DETERMINANTS OF NONFARM ACTIVITY @ ICRISAT

Report Submitted to

International Crop Research Institute of Semi Arid Tropics

By

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To Whomsoever IT May Concern

This is to certify this project report on "**Determinants of non-farm sector**" is a bonfire record of work done by ***Miss Aanchal Jain*** under my supervision and submitted to **International Crop Research Institute of the Semi-Arid Tropics.**

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DECLARATION

I do hereby declare that the report entitled upon "**Determinants of non-farm activities**" is an original and independent record of project work undertaken by me under the supervision of **Dr. A. Amarender Reddy, Special Project Scientist, MIP (Markets Institutes and Policies), at International Crop Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, India,** during the period of my study as a part of curriculum of Master in Agribusiness Economics.

Hyderabad **By**

DATE: 12.07.2013 **AANCHAL JAIN**

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ABSTRACT

The economy of rural area in India is predominantly based on agriculture and other activities and other activities related to agriculture sector. Hence an overwhelming majority of rural population is mainly depending on agriculture sector both for its employment and livelihood. At the same time various non-agricultural activities are also playing an important role in providing the opportunities of employment and incomes to the labour force belonging to both farming and non-farming households. Through, the nature of employment as available either in agricultural or non-agricultural activities is measured for a shorter duration.

Using the secondary data, we analyse the determinants of individual participation in non-agricultural activities in Andhra Pradesh, Punjab, And Tamil Nadu. The studies were conducted at International Research Institute of Semi Arid Tropics. The determinants of employment within non-farm activities are analysed. Literacy rate and urbanization have important roles in employment in non-farm activity. Other variables matter too. Those from socially disadvantaged groups (schedule caste or tribes), for example, have lower probabilities of employment in manufacturing and trading.

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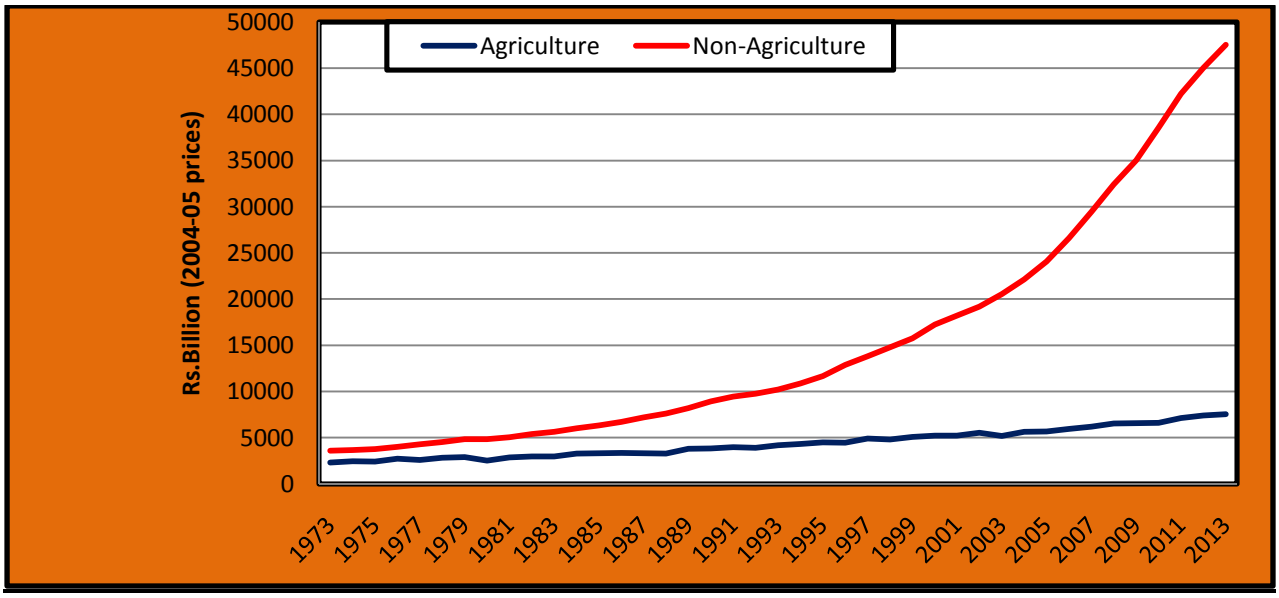
1. INTRODUCTION

Farm activities mean agriculture activity and nonfarm activity which is used synonymously with non agriculture activity. There are two alternative approaches to define rural nonfarm activities. The first is the locative approach in which the primary criterion is that a rural nonfarm activity is performed in a location which falls within a designated rural area. The second is based on the linkage approach where an industrial enterprise generates significant development linkages with the rural areas. Rural nonfarm sector includes all economic activities viz., household and non-household manufacturing, handicrafts, processing, repairs, construction, mining and quarrying, transport, trade, communication, community and personal services etc. in rural areas. Rural nonfarm activity, thus, play an important role to provide supplementary employment to small and marginal farm households, reduce income inequalities and rural-urban migration.

Importance of Nonfarm Sector

- Employment growth in the farm sector has not been in consonance with employment growth in general.
- A planned strategy of rural nonfarm development may prevent many rural people from migrating to urban industrial and commercial centre.
- When the economic base of rural extends beyond agriculture, rural urban economic gaps are bound to get narrower along with salutary effects in many other aspects associated with the life and aspirations of the people.
- Rural industries are generally less capital intensive and more labor absorbing.
- Rural industrialization has significant spin-offs for agricultural development as well.
- Rural income distribution is much less unequal in areas where a wide network of nonfarm avenues of employment exits; the lower strata of rural societies participate much more intensely in nonfarm activities, through their involvement is much less remunerative as compared with that of the upper strata.

Graph no.1 SHARE OF AGRICULTURE AND NON-AGRICULTURE SECTOR IN INDIA



This graph shows the importance of non-farm sector in Indian economy. Here blue line shows the agricultural GDP from the year 1973-2013 and the red line shows the non-agricultural GDP. As we can see that blue line is increasing but it is almost stable where as the red line i.e. non-farm GDP is increasing at a very fast rate, in 2013 share of agriculture sector to India's GDP is just Rs7000 billion but at the same time the share of non-agricultural sector rose to almost Rs 50000 billion, and now it contributes to 86% in India's GDP. So our main aim is to increase the employment in the non-farm sector so that there is a structural change in the employment also.

Traditionally, rural household in developing countries have been viewed as though they were exclusively engaged in agriculture. There is mounting evidence that agriculture sector had played a very significant role for generation of rural employment in the Asia and Pacific regions, its contribution to the overall economy has greatly reduced in the recent past. Therefore, development

of various nonfarm activities can effectively be exploited as a potent stimulator for the further economic growth offering rural communities better employment prospects on a sustainable basis.

Non-farm activities are mainly classified into three categories

- **Regular, salaried employment**- regular non-farm employment is typically highly sought and most clearly associated with relatively high and stable income. But only 22% of the non-farm workforce held under regular salaried jobs in 2004-05.
- **Casual laborers**- 28% of the rural non-farm workforce was employed as casual laborers. Among the workers casual work is less demeaning as compared to agricultural wage labor, as it pays better, but it is hazardous. Examples construction, rickshaw pulling, industrial workforce etc.
- **Self-employment**- In 2004-05 the other half of the non-farm rural workforce was involved in self-employment. Non-farm self employment activities can be residual, last resort option (e.g., unpaid family labor and wage work concealed as self-employment under different forms of contracting out tasks) as well as high return activities.

It has been noticed that nonfarm incomes accrue via wage employment as well as self-employment/ own enterprise activities, and that within the former there is an important distinction between casual wage employment and salaried, regular employment. We find evidence that education and wealth is strongly correlated with the more remunerative nonfarm activities; that (low) caste may pose barriers to access; and those village level agricultural conditions, population densities, and other regional effects are also of independent significance. Up to this point the analysis thus suggests that while the nonfarm sector may be non-negligible in the size in rural India, its direct contribution to poverty reduction is possibly quite muted because the poor lack the assets which determine access to nonfarm income.

Decisions made by rural households concerning the form and extent of their involvement in rural nonfarm activities generally depend on two main factors:

The incentives offered, such as the relative probability and risk of farm and rural nonfarm activities and the household's capacity (determined by education, incomes and assets and access to credit etc.) to undertake such activities.

Households are motivated to undertake rural nonfarm activity either by "pull[1]" or ""[2]push" factors.

Most of rural India's workforce (70%) remains primarily involved in agriculture, it is clear that India needs to manage a transition of people out if agriculture. The gap between the number of new rural workers and the number of new jobs in agriculture is growing; agriculture advances alone will not meet the rural employment challenge. Migration to urban areas will be important, but the rural nonfarm economy will also have to be a key source of new jobs.

So the main aim of the report is to study the role of different variables which in creating employment in non-farm sector. It also shows that with the growth of nonfarm sector there is also evidence of decline "quality" of nonfarm jobs, notably in the direction of increased actualization of nonfarm employment away from regular, salaried, employment.

Amongst the policymakers there is a considerable interest in understanding better how the nonfarm sector contributes to economic growth and what, if any, specific role it plays in alleviating rural poverty. There is a fear in many parts of the world that rapid growth in agriculture during the next few decades may remain elusive, and that absent other sources of rural growth it will be difficult to maintain, much less raise, rural per capita living standards.

The result could be raising rural poverty and an acceleration of migration to urban areas. Understanding better whether and how the rural nonfarm sector can be promoted so as to pick up any slack in the agricultural sector is a subject of keen interest.

[1] Pull factors, such as better returns in the nonfarm sector relative to the farm sector.
[2] Push factors, which include in particular:
An inadequate farm output, resulting either from temporary events or longer term problems
-an absence of or incomplete crop insurance and consumption credit markets
- the risk of farming, which induce households to manage income and consumption uncertainties by diversifying and undertaking activities with returns that have a low or negative correlation with those of farming.

SPECIFIC OBJECTIVE OF THE STUDY

- To study the relationship between nonfarm employment and social-economic parameters
- Analyze the importance of rural nonfarm activity in employment and wage rates.
- To study the importance of education in rural nonfarm activity.

HYPOTHYSIS

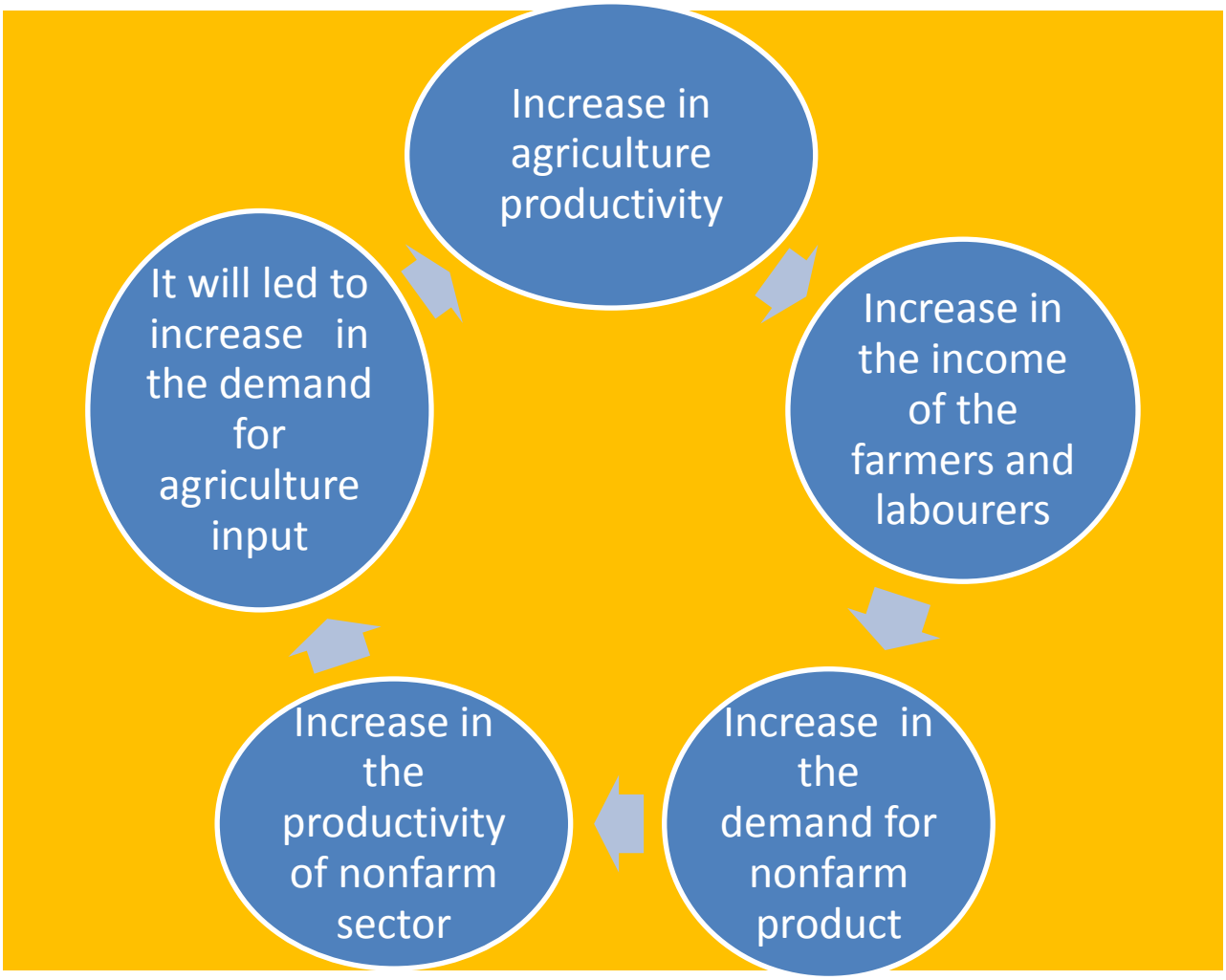
- There is no significance relationship between non-farm employment and various social-economic parameters.
- There is no significance relationship between nonfarm activity and wage rates.

2. Review of literature

Farm-nonfarm linkages

Since the early 1970s there has been attention to the significance of the rural nonfarm sector in the rural economy. As a result of emerging green revolution technologies, there has been a virtuous cycle emerging whereby increases in agricultural productivity and thus the incomes of farmers would be magnified by multiple linkages with nonfarm sector. There were production linkages, both backward, via the demand of agriculturalist for inputs such as engines and tools, and forward via the need to process many agricultural goods, e.g. spinning, milling, canning. Consumption linkages were also through to be important: as agricultural incomes rose, it would feed primarily into an increased demand for goods and services produced in nearby villages and towns. With increased productivity in agriculture either labour is released or wages go up. And the new agricultural surplus would be a source of investment funds for the nonfarm sector.

Fig. 1 LINKAGE BETWEEN AGRICULTURE AND NON-AGRICULTURE SECTOR



Hazel and Haggblade(1990) use state and district level Indian data to look at the relationship between rural nonfarm income and total agriculture income interacted with factors through to influence the magnitude of the multiplier: infrastructure, rural population density, per capita income in agriculture and irrigation. The estimation is done for the rural areas, rural towns and the combined areas. They calculate that on average a 100 rupee increase in agricultural income is

associated with a 64 rupee increase in rural nonfarm income, with 25 rupee in rural areas and 39 in rural towns.

Vaidyanathan(1983) estimated a regression of the importance of non agricultural employment in total employment on farming income, its distribution, the importance of crash crops and unemployment rate, using several state datasets for India. In all cases he found a strongly significant, positive relationship between unemployment and the importance of nonfarm employment. Where agriculture was unable to provide widespread employment, the nonfarm sector played an important role in picking up part of the stack. The incidence of nonfarm employment was also found to be positive associated with both higher farm incomes and more equal distribution, pointing to consumption linkages.

Nonfarm employment patterns

The rural non farm sector displays enormous heterogeneity, both in terms of sectors, and in term of type of employment. The analysis of this section points to a growing, but increasingly casualized, rural non farm sector.

Nonfarm activities can be crudely divided into three sub-sectors representing very different type of employment: regular, salaried employment, where the worker has a long-term contract that does not require daily, weekly or monthly renewal; casual wage labour that entails a daily or periodic renewal of work contract; and self employment where the worker operates her own business.

Employment patterns in the non-farm sector, based on National Sample Survey data and Census data, have been carefully surveyed in Visaria and Basant (1994). This type of analysis is constrained by definitional and comparability issues associated with the major data sources on employment patterns. Nonetheless, the study documents the clear increase in the share of non-agricultural employment in the rural workforce during the 1980s, with the trend more clearly evident among males than among female workers. In addition, the evidence appears to point to a more rapid expansion of tertiary sector employment rather than of secondary sector employment, and that the bulk of employment growth is of a casual nature, rather than permanent.

A recent study on the non-farm sector concludes that between 18-25% of rural employment occurred in the non-farm sector at the beginning of the 1990s (Fisher, Mahajan and Singha, 1997). An important observation made in this study is that approximately one fifth of total employment is estimated to be generated by public sector services; primarily public administration and education (see also Sen, 1996). Other important sectors in terms of employment shares were found to include retail trade, personal services, construction, wood products and furniture, land transport, and textiles. While manufacturing activities are often the first that come to mind when discussing the nonfarm sector, the study shows that services are easily as important.

A study by Acharya and Mitra (2000), draws on multiple rounds of National Sample Survey data (spanning the period 1984-1997), and also two rounds of the Economic Census (corresponding to 1990 and 1998) and asks whether the positive nonfarm employment trends of the 1980s have continued through the 1990s. They find little evidence of further expansion. At the all-rural India level they find that employment in the secondary and tertiary sectors grew from about 22% of the workforce in 1983 to about 25% by 1987-88. There was no further growth during the 1990s; the latest NSS survey for 1997 (a "thin" round) indicates an employment rate of about 24%. The authors note considerable variation across states in the degree of occupational diversification (with states such as Kerala, Punjab, Haryana, Gujarat and Tamil Nadu clearly more diversified than others), but observe no clear evidence of growth in nonfarm employment rates during the 1990s occurring in any state other than Kerala (Acharya and Mitra, 2000).

Factors influencing transformation of the rural economy

Technological Progress:

With growing mechanization of agriculture which may be the result of technological reform (e.g., Green Revolution in India), the input structure of the farm sector changes. Traditional inputs are being replaced by modern inputs like HYV seeds, biotechnologically engineered seeds, fertilizers, pesticides, irrigation and agricultural implements like tractors, harvesters etc. Increasing use of modern inputs increases the consumption of energy (Petroleum, electricity etc.) thus in turn replaces the bullock power in farm agriculture. Adoption of new technology increases agricultural output manifold. As productivity increases, average farm income increases undoubtedly (setting aside the debate of rising inequality in rural areas and adverse environmental impact of new technology). As

a result of increase in production, there is also a corresponding increase in the marketable surplus. The subsistence farm economy which starts producing for the market becomes market oriented. Farmers in rural areas are dependent on the market for the purchasing of inputs as well as for selling the farm output. Market expands and so farmer's supply decisions are more or less influenced by the market signals (market prices for inputs as well as outputs). That is to say, technological progress leads to *commercialization/capitalization* of the farm economy and hence of the rural economy. Simultaneously as production increases, agricultural demand for trading services, storage and communication lifts up. Improved transport and storage become necessary to handle the distribution and marketing of outputs and inputs and banking facilities etc.

Dipti Prakas Pal shows that though agriculture is the main source of living for the rural people having low level of income and hence low level of living compared to that for the urban people, but with time non-farm activities are becoming the alternative source of livelihood for the rural people. With urbanization the secondary and tertiary sectors (i.e. nonfarm) activities are being increasingly performed. Farm mechanization and above all commercialization of agriculture are playing the important role towards transformation of the rural economy in terms of employment, income and level of living. The volume of non-farm employment and income of the rural people have been undergoing substantial changes. Rural non-farm sector (RNFS) plays an important role in reducing the widespread rural poverty through generation of employment and income and creation of effective demand for goods and services. The role becomes important as it can provide diverse employment opportunities to the rural people and in the process transform the rural economy in the desired direction of inclusive growth.

Study by Himanshu (2011) provides some early evidence as to the evolution of the nonfarm sector in rural India since the 2004-05 NSS survey. Drawing on the NSS survey data spanning the period 1997-98 through to 2007-08,Himanshu (2011) argues that the noticeable acceleration of nonfarm employment between 1990-00 and 2004-05, is likely to have been driven in part by particularly high levels of entry into this sector by women, children and elderly who were pushed into the nonfarm labour force because of acute distress in the agricultural sector. For example he documents that the growth rate of agricultural GDP declines from 4% between 1993-99 to 1.6% between 1999-2004, before resuming at a rate of 4.5 between 2004-2007[3]. The resumption of the growth in the agricultural sector, post-2004, led to a slowing of employment expansion in the nonfarm sector. Himanshu (2011) sees this slower nonfarm employment growth during the 2004-07 periods as

[3] Agriculture wage growth mirrored these output trends, declining significantly during the 1999-2004 period, but then registering a significant rise in the second half of the 2000s (Himanshu, 2011)

mainly a return to more usual labour force participation rates, especially of women. In other respects the trends pointed to above, namely ongoing casualization of nonfarm wage employment and the continued significance of self employment, are also clearly apparent in the 2007-08 data. The main thrust of the argument presented in Himanshu (2011) is thus that expansion of the nonfarm sector between 1999-2004 was in large part due to push factors, and should not be interpreted as pointing to a sustained acceleration in the process of inter-sectoral transfer out of agriculture into the nonfarm sector in rural areas.

Village studies indicate that the distribution of non-agricultural employment and earnings reflects two influences. One the one hand, the poor with lower "reservation" wages generally show the greatest inclination to become involved in non-agricultural activities. This is, at least in part, because the poor in many villages are usually dependent on agricultural
casual wage employment, and this occupation is typically viewed with considerable distaste – a *last resort* activity which they would rather not be involved in. On the other hand, the better educated (or otherwise privileged) tend to have more opportunities for non-agricultural employment. Whether the poor are able to gain access to the nonfarm sector thus depends on the extent to which they are crowded out by those with the better contacts, status or wealth. This may well evolve over time. In Palanpur there has been a clear shift over time, with the better-off in the village acquiring an increasing share of non-agricultural employment and earnings. By the early 1990s, the high-ranked Thakurs (previously landlords) had acquired a disproportionate share of non-agricultural employment. This pattern of a gradual reduction in the share of non-agricultural employment and earnings for disadvantaged groups has also been observed by Wadley and Derr (1989) in Karimpur, also in western Uttar Pradesh, and Leaf (1983) for a village in Punjab.

At the broader country-wide level, Ravallion and Datt (1996, 1999) show that the effectiveness of nonfarm growth in reducing poverty has varied widely across states, reflecting systematic differences in initial conditions. In states with low farm productivity, low rural living standards relative to urban area, and poor basic education, poor people have been less able to participate in the growth of the nonfarm sector. They note an important role of initial literacy rates: more than half the difference between the elasticity of poverty to nonfarm output for Bihar and that for Kerala is attributable to Kerala's substantially higher initial literacy rate.

Another important link between the nonfarm sector and rural poverty occurs via the effect of the nonfarm sector on agricultural wage rates. Agricultural labourers are highly represented

among the poor in rural India, and as a result increases in agricultural wage labour earnings are strongly associated with lower poverty (see Datt and Ravallion, 1998).

Expansion of the non-farm economy appears to have influenced agricultural wages in rural India. Until recently, secondary data (Kurien, 1980) suggested that real wages in rural India showed no significant upward trend. However, evidence now suggests that an upward trend did, in fact, emerge in the 1970s and 1980s in most regions of India (Acharya, 1989).5 The rise over time of agricultural wages is also remarked on in numerous village studies (for example, Leaf, 1983, Ramachandran, 1990, Harriss, 1989, Guhan and Mencher, 1983).

In North Arcot, Tamil Nadu, Hazell and Ramasamy (1991) indicate that although new agricultural machinery was displacing hired labor in paddy cultivation, real wage rates in agriculture actually rose (at least for some activities) as a result of increased off-farm employment and the consequent tightening of village labour markets. Because of a withdrawal from agricultural labour by large farmers and the expansion of competing employment opportunities in dairying and non-farm activities, agricultural employment earnings doubled between 1974/75 and 1983/84 for landless labor, small paddy farm, and non-agricultural households.

In India, agriculture contributes to 67.9% of employment but it only contributes to 38.34% of rural GDP as per the 66^{th} round of NSSO data in the year 2009-10. Himanshu et al 2011, Binswanger et al, 2012, Christaensen et al, 2013 indicates that the nonfarm sector in rural India has grown steadily during the past 30 years. Himanshu by taking example of Palanpur village of western Uttar Pradesh linked the recent phenomenon of rural poverty declines with the diversification of the village economy. The paper also highlighted the close association between rural poverty reduction and rural nonfarm growth. Lam and Schoeni (1993) and Fafchamps and Wahba (2006) highlighted the household and social background will have a positive effect on the persons earning. Krishna and Shariff (2011) demonstrated that the two parallel and opposite flows regularly reconfigure the national stock of poverty. Some formerly poor people have escaped poverty; concurrently, some formerly non-poor people have fallen into poverty based on opportunities in employment and income. Krishna and Bajpai (2011) stated that the people in the largest cities have achieved the greatest gains, followed by people in small towns and villages close to towns. Similarly, experience of other countries including China shows the importance of diversified sources of employment in vitality of rural economy. While examining the Chinese rural economy, Siciliano(2012),

highlighted that the reducing the rural-urban income/employment gap in China is a critical objective for both economic growth and equity.

In general, India crossed Lewis turning in the point in the mid 2000s as revealed by sustained increase in real wages. The main reason are increased rural-urban linkages, increased share of nonfarm sector employment, increased labour productivity and wider penetration of largest employment guarantee program (MGNREGA) in to rural areas. There were signs of increased reservation wages rate among worker due to increase income wealth effects. The main problems in the rural labour markets are high unemployment among educated youth, low work participation among women, high disparities in wage rates among interaction in the villagers, it is found that skill development, development of rural infrastructure, adjust public works to crop calendar are some of the immediate policy prescription to correct labour market distortions in rural areas. But still an intensive examination of the burning labour market issues like labour shortage on the one hand and low labour productivity in agriculture, lower agriculture wages on the other needs to be examined.

Developing Countries

There are several reasons why the promotion of RNF activity can be of great interest to developing country policy-makers. First, the evidence shows that RNF income is an important factor in household economies and therefore also in food security, since it allows greater access to food. This source of income may also prevent rapid or excessive urbanization as well as natural resource degradation through overexploitation.

Second, in the face of credit constraints, RNF activity affects the performance of agriculture by providing farmers with cash to invest in productivity-enhancing inputs. Furthermore, development of RNF activity in the food system (including agro processing, distribution and the provision of farm inputs) may increase the profitability of farming by increasing the availability of inputs and improving access to market outlets. In turn, better performance of the food system increases rural incomes and lowers urban food prices.

Third, the nature and performance of agriculture, themselves affected by agricultural policies, can have important effects on the dynamism of the RNF sector to the extent that the latter is linked to agriculture. This sector grows fastest and most equitably where agriculture is dynamic

where farm output is available for processing and distribution, where there are inputs to be sold and equipment repaired and where farm cash incomes are spent on local goods and services.

Table no.1

Share of nonfarm income and employment in total rural income and employment	Nonfarm income share	Nonfarm employment share	Average per caput GNP, 1995($)
	Mean (%)	**Mean (%)**	
AFRICA	42	-	726
East and southern Africa	45	-	932
West Africa	36	-	313
ASIA	32	44	1847
East Asia	35	44	2889
South Asia	29	43	388
LATIN AMERICA	40	25	2499

Contribution in the Rural Economy

The nonfarm sector is performing an important role in the overall economy of the states in term of both providing employment opportunity to different categories of skilled and unskilled labour force and contributing in the income of both farm and nonfarm household. In fact, the contribution of nonfarm sector has been consistently increasing in the creation of additional employment and the generation of income in different geographical locations over the years due to decreasing man-land ratio and an overall decline in the net cultivated area, besides a considerable decline in the per capita net domestic production being originated from agriculture related activities. The consequences of these all adverse performances of farming economies have universally been well recognised in terms of a significant decline in the concentration of workforce in agriculture and allied activities and its subsequent shift in nonfarm sector during the recent past.

However, the contribution of various components of nonfarm sector in general and its manufacturing segment in particular in the process of overall development, especially in terms of creating employment and generation of income, has been realized at much below the level of its

actual expectations in different areas. This is largely due to inadequate initiatives undertaken for the exploitation of various advantages and niche based opportunities that are available in favour developing variety of nonfarm activities in different locations of the state under the past-development plans.

Further an attempt has been carried out to examine the pattern of contribution of different nonfarm activities in the overall income as being generated from rural nonfarm sector in different geographically locations. Annually, on an average a nonfarm house hold is generating around Rs. 15.6 thousand from engaging its family workforce in performing different nonfarm activities within the rural areas, through it is marginally varying from lowest 14.53 thousand in highest at Rs. 16.59 thousand for the household located in high and middle hill areas.

Review of literature table

SN	AUTHORS	TITLE	YEAR OF PUBLICATION	PERIOD OF STUDY	SOUECE/ PUBLICATION TYPE	COVERAGE:METHODS USED/ANALYTICAL FRAMEWORK,COVERAGE	KEY FINFINGS	REMARK
1	Peter Lanjouw and Abusaleh Shariff	Rural nonfarm employment in India: Access, income and poverty impact	2000	1971-2002	National council of applied economics	They have use **multinomial logit model** to explore the individual, household and community characteristics that are associated with the probability of nonfarm employment in rural India. **The study is based on household survey, therefore it is a primary data**.	Nonfarm income share in rural India, multinomial logit: sector of employment north-central regions, western region, eastern region, southern region, how caste and education are related to employment in nonfarm sector. Nonfarm share are highest in the states of Himachal Pradesh, northeast; West Bengal and Tamil Nadu(more than 45%). But in states of Gujrat, Madhya Pradesh, Andhra Pradesh nonfarm income is less than	Nonfarm income in rural India contributed, on average, about one third (34%) of total household income in 1993/4. Strong evidence of the importance of education and wealth in determining access to nonfarm occupation. Nonfarm sector offers little real opportunity for women in rural India. **So it is very important to improve education levels in rural India**.

							25%.	
2	Tom Reardon	Rural non-farm income in developin g countries		1970-1995	Paper prepared for FAO	. In this article **secondary data** is been used. it is based on the estimation from the World bank 1997, World development report 1997, Washington, DC	Factors conditioning incentives and capacity for RNF activities, importance of RNF activity-comparisons across developing country regiongs, determinants of RNF activity: inter household differences Non-farm income share is higher in east and southern Africa (45%), followed by Latin America (40%), west Africa(36%), least in South Asia (29%) and also in east Asia (35%). Nonfarm employment share is not given. But it is 44% in East Asia and 25% in Latin America	It is important to help the poor to overcome the constraints like lack of key assets, remunerative RNF employment and thus enable them to participate in RNF activities. Investment in general education and specific skill information centres in rural areas for the purpose of identifying promising opportunity.
3	Daniel Start	Rise and fall of the rural non-farm economy: poverty impacts and policy options	2001	1984-2000	Development policy review, 19(4): 491-505		Main theories of RNFE development and outlines a simple model for thinking about stages of diversification in rural development, impact on poverty, inequality and well-being that can be caused by participation in	Rural poverty alleviation is the assumption that small scale, presumable informal, enterprise are best placed to provide jobs and livelihoods for the poor. It is through small scale informal sector that many of the poor participate in the RNFE. Step wise expansion of these enterprise

							RNFE.	can act as a highly effective escape route out of poverty.
4	Anjali Kumar	Rural employment diversification in India: trends, determinants and implementation on poverty.		1983 & 2009-10	review Vol. 24 (Conference Number) 2011 pp 361-372, NSSO DATA	**Log Linear regression model** is being used to examine the impact of nonfarm activity in reducing poverty, and to analyze the determinants of employment diversification towards nonfarm sector and horticulture crops and to attribute weights to these determinants multinomial logit model have been used.	State wise share of nonfarm sector in rural employment, source of new job in rural India: 1983 to 2009-10. Trends and pattern of rural employment in agriculture sector, rural employment within agriculture sector across states.	The share of GDP originating from agriculture has gone down from over 50 per cent at the time of Independence to nearly14 per cent currently, the share of workforce engaged in agriculture, which was about 70 per cent in 1951, still remains at over 50 per cent. This has led to widening of gap between incomes in agricultural and non-agricultural sectors, which is perceived to be one of the major reasons for persistence of poverty in the country.
5	Brajesh Jha	Policies for increasing nonfarm employment for farm household in India	2011	1978-2008	IGE Working paper number 310	NSSO data 2005	Macroeconomic Policies, Policies related to specific Sectors, Institutions and Incentives for Increasing Rural Employment	
6	Benjamin Davis, Paul Winters, Gero Carletto	Rural income generating activities:	September 7, 2007		Paper for presentation at the 106th EAAE	It is constructed from a pool of several Living Standard Measurement Study	Household participating in on farm activities are landed, with lower level of education, located at greater	For policy makers, the result suggests the need to carefully consider how to promote rural development. Policy makers must

		A cross country compariso n			Seminar on "pro-poor development in low income countries"	and other multipurpose household survey made available by World Bank through joint project with FAO.	distance from infrastructure and male headed household. Whereas off farm household have higher level of education, near to infrastructure and younger head of household.	also be careful that any intervention deal with the likelihood that barriers to entry may limit the ability of poor households to take advantage of opportunities.
7	Danial Coppard	Rural nonfarm economy in India: Review of Literature	November 2001		NRI Report Number: 2662		Detailed work on Madhya Pradesh and Orissa	Numerous studies have identified the positive role of small town growth and proximity to urban centres for the growth of the RNFE, through the provision of local and non-local markets, infrastructure, inputs and technology, in addition to sources of employment
8	A.K. Mukhopadhya, D. Gangopadhyay & Saswati Nayak.	Nonfarm occupatio n in rural India, S&T for rural India and inclusive growth		1998 and 2012		Ecomomic census all-India report(2005), govt of India, Ministry of statistics and programme implementation.	Distribution of major non agricultural establishments in rural India during 2005, importance of rural nonfarm sector, distribution of enterprises in rural India, distribution of rural workforce in nonfarm activities. Strength and weakness of nonfarm sector.	Efforts are needed to identify appropriate and effective institutional vehicles for development of nonfarm sector policy and interventions for creating employment opportunities. many strategies and programs to promote RNFE have been formulated in various countries. It is also vital to improve the marketing links between the village entrepreneurs and the larger business firms located in the towns/cities.

9	Dipti Prakas Pal and Mausumi Datta Biswas	Diversification of farm and nonfarm sector and structural transformation of rural economy		1997-78 to 2007-2008	NSSO Report No. 531: employment and unemployment situation in India	I-O model has been used. It describes the inter-dependence among the different producing industries. Thus becomes a tool to measure the structural interdependence of an economy and to determine the extent and degree of inter-linkages among industries	The main question arises whether the rural economic transformation follows the overall economic transformation or otherwise. Question relates to whether in the rural economic agriculture losses its prime importance over time in favour of nonfarm activities and becomes transformed.	Judged by the indices of transformation India's farm and nonfarm sector in the rural employment have structurally changed to some extent during the period 1983-2006. Dependence of farm sector on the nonfarm sector and that of the nonfarm on farm sector have increased
10	Raghav Gaiha and Katasushi Imai	Non agricultural employment and poverty in India: An analysis based on the 60^{th} round of NSS	Februrary 2007	Enonomics discussion paper EDP-0705	Use of National Sample Survey(NSS) household data for 2004.	Multinomial logit estimation is carried out.	Key find of this article is to identify the determinants of participation in nonfarm activities in rural and urban India in 2004.	Our analysis points to two imp policy One is that targeted interventions may be unavoidable to ensure that disadvantaged groups have easier access to non-farm employment opportunities to overcome persistence poverty. Second is absorption of surplus rural labour force in non-farm activities is conditional on rapid expansion of school and technical education and better infrastructure.
11	Dr. Dhaval Dave and Rina Dave	Role of nonfarm sector in rural develpom			Volume NO.1, issue number 7	Use of secondary information	Pattern of income distribution among farm and nonfarm household. Percentage share of farm and nonfarm sectors in the	Bringing improvement in the productivity of crops so as to enhance rapid growth of agriculture is unlikely to employ entire labour force. Initiating for

		ent					total income.	developing comprehensive planning approach towards the promotion and expansion of potential nonfarm activities in rural areas.
12	Dr. P.Subramanyachary and Dr. M. Reddi Ramu	Rural development-non-farm sector: A need for sustainable development in India	January 2013		Volume 3, issue 1, January 2013, ISSN-2249-555x		Importance of rural development, objectives of rural development.	For the prosperity of any economy either in development or underdeveloped country sustainable rural development is required by giving priority to nonfarm activities.
13	Peter Lanjouw & Jean O. Lanjouw	The rural nonfarm sector: issues and evidence from developing countries	July 2000		Agriculture economics 26 (2001)n1-23		Aggregate statistics on the non-farm sector (percentage of rural employment which is nonfarm), characteristics of the nonfarm employment sector-inequality and poverty alleviation	
14	Jeemol Unni, G Raveendran	Growth of employment		1993-94 to 2004-05	Economics and political weekly January 20, 2007		Number of worker by usual status and annual growth during 1983 to 2005. Average annual growth of subsidiary status employment by status in agriculture and non	If the growth of the economy is to be inclusive, the majority of the workforce, who do not seems to be reaping the benefits of GDP acceleration, will have to be bought into the growth process.

							agriculture.	
15	Himanshu, Peter Lanjouw, Abhiroop Mukhopadhyay	Nonfarm diversification and rural poverty decline	2011	Changes in nonfarm sector since1980	Asia research centre working paper 44	The paper assembles various National Sample Survey Organisation (NSSO) employment survey in order to track changes in the nonfarm sector since 1980	The aim of the paper is to study the role of the growing nonfarm sector in reducing rural poverty.	We demonstrated that the process of rural transformation has contributed to declining rural poverty both directly, through employment generation, particularly casual wage employment, and also indirectly through an impact on agriculture wages.
16	Amitabh Kundu, Niranjan Sarangi, Bal Paritosh Dash	Rural nonfarm employment: an analysis of rural urban interdependencies	February 2003	1993-2000	Working paper 196	Data from the population census and National Sample Survey (NSS)	This paper analysis the changing pattern of employment and unemployment in rural areas during the past three decades, focusing on the growth of nonfarm employment.	This paper recommends that anti poverty programmes should primarily be focused on the creation of economic infrastructure, provision of basic amenities and strengthening the rural urban linkages.

3. Methodology

- The data used in this paper were obtained from a larger research project entitled "Village Dynamic Studies in South Asia (VDSA), in which ICRISAT research team collected a range of data from developed states like Andhra Pradesh, Punjab and Tamil Nadu. While going through Review of literature I think we should deal with variables like:

  DEPENDENT VARIABLES
- **Percentage of people dependent on nonfarm sector**

  INDEPENDENT VARIABLES
- **Literacy rate = Total literates/ total population**
- **Percentage of Net cropped area to geographical area = net cropped area*100/total geographical area**
- **Cropping intensity = gross cropped area/ net cropped area**
- **Population density = total population/ total geographical area**
- **Urbanization = total urban population/ total population**
- **Road density = road length/ total geographical area**
- **Percentage of Agricultural labor to agricultural population = agricultural labor*100/ agricultural labor + cultivable labor**
- **Percentage of household industries to non agricultural workers = household industries*100/ total population *0.4-cultivators- total agricultural labors.**
- **Percentage of schedule caste and schedule tribe =(schedule caste +schedule tribe)*100/total population**

Table no.2 Time period taken

States	Land use data	Population data	Road length	wages

			data	
Andhra Pradesh	**1971-2010**	**1971-2011**	**1971-2008**	**1971-2009**
Punjab	**1971-2010**	**1971-2011**	**1971-2008**	**1971-2009**
Tamil Nadu	**1971-2009**	**1971-2011**	**1971-2007**	**1971-2009**

Reasons for selecting these states

- **Andhra Pradesh**- Proper village level study data is available for this state. We also went for a field trip in a village named Dokur. The share of income accruing from nonfarm sources averages only 23%.
- **Tamil Nadu**- In Tamil Nadu although new agricultural machinery was displacing hired labour in paddy cultivation, real wage rates in agriculture actually rose as a result of increased off-farm employment. In this state there was a withdrawal from agricultural labour by large farmers and the expansion of competing employment opportunities in dairying and nonfarm activities. The average share of income from nonfarm sources is 46%
- **PUNJAB**- Agriculture data is available of Punjab. It is a developed state.

4. RESULTS AND DISCUSSIONS

Percentage of people dependent on agriculture

Table no.3 ANDHRA PRADESH

-> stcode = 1

Source	SS	df	MS	Number of obs = 100
Model	18685.3181	13	1437.33216	F(13, 86) = 51.55
Residual	2397.79244	86	27.8813074	Prob > F = 0.0000
				R-squared = 0.8863
Total	21083.1105	99	212.960712	Adj R-squared = 0.8691
				Root MSE = 5.2803

pc_d_nonagrl	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
year						
1981	-4.292162	1.974872	-2.17	0.033	-8.218078	-.3662451
1991	-9.227576	2.412355	-3.83	0.000	-14.02318	-4.431973
2001	-11.96112	4.69292	-2.55	0.013	-21.29034	-2.631901
2011	-16.03905	5.065441	-3.17	0.002	-26.10881	-5.969283
road_density	.0107275	.6160782	0.02	0.986	-1.213995	1.235451
urbanisati~c	.7602979	.0900537	8.44	0.000	.5812771	.9393187
croppingin~y	.1047507	.0542744	1.93	0.057	-.0031433	.2126446
nca_ga	-.383118	.0740484	-5.17	0.000	-.5303214	-.2359146
popdensity	.0196119	.0069573	2.82	0.006	.0057813	.0334426
agril_l_to~p	.0851626	.0974177	0.87	0.384	-.1084974	.2788226
pc_hhind_t~p	.2308567	.2287004	1.01	0.316	-.2237847	.685498
literacy	.0797226	.1829286	0.44	0.664	-.2839274	.4433726
pc_stsc	-.2351916	.105686	-2.23	0.029	-.4452883	-.0250948
_cons	9.282693	6.3918	1.45	0.150	-3.423785	21.98917

From this regression table of Andhra Pradesh we can conclude that as road density, urbanization, cropping intensity, population density, percentage of household industries to non-agricultural population, literacy rate have positive effect on the percentage of population dependent on nonfarm sector or we can say that they have a significant effect on the dependent variable. Means as these variables increases percentage of population dependent on nonfarm sector increases. Whereas variables like percentage of net cropped area to geographical area and percentage of schedule caste and schedule tribe have a negative effect on percentage of population dependent on nonfarm sector that means as these variables increases they decrease the value of dependent variable.

Table no. 4 PUNJAB

-> stcode = 9

Source	SS	df	MS		
Model	6000.03709	13	461.541315	Number of obs	= 55
Residual	240.046093	41	5.85478275	F(13, 41)	= 78.83
				Prob > F	= 0.0000
Total	6240.08319	54	115.557096	R-squared	= 0.9615
				Adj R-squared	= 0.9493
				Root MSE	= 2.4197

pc_d_nonagrl	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
year						
1981	-2.525019	1.880261	-1.34	0.187	-6.322283	1.272245
1991	-8.42493	2.827457	-2.98	0.005	-14.13509	-2.714765
2001	-17.40931	3.749787	-4.64	0.000	-24.98216	-9.836461
2011	-5.032068	7.2412	-0.69	0.491	-19.65597	9.591832
road_density	-.1960803	.3014377	-0.65	0.519	-.8048461	.4126855
urbanisati~c	.0019815	.0941161	0.02	0.983	-.1880898	.1920529
croppingin~y	.0074521	.0403858	0.18	0.855	-.0741086	.0890128
nca_ga	-.0276154	.0727948	-0.38	0.706	-.1746274	.1193966
popdensity	.051113	.0075186	6.80	0.000	.0359289	.0662972
agril_l_to~p	-.455847	.1102565	-4.13	0.000	-.6785146	-.2331794
pc_hhind_t~p	-4.005197	1.448326	-2.77	0.008	-6.93015	-1.080244
literacy	.7116022	.1064026	6.69	0.000	.4967178	.9264866
pc_stsc	-.0392254	.0933502	-0.42	0.677	-.22775	.1492991
_cons	33.35344	8.640417	3.86	0.000	15.90377	50.80312

In the case of Punjab we have variables like urbanization, cropping intensity, population density, literacy rate which have a positive effect on the dependent variable. Means as these variables increases percentage of people dependent on nonfarm sector also increases.

Whereas variables like road density, percentage of net cropped area to total geographical area, percentage of agricultural labour to total agricultural population have a negative effect on the dependent variable. Means as these variables increases percentage of people dependent on nonfarm sector decreases.

Table no.5 TAMIL NADU

-> stcode = 11

Source	SS	df	MS		
Model	19821.2997	13	1524.71536	Number of obs	60
Residual	2412.45569	46	52.4446889	F(13, 46)	29.07
				Prob > F	0.0000
Total	22233.7554	59	376.843311	R-squared	0.8915
				Adj R-squared	0.8608
				Root MSE	7.2419

pc_d_nonagrl	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
year						
1981	-23.64916	3.505828	-6.75	0.000	-30.70602	-16.59229
1991	-41.1113	4.65625	-8.83	0.000	-50.48385	-31.73876
2001	-59.42354	6.029972	-9.85	0.000	-71.56124	-47.28584
2011	-71.05605	8.114314	-8.76	0.000	-87.38931	-54.72278
road_density	1.037466	.4650821	2.23	0.031	.101304	1.973627
urbanisati~c	.4681676	.1336596	3.50	0.001	.1991248	.7372104
croppingin~y	.022558	.1134021	0.20	0.843	-.2057086	.2508247
nca_ga	-.8185687	.1787171	-4.58	0.000	-1.178308	-.4588299
popdensity	.0173403	.0107517	1.61	0.114	-.0043017	.0389823
agril_l_to~p	-.1187541	.2047508	-0.58	0.565	-.5308961	.2933879
pc_hhind_t~p	.6987949	.7283191	0.96	0.342	-.7672354	2.164825
literacy	1.323682	.305203	4.34	0.000	.7093405	1.938024
pc_stsc	.5642526	.1953879	2.89	0.006	.1709571	.9575481
_cons	.3143338	18.40829	0.02	0.986	-36.73962	37.36829

From this regression table we can say that in Tamil Nadu road density and literacy rate have a very significant effect on the dependent variable that is non-farm sector that means as road density and literacy rate increases percentage of people dependent on nonfarm sector also increases.

Whereas variables like net cropped area to total geographical area and total agricultural labour to total population have a negative effect on the dependent variables.

Table no.6 POOLED REGRESSION

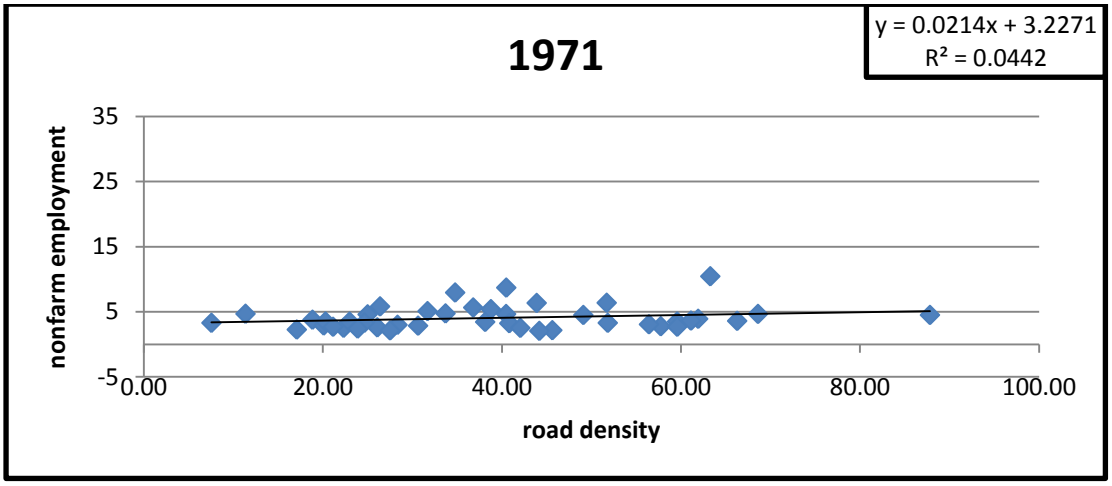
Source	SS	df	MS		
Model	88476.0135	15	5898.4009	Number of obs	= 215
Residual	8952.88305	199	44.989362	F(15, 199)	= 131.11
				Prob > F	= 0.0000
Total	97428.8966	214	455.275218	R-squared	= 0.9081
				Adj R-squared	= 0.9012
				Root MSE	= 6.7074

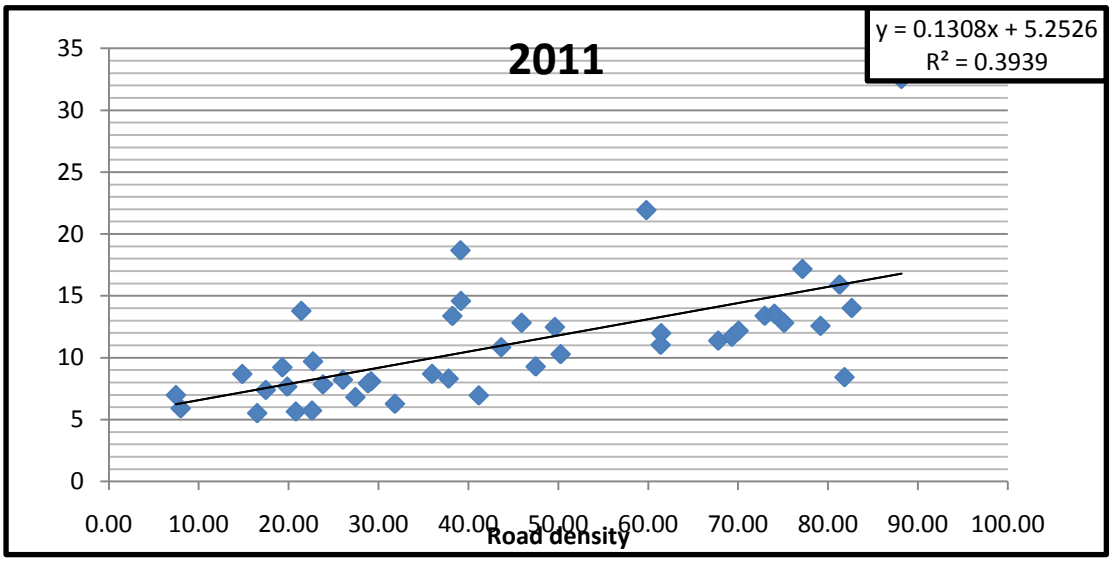
pc_d_nonagrl	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
stcode						
9	35.96937	4.079826	8.82	0.000	27.92413	44.01461
11	-.1853506	2.005671	-0.09	0.926	-4.140446	3.769745
year						
1981	-9.708387	1.612608	-6.02	0.000	-12.88838	-6.528394
1991	-18.2391	1.965946	-9.28	0.000	-22.11586	-14.36234
2001	-29.80148	2.887005	-10.32	0.000	-35.49453	-24.10843
2011	-35.68948	3.405082	-10.48	0.000	-42.40415	-28.9748
road_density	.2913038	.2123029	1.37	0.172	-.1273484	.7099559
urbanisati~c	.6462804	.0500656	12.91	0.000	.5475531	.7450076
croppingin~y	.0658678	.0349539	1.88	0.061	-.0030598	.1347953
nca_ga	-.3989886	.0598967	-6.66	0.000	-.5171022	-.2808749
popdensity	.0174082	.0049898	3.49	0.001	.0075686	.0272478
agril_l_to~p	.0225742	.0648898	0.35	0.728	-.1053858	.1505341
pc_hhind_t~p	.5541641	.2062644	2.69	0.008	.1474196	.9609086
literacy	.6471837	.107565	6.02	0.000	.4350702	.8592972
pc_stsc	.0383146	.0810014	0.47	0.637	-.1214165	.1980458
_cons	.2521058	5.415802	0.05	0.963	-10.42762	10.93183

This regression table is a pooled regression table which shows all the three states. So through this we can say that in total net cropped area to total geographical area have a negative effect on the dependent variable.

GRAPHS DEPECTING RELATIONSHIPS BETWEEN NONFARM EMPLOYMENT AND DIFFERENT INDEPENDENT VARIABLES

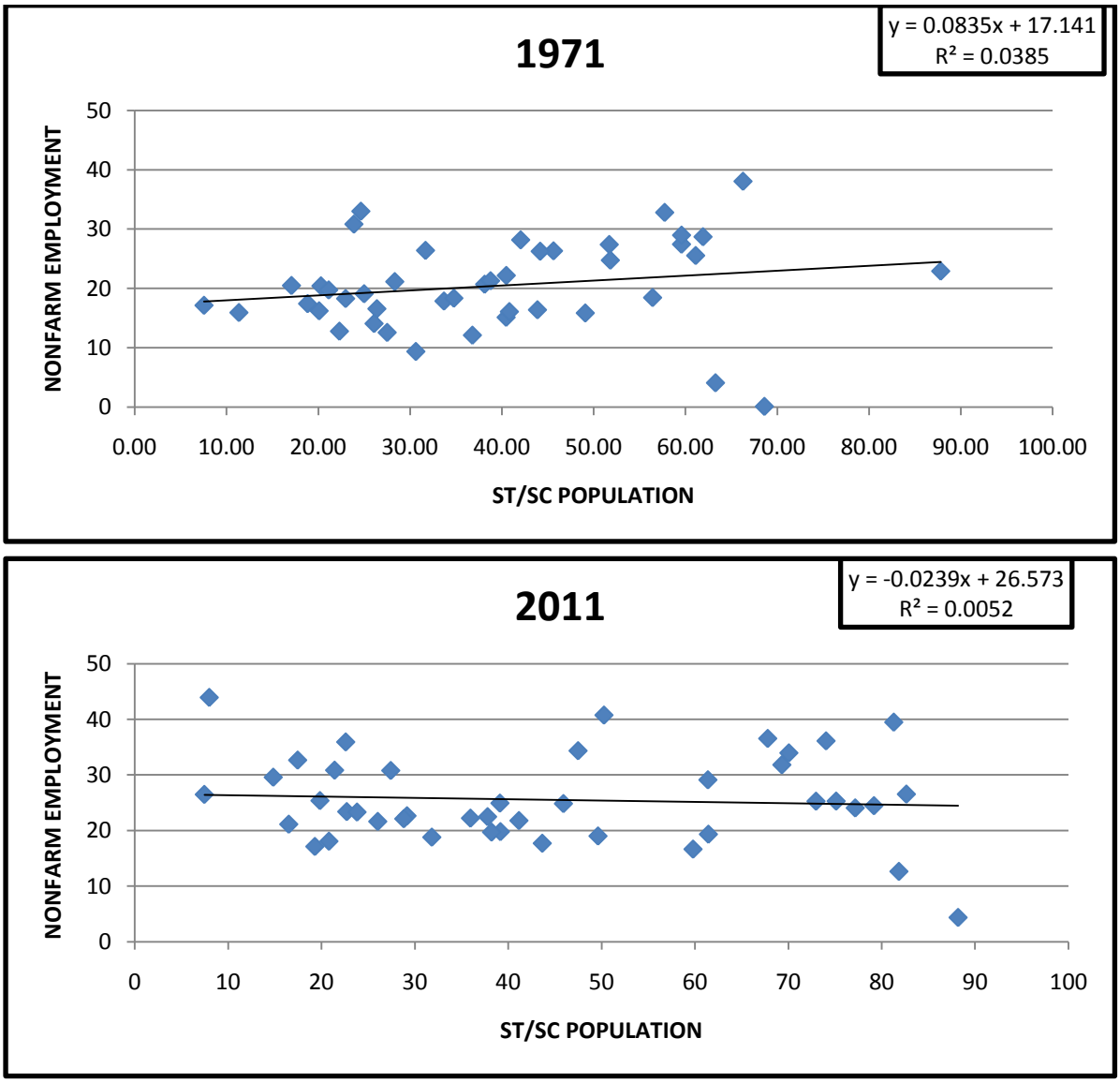
Graph no.2 road density and non-farm employment





These are the two graphs which depict the relationship between road density and percentage employed in nonfarm sector. As we can see that in 1971 road density was mainly concentrated between 20-30 km/1000hec due to which nonfarm sector employment was very low, it is main between 3-5% and the highest is 10% but in 2011 as due to improvement in infrastructure, construction of roads, road density increases and now it is between 60-80% due to which nonfarm employment increases and now maximum amount of employment reaches to 355 which is more than 3 times.

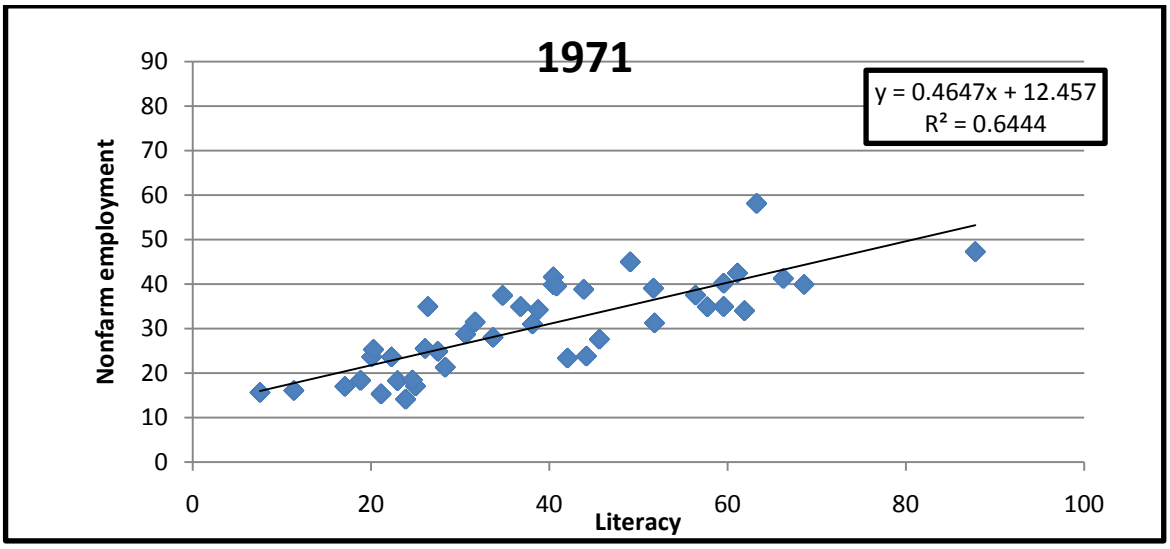
Graph no.3 SCHESULE CASTE AND SCHEDULE TRIBE AND EMPLOYMENT IN NON-FARM SECTOR

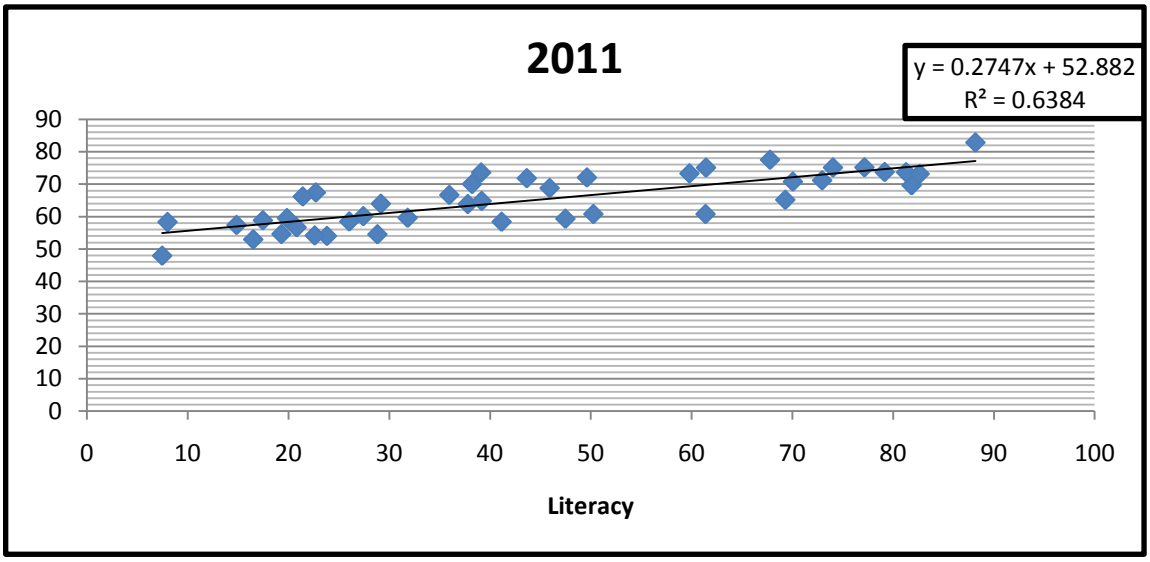


These two graphs show the relationship between schedule caste and schedule tribe population with that of percentage of population dependent on non-farm sector. As we can see that in 1971 more amount of people are engaged in non-farm sector. But in 2011percentage of SC/ST people employed in non-farm sector decrease. From the equation also we can see that there is a positive relationship between SC/ST and non-farm employment, but in 2011 the slope become negative. The main reason behind this can be as in 1971 mainly non-farm sector are traditional in nature like handicrafts, pottery etc. which do not require much skills, knowledge, assets, money but with time and after liberalization i.e. after 1991 non-farm sector improved and it includes big

business, processing industries etc which require more of knowledge, skills and money which is lacked in SC/ST people.

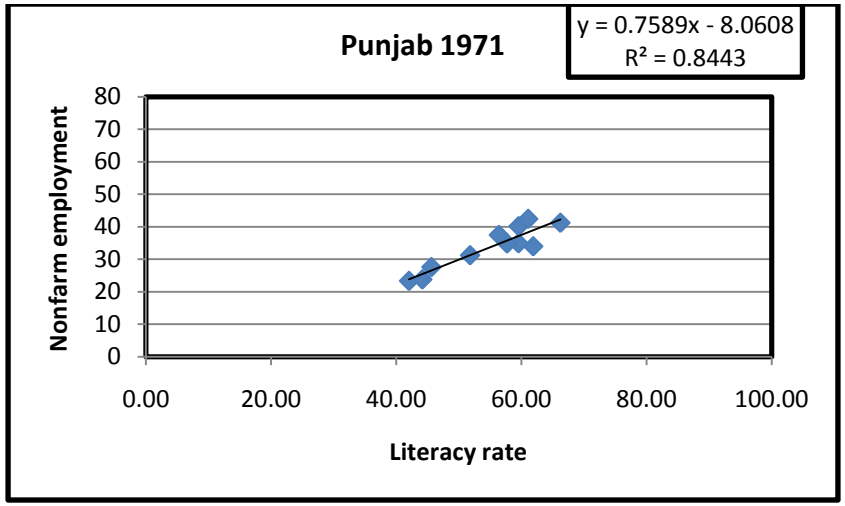
Graph no.4 LITERACY AND NONFARM EMPLOYMENT

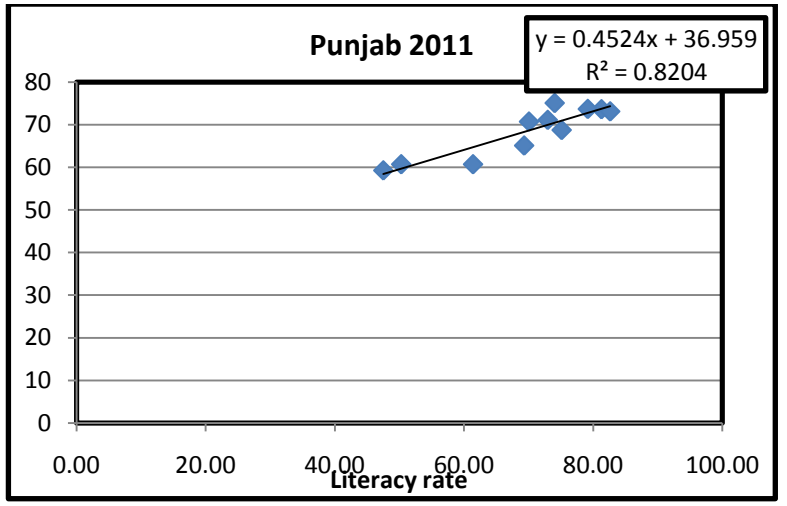


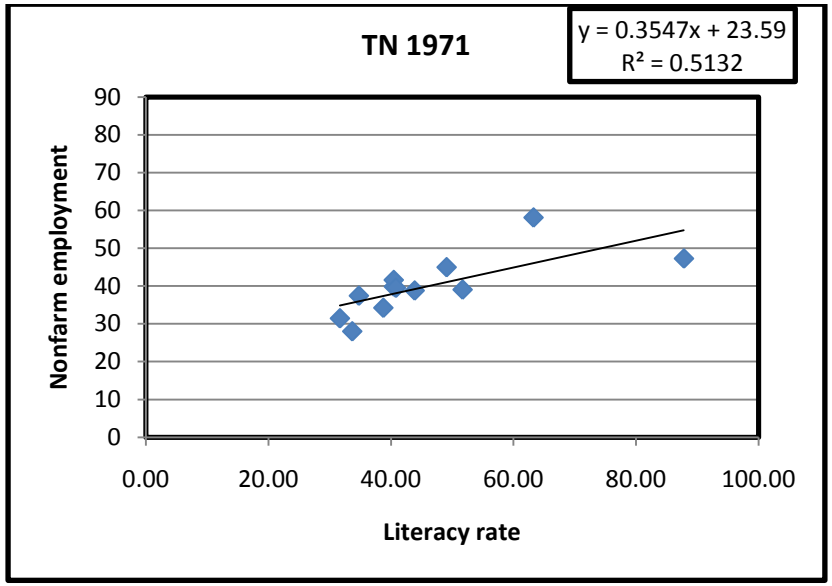


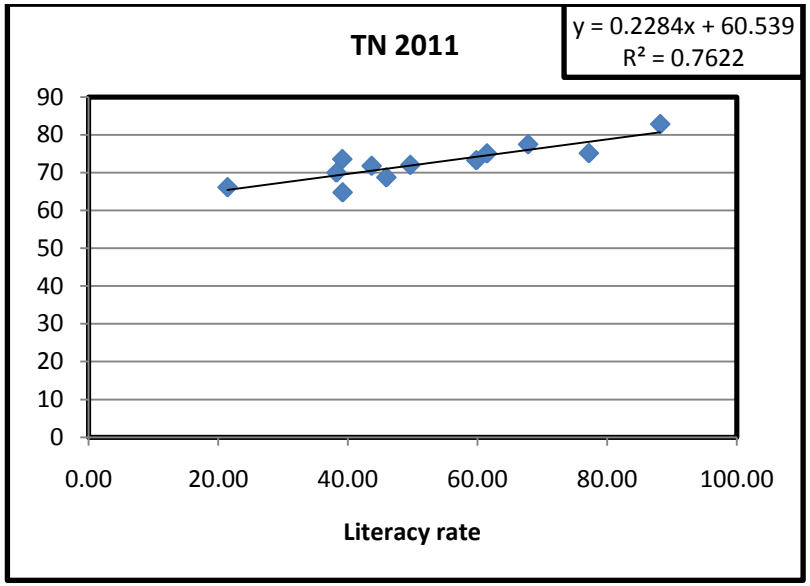
These two graphs shows the relationship between literacy rate and percentage of people employed in non-farm sector. As we can that in 2011 whole trend line moves upward which shows that non-farm employment have increased and we can also see that in 1971 amount of people who are literate are mainly concentrated between 30-70% but if we see graph of 2011 it shows that large amount of districts comes under 80-90% as people are more educated, more number of

schools, better schooling and also due to awareness, education level increases. We can also see that the value of R^2 that there is 64% variation in the non-farm employment due to literacy rate.

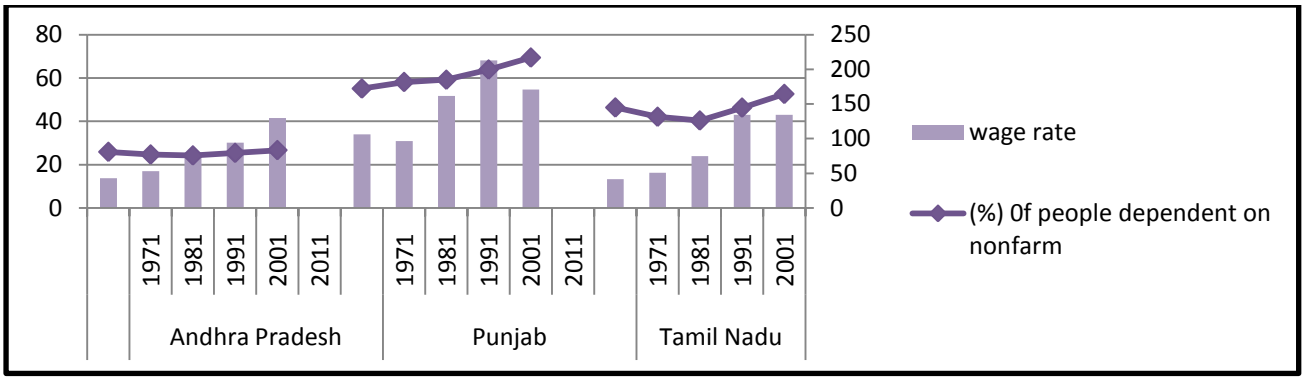

Punjab 1971
y = 0.7589x - 8.0608
R² = 0.8443
Nonfarm employment
Literacy rate
0
10
20
30
40
50
60
70
80
0.00
20.00
40.00
60.00
80.00
100.00


Punjab 2011
y = 0.4524x + 36.959
R² = 0.8204
Literacy rate
0
10
20
30
40
50
60
70
80
0.00
20.00
40.00
60.00
80.00
100.00


TN 1971
y = 0.3547x + 23.59
R² = 0.5132
Nonfarm employment
Literacy rate
0
10
20
30
40
50
60
70
80
90
0.00
20.00
40.00
60.00
80.00
100.00

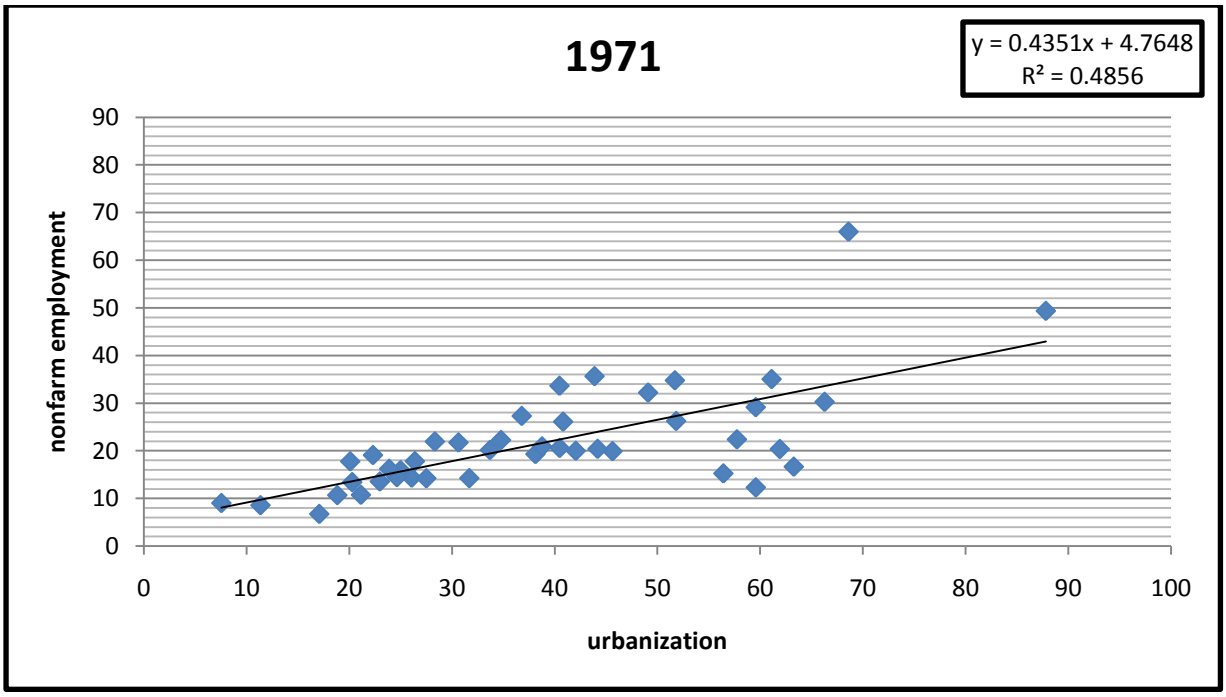

TN 2011
y = 0.2284x + 60.539
R² = 0.7622
Literacy rate
0
10
20
30
40
50
60
70
80
90
0.00
20.00
40.00
60.00
80.00
100.00

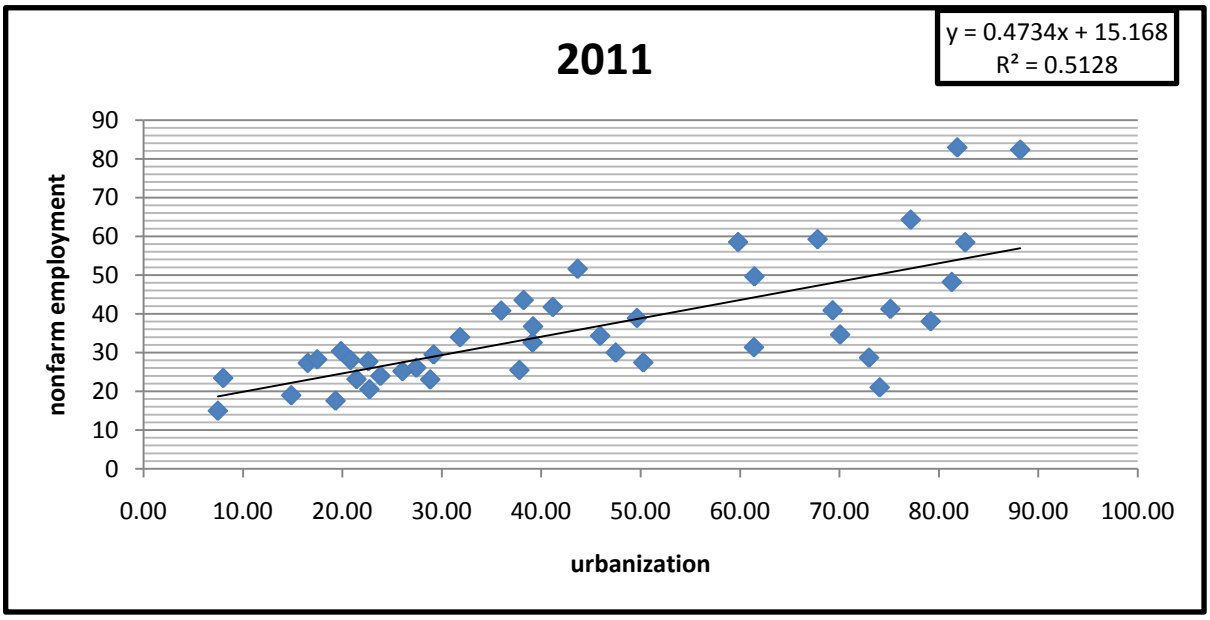
Graph no.5 WAGES AND NONFARM EMPLOYMENT



This graph shows the variation in the wage rate of three different states. In Tamil Nadu although human capital level is higher in 1971, but they have picked up in 1991 mainly because of government education programmes and good governance in education, because of this reason we can see that after 1991 wage rates have roused. It's like releasing a lion from the cage likewise we can see that after liberalization its economy moved up, whereas in Punjab wage rates are much higher before only it is due to **Green Revolution** and higher agricultural productivity. In Punjab threshold level is already crossed due to which agricultural productivity increased due to which non-farm sector increased. But wages rates in Andhra Pradesh are increasing but not with the same rate as in Punjab and Tamil Nadu.

Table no.6 RELATIONSHIP BETWEEN URBANIZATION AND EMPLOYMENT IN NON-FARM SECTOR





These two graphs represent the relationship between urbanization and employment in non-farm sector. As we can see in 1971 urbanization and non-farm sector both are very less and urbanization is mainly concentrated between 20-40% but in 2011 due to development it increases to 80-90% due to which non-farm sector also increases. Urbanization increased mainly due to increase in literacy,

human capital and increase in number of small towns due to which there is a uniform development. When there is an increase in small number of towns it will automatically increase the demand for small business thus also lead to increase in non-farm employment.

5. CONCLUSION

It is universally accepted that when an excessive pressure of population leads to the subsequent addition of labour force, the agricultural sector alone is neither in a position to create additional productive employment opportunities nor it can provide sufficient income to sustain the livelihood of the rural households. More, expressly, even in agriculturally prosperous and high growth regions the potentials foe the further development of agriculture seems to be tapering off so that the further impetus for development of the rural economy has to come from an expanding base of rural non-farm activities.

This paper investigated the determinants of individual participation in non-agricultural activities in both rural and urban areas. Participation in these activities takes different form: as workers and self-employed person, and, within non-farm activities, by type of activities. As these forms have different implications for poverty in rural and urban areas, their determinants have considerable policy significance. School and technical education as well as infrastructure are identified as significant determinants of participation in non-farm activities as workers and self-employed persons, among others.\

These variables also influence participation within non-farm activities, grouped under population density, urbanization, and small household industries. Specially, positive and significant effects are associated with literacy rate and infrastructure like road density. Those from socially disadvantaged groups, such as Schedule Tribes or Caste have lower probabilities of finding employment in these sub-sectors. As these groups suffer from social exclusion, and limited access to credit, expansion of education and better infrastructure may not benefit them much.

Non-farm income in rural India contributes, on an average, about one third of the total household incomes in 1991. Non-farm incomes shares are highest in the states of Tamil Nadu and Punjab. In these states, non-farm income sources accounts for more than 45% of total income,. Conversely, in Andhra Pradesh the share of income accruing from non-farm sources is below 25%. Socially, educationally and economically backward classes are not able to capture these benefits and mostly stick to their traditional occupations like cultivation, agricultural labourer and caste occupation. These households who stay back in the villages with little social and physical capital's are not able to upgrade their economic status over the period and not able to participate in the capital are not able to upgrade their economic status over the period and not able to participate in the India's growth story. The wage rate of these people is far below than the urban and non-farm wage rates.

The productivity of labour in the past. There is a need for right policies to effectively address this excluded population.

REFRENCES

- Tom Readon. (1995) Rural nonfarm income in developing countries.
- Petern Lanjouw and Abusalesh Shariff. (2000), Rural nonfarm employment in India: Access
- Daniel Start. (2001) Rise and fall of the rural nonfarm economy: poverty impacts and policy options.
- Anjali Kumar. (2010) Rural employment diversification in India: Trends, determinants and implication on poverty.
- Brajesh Jha. (2011) Policies for increasing nonfarm employment for farm household in India.
- Benjamin Davis, Paul Winter, Gero Carletto. (2007) Rural income generating activities: Across country comparision.
- David Coppard. (2001) Rural nonfarm economy in India: Review of Literature.
- A.K Mukhopadhya, D. Gangupadhyay and Saswati Nayak. (2012), nonfarm occupation in rural India and inclusive growth.
- Dipti Prakas Pal and Mausumi Datta Biswas. (2008) Diversification of farm and nonfarm sector and structural transformation of rural economy.
- Raghav Gaiha and Katasushi Imai. (2007) Non agricultural employment and poverty in India: An analysis based on the 60^{th} round of NSS.
- Dr. Dhavan Dave and Rina Dave, Role of nonfarm sector in rural development.
- Dr. P. Subramanyacharya and Dr. M Reddy Ramu (2013), Rural development in nonfarm sector: a need for sustainable development in India.
- Peter Lanjouw and Jean O. Lanjouw (2000), The rural nonfarm sector: issues and evidences from developing countries.
- Jeemal Unni, G Raveendran. (2005) Growth of employment.
- Himanshu, Peter Lanjouw, Abhiroop Mukhopadhya. (2011), Nonfarm diversification and rural poverty declines.

- Amitabh Kundu, Niranjan Sarangi, Bal Paritosh Dash. (2003) Rural nonfarm employment : An analysis of rural Urban interdependicies.