.

Figure 2.3: Employment diversification

The findings of a large numbers of studies have revealed that there is a positive relationship between the growth of agricultural productivity and non-agricultural employment across the country *Vaidyanathan A., 1986; Unni, 1996 and Dev, 2007 and Jayaraj D., 1994* and across the states *Singh 1989*. The growth in agriculture is expected to influence positively the growth pattern and expansion of non-agricultural enterprises, by way of supplying adequate raw materials, creating greater demands for various inputs and allied services raising to local and external demands for consumption goods and creating the possibility of generating surplus for its further investment on different rural non-farm activities especially in activities relating to processing and trade *Hariss 1987*. Expectations are that the expansion of non-farm activities so as to raise the income of rural households will lead to attract the surplus labour force of agriculture to turn into non-farm activities. In fact, the unemployed labour force out and those are no way engaged in agriculture will also find the

Mellor, 1976 argues that to achieve structural changes in underdeveloped economies, it is necessary to increase agricultural incomes and to increase labour productivity in agriculture, which would further accelerate structural changes in the employment distribution. Theory of growth linkage underlines that green revolution and consequently agricultural growth process would lead to demand led growth of both the agriculture and non-farm sector through a ‘Virtuous Circle’ of food production and employment. The latter would occur through multiple linkages with the agricultural sector Paul, Janvry, Sadoulet, & Stamoulis, 1997.

2.6.3 Third proposition

According to C.P. Chandrasekhar, hypothesis both pull (developmental factor) and push (distress factors) factors are working simultaneously for the expansion of the non-farm employment. His analysis related to India as a whole and the state of West Bengal in particular during 1972-73 to 1987-88 depicted that in occupation diversification in rural India over the last decade and a half is not the fall-out of rural dynamism in the wake of Green Revolution, but a reflection of the fact that two and half decades after Green Revolution process began in India, much of the country has yet to experience the full impact of that process. He argues that Mellor’s perspective to the realization of monotonic relationship between agricultural growth and an increase in rural non-farm employment is valid only as an analytical description of a specific empirical reality, since it is conditional to the co-existence of a number of tendencies do not normally corresponding to the actual development of capitalist agriculture based on Green revolution technologies. Such a process of development most often starts with a base of extreme asset inequality, as in true in India, and therefore need not stimulate demand for rural-based non-agricultural products and services as part of a ‘rural led’ growth path.

He also argues that areas which are obtaining access to irrigation and currently adopting new technology, there is no ‘push’ of workers out of agriculture but rather a draw on labour resources by agriculture. However, in more mature Green Revolution areas, where the
elasticity of employment with respect to output declines leading to ‘push’ of labour out of agriculture. According to him, the existence of push in favour of non-farm activity is inadequate to ensure its growth. The growth of non-farm activities depends on the availability of market in which such activities can cater and return from such activities can cater and the return from such activities to those who choose to opt for such employment. Therefore, there exists a ‘pull factor’ also.

Several other factors like commercialization of agriculture, urbanisation, education, formal vocational training, monthly per capita income, ownership of land, rural infrastructure, access to credit, government expenditure is important for the expansion of non-farm employment. In the literature, there are several empirical studies testing the importance of above mentioned variables.

Urbanisation and growth of infrastructure also influence the expansion of non-farm employment in various ways. **Bhalla, 1993** argues for the importance of proximity to urban centres for rural livelihood diversification. In an assessment of district level census data, she concludes that a switch in preference for urban produced inputs has had a significant impact on the growth of the non-farm sector in districts of high agriculture productivity. **Papola T. S., 1992** emphasizes the role of rural towns in the employment of rural workers and diversification of rural non-farm employment. He found that the productivity and incomes of non-farm enterprises were higher in regions where rural towns were more evenly spread than where there were only a few concentrated settlements, which he attributes to the action of forward and backward linkages. **Shukla, 1991** in Gujarat, **Jayaraj, 1994** in Tamilnadu, and **Eapen, 1995** in his study of non-farm employment in Kerala, also find an important positive influence of urbanisation on rural non-farm growth.

Actually, urbanisation expands the market for rural enterprises and encourages non-farm attributes in the secondary and tertiary sectors.

**Hazell and Haggblade, 1991** emphasise the importance of rural infrastructure in increasing the income multipliers of agricultural growth to the non-farm sector. **Shukla, 1994** finds significance in rural electrification to determine the magnitude of rural non-farm employment. Harris 1991 also highlights the need for good rural infrastructure to maximize
rural growth linkages, as does Shukla 1992, who found that trading and non-household manufacturing particularly benefitted from roads. However, urbanisation and growth of infrastructure can discourage rural manufacturing activities through the advent of more attractive or less expensive substitute Visaria and Basant, 1994.

Education is crucial since the better paid local jobs require formal schooling, usually to completion of secondary school or beyond Ferreira & Lanjouw, 2001. Education also makes migration more likely to be successful. If a distinction is made between casual non-farm wage employment and regular, salaried employment, it is clear that probability of employment in the later sector rises as the education within the non-farm sector, reports those earnings tends to rise sharply with higher education level. However, it is clear that schooling beyond primary level and achievements of literacy and numeracy provides skills that matter in the majority of rural non-farm activities Davis, 2001.

Literacy and education was found by Eapen, 1994 to play a significant role in non-farm employment in Kerala, allowing shifts in employment from the farm to non-farm sectors. Positive correlation between literacy and non-farm employment were also found in Tamil Nadu Jayaraj, 1994 and Gujarat Basant & Kumar, 1989.

Inadequate access to capital is one of the most important obstacles to growth of entrepreneurship and investment, in the rural non-farm sector. Limited access of formal credit in the rural areas reduced the probability of entering in the rural non-farm sector as self employed persons.

Another important infrastructural factor that can promote rural non-farm employment is rural electrification. Expansion of areas under rural electrification can induce setting up of electricity driven manufacturing units in the rural areas. Infrastructural development through better transportation and communication together with electrification changes the tastes and preferences of rural households and orient them towards urban products like household electric goods, including radios, televisions and refrigerators.
The influence of all these factors works conjointly rather than individually. The policy approach to the non-farm sector must clearly recognize the spatial and local specificities in terms of the sectoral linkages and the composition of the rural non-farm economy.

However, the macro level trend could conceal the actual trend at the micro level. Thus the regional level analysis can be useful in indentifying the broad factors that influence non-farm growth. In order to foster non-farm activity at the micro level it would be useful to know how and why various segments of the non-farm sector develop, how strong the farm nonfarm linkage to develop RNFS. This would require a micro level analysis. In this connection and determinants of RNFE in Gujarat that inform us.

The model of “Demand led Growth” suggests that a sustained rise in farm output and incomes can act as a prime mover, initiating the expansion of local non-farm activities, which in turn sets off a chain reaction of sufficient magnitude to sustain the shift of workers from agriculture to non-agricultural occupations.

2.6.4 Consumption and Production linkages

These are crucial pattern of growth. Consumption linkages are stimulated through an increase in the income of farmers which would accelerate demand for a wide variety of consumer goods, of which some might be produced by the local non-farm economy. Production linkages working both in backward and forward manner also emanate from the agriculture sector. The backward linkages would result from the expansion in agriculture that leads to a rise in the demand for inputs in the non-farm sector for agriculture and animal husbandry which are either produced or distributed. Forward linkages reflect the need to process the agricultural goods as all aspects of post-harvest of agricultural/primary sector produce. Growth of the non-farm sector stimulates the growth of agricultural productivity, setting into motion a virtuous spiral of demand led growth Dev, 2007 Papola & Subrahmanian, 1973 and Unni, 1996.
However, the final demand for manufactures and services in a given rural area may be a function of the level of prosperity of its population, of whom agriculturalists form the most important segment. It depends on the magnitude of public expenditure and also on the degree of commercialization in rural areas.

An epitome classification of the RNFE should capture some or all of the following distinctions:

RNFE would lead to Agricultural Linkages, Market linkages and size and productivity.

- **Agricultural linkages**: implies when RNFE increases it leads to eradication of disguised unemployment which therefore increases the average agricultural productivity and agricultural workers will get higher wages that would lead to increase in purchasing power leading to increase in demand for consumer goods.

- **Market Linkages**: those producing goods and services for the local market and those producing for distant market; since the latter have the chance to create jobs and incomes independently of the rural economy *Davis, 2003*.

**2.7 Insights from literature**

Over the years, percent of household dependent on agriculture as the primary occupation has decreased *Jodhka, 2012*. Diversification into more than one economic activity is higher among agricultural households and individual agricultural workers as often cultivation of marginal holdings does not provide secure livelihoods. Rural non-farm employment is found in two extreme i.e. amongst the richest and the poorest. Economists like *Haggblade, et al. 2007* states that landless and near landless farmers depend on RNFE as a ‘coping strategy’ whereas young educated family members of large farmers opt for RNFE for income diversification and also ‘labour smoothing’ so that it mitigates seasonal swings.

“Regions with low level of agricultural development are, no doubt found to have a high proportion of workers in non-farm activities. But while the RNFS growth in agriculturally developed region is demand and opportunity based that in agriculturally backward ones is mostly distress driven. Agricultural development leads to growth of non-farm activities not
only through forward and backward linkages but also through the utilization of investible surplus generated by it. It is, no doubt that quite often the surplus gets invested in small towns in the rural hinterland, but that should be treated as a healthy development towards rural-urban linkages and integration.” Papola and Sharma, 2005.

Proximity to nearby town too is an important factor in creation of additional employment opportunities. It may also trigger non-farm, employment growth Mehta, 2001. However, growth in Non-Farm Employment leads to greater integration between rural and urban economy, which is crucial for accelerated and balanced development. Non-manufacturing segments of the RNFS has grown faster than manufacturing ones i.e. manufacturing, trade services, transportation, storage and communication which has a tendency to get located in towns rather than villages due to the availability of infrastructure and market linkages Bhalla, 2005. Given that in Gujarat, infrastructure is comparatively better off further this study would examine the role of infrastructure in creation of RNFE.

It may be necessary to treat rural artisans based activities as infant industries and accord them protection both against domestic and foreign competition for a limited period Nayyar and Sharma, 2005. In such a set-up government, should identify small and medium towns that can play a key role in the overall rural transformation. Government should identify areas, especially in the backward regions that have potential for growth of non-farm sector. It is essential that the growth of smaller towns the process of creation of infrastructure is stepped up.

Based on the stated literature this study would like to throw light on some key issues relevant in Gujarat. Observing the double-digit growth in agriculture, this study would find the probable effects of crop-diversification on the dynamics of RNFE. Thus the agricultural growth in Gujarat is leading to distress driven diversification of livelihood. The study will also investigate the impact of public investment in infrastructure in the rural areas on rural non-farm employment.

2.7.1 Multiple jobs

In developing countries, rural households are seldom so classified that the work of all household members throughout the year falls in a single economic sector therefore holding
more than one job is more common than developed countries. The decision of single or multiple jobs depend upon asset position i.e. both human and physical and attitude towards risk.

In a country like India, a large proportion of the work force is engaged in casual labour and constantly faces the risk of unemployment, it is the asset position, both human and physical, rather than attitudes to risk which determine the choice of occupation. Alternatively, the attitude to risk is determined by the asset position of the individual. The multiple job holding models directs attention towards the problems involved in production activity in rural India.

Features that influence multiple jobs are younger workers are more likely to hold two jobs than a single job. On an average at the age of 34 years the probability of multiple jobs peaks. The turning point for the activity choice among men and women

<table>
<thead>
<tr>
<th>Table 2.2: Number of employed men and women</th>
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<tbody>
<tr>
<td>Self employed</td>
</tr>
<tr>
<td>Men</td>
</tr>
<tr>
<td>37</td>
</tr>
<tr>
<td>Wage Employed</td>
</tr>
<tr>
<td>Men</td>
</tr>
<tr>
<td>33</td>
</tr>
</tbody>
</table>

Source: Unni, 1996

People who undertake single jobs appear to be older, better educated or have a very high value of land or other productive assets. Equipped with these sources of human and physical capital these individuals are hypothesized to have higher income streams and are better insulated against uncertainties in their fields of activity. Among primarily wage employed persons, younger, less educated persons faced with lower wages undertake multiple jobs. In both cases, greater distance from the town appears to encourage diversification of occupations Unni, 1996.

In developing countries like India, rural households are not so often specialized that the work of all household members throughout the year falls in a single economic sector. Inability to cover the range of occupations and types of employment status of individuals is one of the most critical limitations of available aggregate data. It provides a classification of workers according to their principal sector of employment or occupation which leads to underestimation of labour force by economic activity especially among females.

2.7.2 Non-Farm Employment and Urbanisation
Urbanisation influences rural non-farm employment through two factors:

‘Supply side’: Providing location and productive support to off farm rural employment. In some cases, non-farm employees counted in the rural areas may physically commute to workplaces in nearby towns. The share of small towns in district urban population acts favourably upon the magnitude and share of rural non-farm employment, suggesting at least rural-urban complementarity. The difference between rural and urban gets distorted as people commute on daily basis from rural to urban areas in search of non-farm jobs and vice a versa though in relatively scarce cases. In 2009-10, a total number of 8.05 million workers not engaged in agriculture commuted from rural to urban areas for work, while 4.37 million workers not engaged in agriculture commuted from urban to rural areas for work. Thus, a total of 12.42 million non-agricultural workers commuted across the rural-urban boundary (NSSO, 2011), in some direction, for work making the two-way traffic between the city and village influence each other. Thus, it shows strong relation between rural and urban areas due to non-farm employment. Urbanization and RNFE are interlinked to an extent which makes it difficult for us to decompose the effect.

‘Demand side’ i.e. the demand for the products produced by non-farm activities. It will depend upon the nature of the urban place hierarchy and the extent of the spatial integration of markets, small towns or large cities may provide either marketing opportunities or price/product competition for rural non-agricultural ‘exports’ (pg. 345)

1. Over time, several semi-rural urban localities are classified as towns although a few former towns get declassified. Also, the boundaries of cities are periodically extended to include the surrounding ‘rural areas’ and are called urban agglomeration. Such expansion of urban areas is likely to lead to an apparent decrease in the magnitude of rural non-agricultural activities. This is so because the share of the non-agricultural sector in those rural areas which get classified as urban is more than in other rural areas.

2. Urbanisation and the associated improvements in infrastructure may render some rural non-agricultural activities, especially in the manufacturing sector, non-viable through the competition of better or less expensive substitutes.

3. Urbanisation and the growth of infrastructure may expand the market for rural enterprises and encourage non-agricultural activities both in the secondary and tertiary sectors in the neighboring rural areas to satisfy non-local demands. As noted above, such developments
can encourage both local and non-local capital to flow into rural areas to exploit local resources for viable non-agricultural activities.

4. Better and relatively inexpensive transport facilities make it possible for many members of rural households to shift to non-agricultural occupations without changing their residence through commutation.

5. Proximity and the level of rural non-agricultural employment are positively correlated as the non-farm sector grows much faster due to the influence of the urban economy; the rural area develops into an urban unit. (pg. 166)

6. On the other hand, increasing non-farm employment at the urban periphery may accelerate the pace of growth of urban agglomeration.

7. Growth in non-farm employment in certain rural localities connected to urban centres may result in their reclassification as urban centres or towns.

According to D Jayaraj, the extent of growth of transport gears different patterns of growth in the non-farm sector. When agricultural income increases it simply transfers purchasing power from one sector to another with an associated decline in productivity.

2.7.3 Rural Non-Farm Employment in India

During second five-year plan in the era of industrialization, the growth rate of industrial sector was though not very high but was significantly higher due to which demand for agriculture products increased. Later in 1980s, as the service sector geared up agricultural sector slowed. Thus, India is said to skip the second stage of development and flown to service sector *Papola T., 2009*. India was self-sufficient in terms of food grain as self-reliance during that time was the only solution.

Since the green revolution period, in rural areas the structural transformation in employment can be noticed from agriculture to non-agricultural activities. In 1980-81, the share of agriculture was two-third of the rural net domestic product (NDP), and by 2009-10 the same share was in non-agricultural sector. This makes it all the more important to understand the processes of change in rural India in the context of relatively rapid growth. In India farm employment experience, can be identified in three phases. In 1960s the first phase arose, expansion of net sown area provided most of the observed increases in farm output. The increased output positively correlated with employment.
Green revolution i.e. the second phase, the yield increase came to account for ninety percent or more of all output growth. Under such situation increase in production may or may not have been associated with the increased demand for labour. Instead labour displacing mechanization was adopted due to rising real product wage rates from the mid-1970s onwards. As, wheat was grown with other commercial crops like rice, cotton and sugarcane consequently timeliness became a crucial point which needed mechanization. In some regions, agricultural employment slowed down despite high farm output and substantial public investment, rural electrification and irrigation. In the third phase, in India agricultural employment growth has decelerated largely because farm output growth rates themselves decelerated to below 2 percent during the 1990’s. One of the major reasons was the prolonged decline in public investment and irrigation investment bhalla, 1994.

Slowdown in creation of job opportunities in rural non-farm sector tends to push people back into agriculture which results from the increase in the number of the farm workers, in turn depressing the value of the output per farm worker.

However, rural diversification in Indian states was diverse and also the factors associated with it varied from one region to another. Thus, the impact of it on income and poverty was not uniform. According to 2011-12 (68th round NSSO), 69% of the household belongs to rural population resides and India has 71% rural population and about the same percentage is poor in the country. Since the cultivable land-mass ratio is limited, implying that agriculture cannot meet the number of new rural workers therefore RNFE acts as a panacea.
2.8 Development Strategies and employment in India over the different plan periods

Throughout the past five and half decades of developing planning of India, employment has been a key concern. In the early years of development planning, employment generation was treated as a goal of development planning, not a central concern and it seemed to be a corollary of the development process Papola, 2008. Since the mid 1973, the estimates of poverty, employment and unemployment based on NSSO data indicated that the achievements relating to growth and employment fell far short of expectations. It was in the fifth five year plan (1974-79) when reorientation of the development strategies towards an employment-oriented growth and the introduction of special anti poverty and employment programmes were initiated. In the seventh plan (1985-90), the central element in the development strategy was the generation of productive employment. In the eighth plan (1992-97) employment was considered to be important enough as a subject to merit an independent chapter in the plan document (Planning Commission, 1992, chapter 6). In this plan period, several overall and sectoral priorities, policies and programmes like agriculture and waste land development, support and policy framework for the development of the rural non farm sector, small and decentralised industrial sector, faster growth of informal and services were initiated for achieving goal of ‘employment for all’ by 2002 (planning commission, 1992, P-12). The ninth plan (1997-2002) identified three important dimensions of state policy employment, quality of life and regional balance. Ninth plan emphasised like the eighth plan, that growth could be made more employment friendly by ‘concentrating on sectors, sub-sectors and technologies that are more labour intensive, in regions characterised by higher incidence of unemployment and underemployment (Planning Commission, 1998, p-14). Accordingly it provides priority to agriculture and rural development with a view to generating adequate productive employment and eradication of poverty, as its first objective. However, growth-led employment strategy failed in 1990s and the plan period, leaving the backlog of unemployment unchanged. The planning commission appointed two committees-A Task Force on Employment Opportunities in 2001 and a Special Group on Targetting 10 Million Employment Opportunities per year in 2002 to examine the trend and potential for
employment generation to achieve the goal of employment for all within a specified period of time.

A number of special programmes relating to different sectors, particularly in agriculture and related activities, rural non farm sector and social sectors like construction, tourism, information and communication technology and financial services were envisaged following the recommendations of the Special Group (Planning Commission, 2002a). Estimates based on the NSSO 61st round, however, reveal that employment has grown at around 2.8 percent per annum during 1999-00/2004-05. The rate of GDP growth has been higher in this period as compare to earlier quinquenium, and the employment content of growth have significantly improved from 0.15 during 1994-2000 to 0.48 during 2000-05. Planning commission sources indicate that about 47 million employment opportunities were created per year during the plan period (2002-07). This is close to target of 50 million.

However, decline of poverty has been relatively low, at 0.8 per cent per annum, in spite of high GDP and high employment opportunities. The Approach Paper to the Eleventh plan (2007-12), therefore, emphasised on ‘inclusive’ growth and envisages employment as a central element of such growth. Now the emphasis is on two aspects of employment: productivity and incomes to address the problem of working poor.

The approach to the 12th five year plan (2012-17) also emphasised on faster, sustainable and more inclusive growth. Adequate and sustainable livelihood opportunities are required to realise the dream of inclusive growth.

The 12th five-year plan (2012-17) also emphasized on faster, sustainable, and more inclusive growth. Adequate and sustainable livelihood opportunities are required to generate to realise the dream of inclusive growth.

The 68th round NSSO survey on employment shows that majority of new jobs created during 2011-12 and 2004-05 were casual in nature, mainly in construction, NSSO reports on employment showed that in India there is displacement of labour from labour surplus agricultural sector to the non-farm sector but the nature of work in which they were absorbed, conditions of work and their earnings are required to examine.
Therefore, in the next section, we reviewed the quantitative significance of rural non-farm employment and the quality of employment that have been studied by different researchers in the past period.

2.9 Differential growth between sub sectors within primary, secondary, and tertiary sectors

Recent literature particularly emphasizes that whilst the common perception of the rural non-farm sector in India is one compromising largely of traditional village industries, in reality the sector is diverse. Fisher, Mahajan, & Singha, 1997 indentify 17 sub sectors which account for 80 percent of all RNF employment. The tertiary sector, itself contributing 60 percent of all RNF employment, includes retail trade, education, public administration, personal services, land transport, restaurants and hotels and medical services. The secondary sector includes many traditional sub sectors such as textiles, wood, pottery, food, tobacco, metal products, as well as repairs and construction. Important activities including manufacturing outside the household, trading and public services are each estimated to account for one fifth RNF employment Coppard, 2001. Fisher, Mahajan, & Singha, 1997 argue that most non-farm enterprises are small, each providing employment for an average of 2.2 people, using basic manual technologies to produce simple, low quality outputs. There are also more productive, but fewer, small, medium, large entreprises which may invest in more advanced technologies to produce modern and higher quality products.

Unni, 1998 argues that the beginning of a structural change in employment away from agriculture towards the non farm sector is evident, both at all India and rural-India levels. Bhaduri, 1987 finds that during 1977-78 and 1990-91, the share of the primary sector in GDP (mostly agriculture) and its share in total recorded employment fell, whilst those of the secondary and tertiary sectors have increased. Within the RNF sector, growth is found to be significantly higher in the tertiary sectors rather than the secondary (manufacturing) sector. However, the growth of RNF employment during this period is largely attributed to an increase in the proportion of casual workers in the unorganised sector, rather than full
time employment or increases in the number of rural non-farm producers Bhattacharya & Mitra, 1993. Additionally, casual agricultural labourers report a much higher incidence of RNF employment in a secondary or subsidiary capacity Basant & Kumar, 1989.

When combined, overall growth in rural non-farm manufacturing employment is found to be modest, but consistent (except for the early 1990s) in both absolute terms and as a share of total workforce and greater than that of the agricultural sector. Employment in the tertiary sector has witnessed a higher growth rate. Such growth is considered to reflect a structural change away from agriculture and towards the non farm sector (arguably principally in the male labour force), thus signalling the current and future significance of the RNFE. Recent growth, however, has largely been attributed to an increase in the proportion of casual workers rather than full time employment, significant variation is found across states as well as between sub-sectors.

Papola T. S., 1992 estimates that over half of all manufacturing jobs are in rural areas. However, this subsector can be further disaggregated to household and non-household, and traditional and modern manufacturing Mukhopadhya & Lim, 1985; Visaria, 1995; Samal, 1997 and Fisher, Mahajan, & Singha, 1997 emphasising that the majority of high share subsectors in rural manufacturing are in traditional sub-sectors, many of which are household based and declining, which little capacity to create further employment. In contrast the sub-sectors also includes modern manufacturing industries, such as power looms, modern garments, furniture, ceramics and agro processing, many of which makes a large contribution to India’s export market Fisher, Mahajan, & Singha , 1997. Visaria, 1995 thus argues that overall growth in manufacturing is modest due to the continuing decline of household industry and subsitution of capital for labour, particularly in food processing industry. He concludes that attainment of rural development appears to promote the expansion of non-household components of rural industry and a relative shrinkage of traditional household industries.

Study by Jha, 2007 reveals that though rural manufacturing is the most important industrial category in the non-farm sector, employment growth in it decelerated during the 90s. There are also evidences of manufacturing activities shifting away from the rural to urban sector in the country. Employment growth in the sectors like construction, trade, transport and
business services are increasing but their growth is not autonomous. It depends on the
different development and demographic factors generally associated with the development
stage of the region. Moreover, these industries together are account for only 11 percent of
rural employment in the country.

Bhaumik, 2007 finds that, at all-India level, in 2004-05, the sectoral composition of non-
farm employment has been such that wholesale and retail trade accounted for the highest
percentage of male non farm employment (24.78 percent), which is followed by
manufacturing, construction, services and transport, storage etc in order of importance.
For females, manufacturing has been extremely important (representing 50 percent of
female non farm employment), followed by services, wholesale and retail trade and
construction. However, in case of male non-farm workers, the percentage shares of
services, manufacturing, electricity, gas and water supply and minning and quarrying
declined during 1993-94 to 2004-05. Among these sectors, the decline has been high in
services (-9.42 percentage points). The sectors to gain are construction (7.94 points),
wholesale and retail trade (3.54 points) and transport, storage etc (2.85 points). As regards
female non farm employment, marginal decline is visible in the share of manufacturing,
wholesale and retail trade, services and mining and quarrying while the sectors to gain are
construction and transport, storage etc.

Actually, non-farm sector encompasses a large number of activities, the success of which
in a country as diverse as India, it requires frequent innovations in rural institutions
depending on the changes prespective and socio-economic conditions of the people Jha,
2007.

2.10 Inter-State Differences

Bhalla, 1993 and Chadha, 1986 assess variation across states. Bhalla identifies Gujarat,
Haryana, Jammu and Kashmir, Karnataka, Kerala, Maharashtra and Rajasthan as
witnessing expanding non-farm employment between the 1961 and 1981 censuses. Chadha
finds significant expansion in male workers during the 1970s and 1980s in Punjab,
Haryana, Gujarat, Himachal Pradesh, Rajasthan and Tamil Nadu, with modest growth in
Orissa, Karnataka, West Bengal and Maharashtra.
Fisher, Mahajan, & Singha, 1997 found inter-state variation in the rural non farm sector across the eight Indian States studied. The RNF sector was found to be more developed in Punjab, Tamil Nadu and Gujarat and less so in Assam, Orissa, Andra Pradesh, Rajasthan and Uttar Pradesh. RNF employment, particularly the tertiary sector, in Punjab was believed to be closely connected to agricultural development, whilst transformation of the rural economy in Gujarat was attributed to a rapid growth in rural manufacturing.

Inter-state variation is reflected in the 1991 census, which records Kerala with the highest proportion of rural workers engaged in non-farm activities at 43.9 percent followed by West Bengal (26.5), Haryana (26.2) and Punjab (25.8). At the other ends of the spectrum, like Bihar and Madhya Pradesh with 11.7 and 10.7 percent respectively, Fisher, Mahajan, & Singha, 1997.

Bhaumik, 2007 on the basis of NSSO data found that the incidence of rural non-farm employment has not been uniform across the states of India. At all points of time (1983-1993-94 to 2004-05), as regards male workers, this has been highest in Kerala and lowest in Madhya Pradesh. On the other hand, West Bengal and Kerala captured the first position interchangeably as regards incidence of non-farm employment for females. Maharashtra and Madhya Pradesh shared between them the lowest position in this regard at chosen time points.

There is considerable variation regarding the sectoral distribution of non-farm workers across the states. Study by Bhaumik, 2002 show that rural manufacturing sector absorbed more than 25 percent male non-farm workers in Bihar, West Bengal, Gujarat, Maharashtra, Tamil Nadu and Uttar Pradesh in the year 1999-00. The trade sector has provided employment to 20-30 percent of male non-farm workers in 11 states (Andra Pradesh, Assam, Bihar, Haryana, Karnataka, Madhya Pradesh, Maharashtra and Orissa (in absorbing more than 20 percent workers in each state). The construction sector has been absorbing more than 20 percent of male non-farm workers in Rajasthan, Haryana, Kerala and Punjab. Transport, storage etc, had absorbed more than 10 percent of male non-farm workers in all the states except Madhya Pradesh and Orissa. In the case of female non-farm workers. Even in all remaining states, this sector alone provided employment to more than 25 percent of female non-farm workers. The service sector has been important from the
point of view of female employment in Assam and Punjab (absorbing more than 50 percent of female non farm workers) while more than 20 percent of female non-farm workers are involved in this sector in Andra Pradesh. Bihar, Gujarat, Harayana, Karnataka, Kerala, Madhya Pradesh, Maharashtra and Uttar Pradesh. As regards employment of female Non-farm workers in wholesale and retail trade the most important states are Gujarat, Haryana, Karnataka and Maharashtra (employing more than 20 percent of them). The construction sector made significant contribution in Gujarat and Rajasthan only.

In the post reform periods, the emerging sub-sectors in terms of employing additional workers, we found that for rural males, the sectors emerging fast in the post reform periods are construction, wholesale and retail trade while manufacturing and services are emerging sector for the females. The picture obtained in this regard varied across the state Bhaumik, 2007. For rural males, construction has been emerging fast in Haryana, Kerala, Madhya Pradesh, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal; manufacturing in Haryana, Maharashtra and Uttar Pradesh; services in Assam and Madhya Pradesh and transport, storage, etc in Gujarat, Karnataka, Tamil Nadu, Andra Pradesh, Kerala, Madhya Pradesh and West Bengal. On the other hand, for female workers, the emerging sectors are manufacturing in Bihar, Haryana, Rajasthan, Uttar Pradesh and West Bengal; construction in Assam, Madhya Pradesh, Rajasthan and Tamil Nadu; wholesale and retail trade in Andra Pradesh, Karnataka, Maharashtra and Tamil Nadu; services in Assam, Haryana, Kerala, Punjab and West Bengal; and transport, storage etc. in infrastructural facilities like assured power/electricity, road, level of urbanisation, literacy, several social and demographic factors and economic policies are important in this regard.

Recognising the role of RNFS in any agriculture based labour surplus economy, past researchers have attempted to identify the factors which promote the expansion of this sector.

2.11 Rural Non-Farm Employment in Gujarat

Gujarat is the torchbearer state of India located in the western part. It has developed industrial economy and has commercial nature of agriculture. It contains only 5% of the population (2011) but contributes to 8% of the total domestic output of all states.
Agriculture in the state showed a more than 12% annual growth rate during 2000-08 while India struggled hard to achieve even a 3% rate of growth in this sector Hirway & Shah, 2011. There are, however, significant intra-state variations in levels of industrialization and agricultural development. A significant part of the state is semi-arid with limited irrigation facilities. Bulk of the agricultural activity in this region is undertaken during July to January, the official 'monsoon' and winter seasons Mehta, 2014.

Gujarat is seen as a “model/ideal state” as it has reaped the most from neo-liberal policies Hirway and Shah, 2011 and Dholakia 2011. However, some researchers believe that the growth has not seeped down to rural areas as indicated by the structure of growth and also existence of lower wage rates than all India average Nagaraj & Pandey, 2013. State is marked by disparities both in terms of overall and sectoral income levels as well as informal pattern of development. According to the -National Council for Applied Economic Research (NCAER), the Gini coefficient3 of incomes in Gujarat is 0.47, which is extremely high Shukla 2010.

There are also evidences of deterioration in the quality of rural employment; and casualization of rural workers has increased enormously Jha, 2012. The latest NSS (68th round) on employment-unemployment reveals that in Gujarat 73.3% of the usually employed rural workers in the non-farm sector who changed their industry in last two years have come from the farm sector Jatav and Sen, 2013. The study proposes to examine the agricultural growth pattern in Gujarat to substantial growth led theory of RNFS in Gujarat and the processes associated with rural structural transformation. Phenomenon of double digit growth rate in agriculture was observed in last decade Mehta, 2014 and Shah, Gulati, Hemant, Shreedhar, & Jain, 2009.

Changes in the rural economy is apparent from the fact that in the 2000s decades the number of census towns has increased from 73 in 2001 to 154 in 2011 census of India 2001 and 2011 apart from demographic growth workforce diversification is also visible in the rural economy. Perhaps, inter relation between agricultural growth, increasing rural non-farm employment and census towns’ needs to be further studied in Gujarat. Many studies have dealt with the issue of rural transformation in the Indian context. A study

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3 Used to measure inequality
conducted by Gujarat institute of Development and research states that in Gujarat, more men are involved in RNFE when calculated through current weekly status. It showed that extent of self-Employment is more in Gujarat than India. It also claims that in less industrially developed areas RNFE is higher than industrially developed area *GIDR, 2013.*

To further strengthen the argument, in context of rural wages; it was seen that though Gujarat is a fast-growing state but the profit earned by the entrepreneur is not equitably shared with their laborers. Labour in the state is basically viewed as a mere factor of production to promote economic growth – and to inflate the profit margins of the corporate sector and promote reinvestment of savings *Hirway & Shah, 2011.*

<table>
<thead>
<tr>
<th>Table 2.3: Structural Transformation of Gujarat Economy</th>
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<tr>
<td>Share of employment in Gujarat</td>
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<tr>
<td>Agricultural &amp; allied activities</td>
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<tr>
<td>Non-Agriculture</td>
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Some regions which have observed growth in RNFE had seen stable agricultural growth. “Conditions are favourable for the more extensive and rapid growth of small-scale industries in only some regions of India, i.e., those which have recorded moderate to high rates of growth of agricultural output without being subject to serious fluctuations”. The State selected for this study was based on analysis of NSS data (2004-5 and 2009-10) and Census, 2001 data, and sectoral gross value added data. Gujarat is one of the very few States in the country which has experienced significant growth in agriculture between 2001-02 and 2011-12. The growth in agriculture sector was 10% and in the same decade number of census towns is also increasing which implies RNFE is also prevalent and increasing. Thus, we can hypothesize that there is a push factor working in the direction of increasing RNFE. Forward and backward linkages also positively affect RNFE in Gujarat. In Uttar Pradesh, the process of structural transformation began in 1990’s due to process of agricultural modernization and partly due to expansion in government employment during 1970’s and 80’s. Self-cultivation was the most important source of livelihood only in Uttar Pradesh, implying continued dependence of its rural population on agriculture. (GIDR, 2013). A significant gender feature in rural non-farm is that in
agriculture and non-agriculture men and women both participate equally. In 1991, rural Kerala observed 52.5% and 52.2% female and male were employed in agricultural activity whereas, in non-agricultural activity 47.5% and 47.8% female and male were employed in non-agricultural activity. It implies there is equal men women participation in occupation *Eapen, 2005*.

We find that between 2001-02 and 2011-12, Gujarat’s share in agriculture GSDP of all states went up from around 5% to 7% (Figure 3). However, if one takes a longer time horizon from 1993-94, then the observed surge in Gujarat’s agriculture in the last decade merely represents a recovery of the lost ground of the 1990s. Evidently relative prosperity and a tendency towards rural secondary and tertiary workforce concentration can and quite commonly go together. Almost all the states experienced at least one decade in which rural workforce concentration took place in the non-farm sector. During the late 1970’s and throughout the 1980’s there was a sea change in the empowerment prospects of rural – urban workers. In the wake of globalization, employment pattern in rural and urban areas have shifted. The study aims to analyse the rural transformation process and the pattern of rural labour absorption in Gujarat. The growth of rural non-farm employment in different parts of the state with varying socio-economic and spatial characteristics would be examined to assess the rural transformation process, as observed through the growth in the number of census towns.

There are contrary views about the forces which lead to rural workforce diversification. Often slow agricultural growth and overall incomes result in distress conditions that lead to lack of demand for non-agriculture commodities *Manoj and Sen, 2013* and *Bhalla, 2005*. On the other hand, extent of marginal to total land holdings have been found to be positively related to non-farm employment as revealed by some in-depth studies *Nayyar and Sharma, 2005*.

In Gujarat, the participation in non-agriculture work varies inversely with size of land owned by the households and mainly landless workers participate in such activities. *Rakesh Basant and B.L. Kumar, 1990*. Whereas, Economic development involves a process of specialization and diversification and thus trends towards decline in the share of agriculture workers is to be expected. Therefore, a progressive casualization of the rural
workforce is not a negative phenomenon. As, the studies show a significant positive relation between the rural unemployment rate and the incidence of non-agricultural employment at the state level. Although the influence of unemployment rate was stronger, agricultural productivity also had a significant and positive relation with the incidence of non-agricultural employment. Vaidyanathan A., 1986.

In a case, Basant, 1994 finds, in a survey of rural employment in the Indian State of Gujarat, that 25% of rural male non-agricultural workers commuted to urban areas for work. As of now 36% of rural workers in Gujarat commute if we consider the people who are dependent on urban jobs the share of urban sector will increase relatively. The rural non-farm activities are such as, trade and transport services, construction, manufacturing, including agro-processing. Clearly, a more limited definition of rural lowers the percentage of employment which is found outside of agriculture. A number of features of the data suggest that the percentage of rural employment found in the non-farm sector may be underestimated for all countries. In most developing countries the bulk of the population lives in rural areas, and this population continues to grow at an extensive rate. Agriculture still dominates, as the most important sector of economic activity in terms of employment generation in the less developed countries. Given limits to arable land, this growth in the rural labour force will not be productively absorbed in the agricultural sector. In developing countries, the rural non-farm sector is a poorly understood component of the rural economy and we know relatively little about its role in the broader development process. This gap in knowledge is due to the sector’s great heterogeneity. Either migration to urban areas or the development of non-farm employment in rural areas must take up the slack. Over the period 1960–1980, rural out-migration have been estimated at 1 and 1.8% annually for 40 developing countries with available data Williamson, 1988.

2.12 Summary of Findings

Main observations from the above analysis are:

Significance of rural non-farm sector is absorbing growing labour force is well recognized. Agriculture is still the dominant employer of rural workers but its ability in further absorbing growing labour force is being questioned in recent time. In many
developing countries of Asia, Latin America and Africa, such increasing participation of rural labour force in Non-Farm employment is 32 percent in 2009-10. However, there is considerable variation across the states regarding the incidence of Non-Farm employment. At all points (1993-94 to 2009-10), for male workers, the incidence of Non-farm employment is highest in Kerala and lowest in Madhya Pradesh. West Bengal and Kerala captured the first position interchangeably as regards incidence of non-farm employment for females. Maharashtra and Madhya Pradesh shared the lowest position in this regard at our chosen time points. Non-farm sector consists of heterogenous set of activities. It is, therefore, important to analyse growth of different sectors to identify the emerging sectors in absorbing growing labour force. Present study reveals that, during the period 1993-94 to 2009-10, in case of male Non-farm workers, the percentage share of service, manufacturing, utilities and mining and quarrying have declined and the sectors to gain are construction, wholesale and retail trade, transport-storage etc. Past researchers have identified number of factors for the expansion of non-farm employment. There are mainly two contrasting opinion in this regard. Following Mellor, many researchers have argued that it is distress driven. It is the distress driven conditions of the poor people in the rural areas that force them to diversify for their alternative source of livelihood. According to some researchers, other factors like education, urbanisation, electrification, rural infrastructural facilities, access to formal credit are important for the expansion of non-farm employment.

There are number of studies Chadha, 1986 and Bhaumik, 2007 that explains the poverty of mitigating role of the non farm sector. However, several empirical studies by different research scholars Lanjouw, 2008. Reveals that lack of education, limited access of land and financial capital, social and economic barriers prevent the poor people to participate in high return non -farm activities. They confined in some low return work. Therefore the avowed objective of mitigating poverty is barely served by this sector.

However, presence of significant percentage of poor people in the rural areas, raise question about the earnings, conditions of work in which the workers are absorbing. Several studies reveal that there is an increasing casualisation of labour, increasing
employment in the unorganised sector, and decrease in the relative wages of casual workers. All these are depressing features of Indian labour market. Therefore, quality of employment or the productivity of work is required to improve.

It is already stated that non-farm sector consists of heterogeneous set of activities. Expansion of non-farm employment and its impact on poverty eradication are varying from one state to another state and also from one region to another region. Therefore, micro level analysis of both the quantitative significance and quality of employment may provide some valuable insight into the nature of poverty.

This study makes an attempt to conduct such analysis at the micro level by considering census towns from different districts of Gujarat. Factors like infrastructure, education and location of the town have an impact on rural non farm employment in census towns.

**Null Hypotheses:**

In order to gain an insight into the above, the study seeks to explore the following hypotheses drawn from the literature review:

1) Increase in agricultural income does not leads to increase in rural non-farm employment

2) Increase in literacy rate and education levels does not spur growth in employment.

3) Rural non-farm employment and the opportunity to diversify to secondary and tertiary sectors, is not a prerequisite for enhanced urbanisation.

4) Presence of rural infrastructure (physical and social), and rural market centres, does not help in the growth of rural enterprises and employment in the same.

These hypotheses are well discussed in following chapters by using both primary and secondary survey.