

The Study of Nature and Characteristics of Rural Non Farm Sector in India

Suresh¹

Abstract: *There has been increase in the rural nonfarm sector in India. The rural labour markets has been showing change, there has been shift in farm worker to nonfarm occupations in the country. There has shift from the self employed in agriculture (cultivators) and agricultural labour households to the non agricultural activities. There has some significant entry barriers for rural workers in terms of education, age and gender etc for entering the nonfarm sector.*

Keywords: Nonfarm sector, Rural workers, Rural India

JEL Classification: J21, J24

Introduction

Rural nonfarm employment provides sources of employment for 25 to 50 percent of the rural labour force on developing countries (Hazell and Steven Haggblade 1991). The occupation pattern remained constant in 1950 and 60s in India but there is change after 1970 onwards there is increase in the nonfarm sector in the country. There is decline in the agriculture sector with increase in the share of the nonfarm sector. Recent studies show the declining trend in the agriculture and increase in the growth of rural nonfarm activities in the country (Vinoj Abraham 2009, Manoj Jataw and Suchitra Sen 2013). The all India trend shows a significant decline in the share of income originating from agriculture but the decline in workforce engaged in agriculture was much slower than the decline in the share of income. Until the 1980's a dominant opinion that existed was that agriculture sector was seen as the reservoir for surplus labour but post 1980's it was felt that agriculture cannot hold the surplus labour and the non-farm sector has become the reservoir for the surplus labour. In this context this paper attempts to analyse two features. One, what are the characteristics of households who are moving into the rural non-farm sector. Two, Are the poor – distress driven households moving into the non-farm sector or are the resource rich households moving out of the farm sector?

The context of study

The various studies have shown there is increasing in the rural nonfarm sector in India (Vaidyanathan 1986, Mahendra dev (1993), Manoj Jataw and Suchitra Sen 2013). There is two main processes that drive the participation of Rural nonfarm sector in India, firstly distress oriented growth in nonfarm sector due to lack of absorption of the farm sector. Secondly High growth in agriculture sector pushing the growth of the nonfarm sector. The Studies related to the distress oriented hypothesis shows that agriculture sector failed to absorb the labour in agriculture, hence the labour have to settle in low productive nonfarm sector. (Vaidyanathan

¹ School of Economics, University of Hyderabad, Hyderabad.

Corresponding author: Suresh can be contacted at: sureshhuc@gmail.com

Any remaining errors or omissions rest solely with the author(s) of this paper

The Study of Nature and Characteristics of Rural Non Farm Sector in India

1986, Mahendra dev 1993, Manoj jataw and Sucharita Sen 2013). The studies related to Agriculture led growth shows that consumption and investment linkages showed the growth of nonfarm sector. The green revolution in India increased the food supply through technology process, which initial increase the rural income and set in motion for the expansion of production and employment in nonfarm sector in the economy. (Mellor and Johnston (1961), Mellor (1976) and Hazell and Haggblade (1991). The other process that might led to growth of nonfarm sector. The urbanisation has played important role in transformation of the agrarian economy (Barbara Harris 1986, Basant and Joshi(1994), Jayaraj 1989). The good transport facilities, cheap labour and resources supporting in industries in nearby towns (Barbara Harris 1986 and Gillian start 1998). The increase in rural literacy, rural roads and financial infrastructure among the main determinants in the growth of the rural nonfarm sector (Srivastav and Dubey 2002, Manoj and Suchitra sen 2013). The enter restrictions to females, below age group or above working groups, technical education etc segmentation of rural nonfarm sector market (Vinoj Abraham, Manoj jataw and suchitra sen 2013). The characteristics of rural nonfarm sector in India. The present study to identify the factor influencing individual participating in the Rural nonfarm sector ?

Recent changes in Trends in Rural nonfarm sector

A brief consideration of Trends of the nonfarm sector in India is crucial for the interpretation in the later sections of the chapter. Firstly trends in distribution in the population is important in understanding scenario of the country. Second table showed that characteristics of the rural workers in country understand the occupation patterns of the labour force.

Table 1: Distribution of Population in India and Tamilnadu in Both Sector

		India			
Sector	1983	1993-94	1999-00	2004-05	2009-10
Rural	76.26	75.17	74.68	74.53	72.68
Urban	24.83	24.83	25.32	25.47	27.32
Total	100	100	100	100	100

Source: Unit level data from various quinquennial rounds of NSS on employment and Unemployment situation in India.

The table 1 observed the distribution of population among the sectors between 1983 to 2009-10 in India. In Rural India the population showed inconsistency decline from 1983 to 2009-10 which was 76 percent in 1983 to 72 percent in 2009-10. In Urban India also showed increase in the urban population which rose from 24 percent in 1983 to 27 percent in 2009-10 there was inconsistent growth in urban population.

Table 2: The Distribution of the Rural Workers Usually Employed Across Employment Status, Rural India & Rural Tamilnadu (percentage %)

		India			
RURAL		male			
year	SE	RE	CL	others	SE
1983	71	86.11	60.99	38.97	64.28
1993-94	73.12	85.52	64.95	38.51	60.36
1999-00	72.15	84.27	65.37	38.66	59.71
2004-05	70.17	81.45	66.31	38.59	53.72

2009-10	74.71	81.54	70.85	37.61	58.7
RURAL			female		
year	SE	RE	CL	others	SE
1983	29	13.89	39.01	61.03	35.72
1993-94	26.88	14.48	35.05	61.49	39.64
1999-00	27.85	15.73	34.63	61.34	40.29
2004-05	29.83	18.55	33.69	61.41	46.28
2009-10	25.29	18.46	29.15	62.39	41.3

SE-Self employed, RE-Regular employed ,CL –Casual labours

Source: Unit level data from various quinquennial rounds of NSS on employment and Unemployment situation in India.

The characteristics of workers in farm and non-farm sector is discussed here. Rural workers are classified as farm and non-farm sector. Rural sector is further classified as Self employed in agriculture is primarily cultivators,casual labours primarily includes agricultural labourers.Nonfarm sector classified as self employed in nonfarm sector may includes even very small entrepreneurs with the tiny enterprises. Other workers are non-descriptive nature. Other may include landlords, money lender, commission agents, etc.

In Rural sector among the males the self employed in agriculture (cultivators) has observed declined from 71 percent in 1983 to 70 percent in 2004-05 and showed increased to 74 percent in 2009-10 .Regular employment among males also observed secular declined from 86 percent in 1983 to 81percent in 2009-10.While proportion of casual labours primarily agricultural labours also showed a increased from 60 percent in 1983 to 70 percent in 2009-10.Others showed a decline marginally from proportion38percent from 1983 to 37 percent in 2009-10. Among females the self employed in agriculture(cultivators) showed a gradual decline from 29 percent in 1983 to 27 percent in 1999-00 again increased to 29 percent in 2004-05 later in 2009-10 declined to 25 percent,Similarly regular employed among the observed increased from 13 percent in 1983 to 18 percent in 2009-10.Casual labour(agricultural labour) showed an declined from 39 percent in 1983 to 29 percent in 2009-10.Others in females registered a marginal increased from 61 percent in 1983 to 62 percent in 2009-10.

Overall India there has self employment(Cultivators) is declined between 1983 to 2004-05 and increasing 2009-10 for both males and females.The decline in self employment is compensated by increase in casualisation of labourers .Regular employment observed a decline for the males while females observed increase in the regular employment.Others have marginally declined for both males and females.

Characteristics of The Rural Non farm Sector In India

A Characteristics of the nonfarm sector in India is crucial for the interpretation in the later sections of the chapter.The farm and nonfarm in rural areas has strong linkages in the shaping the rural economy.Rural nonfarm sector located in rural areas is not exclusive there is continuous movement from rural and urban areas. The larger space for working of rural nonfarm sector.NSSO data for 2004-05 and 2009-10 used for the study previous NSSO employment and unemployment situation in India reports have collected data related to work location.

Table 3: Distribution of Rural workers usually employed in the non-farm sector according to their usual place of work, All India in percentage

USUAL PLACE OF WORK									
		males				Female			
Employ	Year	R-fixed	R-N.Fixed	U-fixed	U-N.Fixed	R-fixed	R-N.Fixed	U-fixed	U-N.Fixed
SE	2004-05	52.76	46.14	39.47	43.79	66.21	61.43	37.61	53.69
	2009-10	53.35	25.57	36.6	42.52	59.33	18.84	34.58	37.94
RE	2004-05	20.26	23.3	45.15	39.04	17.02	16.09	47.97	33.03
	2009-10	27.18	5.62	53.74	12.07	22.34	3.03	53.64	7.77
CL	2004-05	26.98	30.56	15.38	17.17	16.77	22.48	14.42	13.28
	2009-10	19.47	68.81	9.66	45.4	18.33	78.13	11.78	54.3

SE-Self employed, RE-Regular employed ,CL –Casual labourers R-Fixed-Rural fixed location,R-N.Fixed-Rural nonfixed location,U-Fixed-Urban fixed location,U-N.Fixed-Urban nonfixed location

Source: Unit level data from various quinquennial rounds of NSS on employment and Unemployment situation in India.

The table 3, describe the characteristics of the rural nonfarm sector according the usual place of work in India from 2004-05 to 2009-10 .During the 2004-05 to 2009-10 there is increase activities between nonfarm sector in space rural and urban ambit. The location of the work place is classified according to rural fixed location ,rural nonfixed location,Urban fixed and Urban nonfixed (Manoj Jatav and Sucharitra sen 2013).Rural fixed location can defined as place fixed which has regular work place in rural areas while rural nonfixed location which workplace changes in rural areas. Similar the Urban fixed location can defined as place fixed which has regular work place in Urban areas while Urban nonfixed location which workplace changes in rural areas. The males in rural fixed areas showed an marginal increase in self employed (cultivators) from 52 percent to 53 percent.Regular employed in rural areas showed observed an increase in from 20.3 percent in 2004-05 to 27 percent in 2009-10.Casual labourers (mostly agricultural labourers) showed an decline from 26 percent in 2004-05 to 19 percent in 2009-10. The males rural non-fixed areas the self employed(cultivators) showed reduced from 46 percent in 2004-05 to 25 percent in 2009-10.While the regular employed among the males deteriorated from 23 percent in 2004-05 to 5 percent in 2009-10.While casual labourers among the males shot up from 30 percent in 2004-05 to 68 percent in 2009-10. The trends among the Males in urban fixed location self employed registered decline from 39 percent to 37 percent between 2004-05 to 2009-10. Regular group among the males observed increase from 45 percent in 2004-05 to 53 percent in 2009-10.Interestingly casual labourers among the males declined from 15 percent in 2004-05 to 9 percent in 2009-10 The males in urban non fixed location self employed declined from 43 to 42 percent between 2004-05 and 2009-10.Regular employment among the Males in urban non-fixed location observed declined from 39 to 12 percent between 2004-05 to 2009-10.Casual labours among the Males in the urban non- fixed location registered a increased from 17 percent to 45 percent from 2004-05 to 2009-10 females in fixed rural areas in self employed observed reduction from 66 percent in 2004-05 to 59 percent in 2009-10.Regular employment among females registered increase from 17 percent in 2004-05 to 22 percent in 2009-10.Casual labourers among the females registered expanded 16 percent in 2004-05 to 18 percent in 2009-10. The trends among the females in non-fixed rural areas in self employed observed a deteriorated from 61 percent in 2004-05 to 18 percent in 2009-10.Similarly Regular employment also observed greater decline from 16 percent in 2004-05 to 3 percent in 2009-10.Interestingly casual labourers among the females in non-fixed areas observed greater increase from 22 percent in 2004-05 to 78 percent in 2009-10. females in urban fixed location self

employed declined from 37 to 34 percent between 2004-05 and 2009-10. Regular employment among the females in urban fixed location observed expansion from 47 to 53 percent between 2004-05 to 2009-10. Casual labours among the females in the urban fixed location registered a decline from 14 percent to 11 percent from 2004-05 to 2009-10. The trends among the females in urban non-fixed location self employed observed decline from 53 percent to 37 percent between 2004-05 to 2009-10. Regular group among the females observed greater decline from 33 percent in 2004-05 to 7 percent in 2009-10. Interestingly casual labourers among the females increased drastically from 13 percent in 2004-05 to 54 percent in 2009-10. Fixed location among the regular employed and agricultural labourers showed a decline, while the cultivators showed a marginal increment. Rural Non-fixed areas among the males share of casual workers has increased while decline in share of the regular and self employed workers in rural non-fixed areas. The increase of share of the casual labourers in non-fixed areas shows the casualisation of the labour force. Interestingly increase in the self employed (cultivators) among the non-fixed location shows decline in tenants in rural areas. Similar trends have also been registered among the females in non-fixed self employed and regular employed which registered a decline, while the casual labourers among the females in non-fixed areas observed enormous growth. In Urban non-fixed location casual labourers showed a drastic increase for the males and females showed mostly total non-farm work is done by rural workers. The increase in casual labourers both among male and female among non-fixed areas showed a casualisation or distress oriented growth in rural nonfarm sector in the rural areas in the country.

The Rural workers in according in Household type in India

Household type among the rural workers helps in understanding the survival mechanism of the rural workers in the country. Distribution of workers according to household diversification of the rural household to different economic activities particular nonfarm sector.

Table 4: Distribution of rural workers according to household Type in All India

HHL D TYPE	1993-94	2004-05	2009-10
Agri lab		24.08	23.83
	27.53	(-3.45)	(-0.25)
Self in agr		39.78	35.53
	42.38	(-2.6)	(-4.25)
Farm sector		63.86	59.36
	69.91	(-6.05)	(-4.5)
Se in non		16.75	16.41
	13.06	(3.69)	(-0.34)
Other lab		10.57	14.85
	7.49	(3.08)	-4.28
Others		8.82	9.38
	9.54	(-0.72)	-0.56
Non farm		36.14	40.64
	30.09	(6.05)	-4.5

Source: Unit level data from various quinquennial rounds of NSS on employment and Unemployment situation in India.

The Study of Nature and Characteristics of Rural Non Farm Sector in India

The above 4 table infers the rural farm household structure at the all India level from 1993-94 to 2009-10. Household type is considered rural household, if a single source contribution 50% or more of the household's income from economic activities during the last 365 days preceding the date of survey. Household type for the rural areas the selected household will be assigned appropriate type .a) Self employed in agriculture(cultivators). b) Self employed in non-agriculture. c) agriculture labour. d) other labour. e) others Other household are non-descriptive nature. Other may include landlords, money lender, commission agents, etc.

To study to whether there is increase in nonfarm sector.? The study tries to analysis which occupational groups have increased in the non-farm sector. In Rural India ,the share of the self employed in agriculture (cultivators) have witnessed an decline from 42 percent in 1993-94 to 35 percent in 2009-10. The share of agricultural labour registered declined from 27.03 percent in 1993-94 to 23.83 percent in 2009-10. Overall farm sector registered an decline from 69 percent in 1993-94 to 59 percent in 2009-10. Overall farm sector show decline, cultivators showed sharper decline than the agricultural labour.

In non-farm sector, self employed in non-agriculture registered decline 13 percent in 1993-94 to 16.41 percent in 2009-10. Other household (non-agricultural labour) registering a greater increase from 7.49 percent in 1993-94 to 14.85 percent in 2009-10. Other household observed marginal decrease from 9.54 percent in 1993-94 to 9.38 percent in 2009-10. Nonfarm sector observed increase from 30 percent in 1993-94 to 40.05 percent in 2009-10. Overall nonfarm sector increased from 30 percent in 1993-94 to 40 percent in 2009-10. Overall nonfarm sector increase, non-agricultural sector household registered greater increase than other household and self employed in non-agricultural households. There was increase in nonfarm sector while decline in the farm sector (Basant and Kumar(1989), G.S.Bhalla and Peter Hazell (2003) The decline in the agriculture households is compensated by the increase in non-agricultural labour and other households. (Basant and Kumar 1989, R.Vijay 2012).

The self employed in agriculture (cultivators) and agricultural labour households shifted to the non agricultural activities. There has been diversification of household activities in favour non-farm activities but may be due the distress in the agriculture (Vaidyanathan 1986).

Model for Explanations in the Participation in the Non farm Sector

To analysis the factors that affect the rural nonfarm sector .as stated earlier, the objective to explain factors that influence the probability of an individual's participation in the Rural nonfarm sector. To fulfil the objective we begin with a binary logistic model to analysis the choice of individuals between farm and non-farm sector. The binary logistic regression has been used for the period 1993-94(NSS 50th round) and period 2009-10(NSS 66th round) comparison has been made between the two period to understanding between pre liberalisation era to post liberalisation era the changes happened in the individual's participation in the rural nonfarm sector. There are various factors that influence an individual joining the farm or nonfarm sector workforce in the theoretical and empirical literature in rural nonfarm sector. The factors influencing the individuals decision to enter the rural nonfarm sector based on his individual and households. Gender, agegroup, education are individual while landsize and social group which are household characteristics which he belongs influence the entering the rural nonfarm sector. The choice of variables is based on prior literature on Rural nonfarm sector.

To analyse the determinants of participation in rural nonfarm sector as a main occupation among the rural population we have used a binary logistic model. In logit models the dependant variable is a dummy (i.e a dichotomous variable which takes a value of 0 and 1). Here the

dependent variable takes a value $Y=1$ if the current status of the i^{th} worker is employed in nonfarm sector, and $Y=0$, otherwise. Here independent variables are X_{ij} are defined below.

$$Y_i = a_0 + b_j X_{ij} + u_i$$

Where 'i' denotes individuals and 'j' denotes the independent variables

Y_i takes the value 0 if usually employed in farm sector and assume the value =1 otherwise.
period.

$X_j = (\text{Gender, Agegroup, Socialgroup, Familysize, Education, Technical education and Landgroup})$
 $i = \text{time period}$

The existing literature identifies the following factors to influence the choice between farm and non-farm sector.

Gender

Gender plays a significant role in the growth of the nonfarm sector. The literature related to the gender shows that rural females tends to prefer farm work than nonfarm employment (Lanjouw and Shariff (2004)). Males have greater propensity to diversify into income generating activities while females continue farm sector (Ellis 1998). In regions with distress related factors will push the males into traditional rural nonfarm sector, while females would be push to farm sector (Jha, 2001). This is identified as a dummy variable and male represents the reference category, while female represents the categorical variable.

Age Group

Younger population have high probability to enter entering the nonfarm sector (Lanjouw and shariff 2004). While the older age groups are in agriculture sector than other sectors (Eswaran et.al, 2009). So one would expect a higher probability for an educated to enter the non farm sector. In other words, we expected that age is inversely related to the participation in the non-farm employment. Abraham (2009) shows that as age increase there is higher probability of taking farm employment than nonfarm employment. Here, this variable is defined in terms of four variables. The age group is divided in 3 categories first 15 to 29 years, second 30 to 59 years is the reference category, third is 60 to 79 years.

Education

The level of education the influence ones decision to join rural nonform sector. The studies shows that education increases the probability seeking wage and remunerative employment in nonfarm sector. (Lanjouw and Shariff 2004). Better educated individuals are likely to possess skill facilitate the growth of the nonfarm sector. The level of schooling influence the young generation of rural nonfarm employment (Jayaraj 1989, Chadha 1991, Eswaran and Kotwal 2009).

Here Education is divided into 7 categories. Illiterate represents the reference category, while literate with no formalschooling, below primary, primary to middle, secondary to higher secondary, diploma, graduate and above represents the categorical variables.

Technical Education

Social groups in rural area plays important role in determining the occupational choices among the households. Generals and OBCs tend to have entered the nonfarm sector than SCs and STs (Himanshu, Peter Lanjouw, Mukhopadhyay and Rinku Murgai 2009). SCs have relatively few positions in the rural nonfarm sector (Murthy 1996).

Technical education increase the probability of individual entering the modern nonfarm sector. Technical education provides an opportunity to enter the nonfarm sector (Jatav & Sen 2013). Technical education is divided two categories technical education and no technical education. No technical education is reference category and Technical education is categorical variables.

Land size

Land is an asset, whose ownership is an insurance against a multitude of risks and uncertainties of rural Household. The literature shows that landholding increases the involvement in rural nonfarm sector. There is inverse relation between the farm size and nonfarm activities (Hazell and Ramsamy 1973, Ho 1985, Islam 1987). The households which has less than .99 hectares is considered as landless households. The households having landholding of 1 to 1.99 hectares is considered as marginal landowner households, while households having 2 to 3.99 hectares is small landowner household. The household having landsize of 4 to 9.99 hectares is considered as semi-large landowner, while 10 hectare and above is supposed to large landowner household. The land size is divided into 5 categories. landless is reference category, while rest of landholding groups belong to categorical variables.

Family Size

There is not enough literature related to the family size. It generally expected that the in larger household at least one member work in the nonfarm sector. (Abraham 2009) Young member in the larger in the family tend to be participate the nonfarm sector. Household size has classified to according to number of the members. Household size group shows 1-4 members, 5-8 members, 9-12 members and 13 and above. 1-4 members group considered as reference category, while rest of the member groups belong to Categorical variables.

Social Group

Social group is divided into 3 categories. Scheduled tribe (ST) is reference category, while Scheduled Caste (SC) and Others (General & OBCs) are categorical variables.

Estimated equations for analysing factors influencing choice to enter rural non-farm sector

To analyse the factors influencing the choice to enter the non-farm sector at the all India and at the state level of TN we have used two rounds of NSSO data of employment and Unemployment in India. The years are 1993-94 and 2009-10. We have been considering two years as we are trying to analyse whether there are any changes in the factors influencing the choosing to enter the non-farm sector. So we formulating the question as households are in the farm sector and are moving into non-farm sector. We are considering two year as one is attempting to see whether the characteristics of households in the farm and non-farm sector are differencing and then attributing this change to individual specific factors. The two periods for analysis is being seen are one year which is near the initial year for economic reforms and i.e., 1993-94. The second year is nearly 20 years after the reforms i.e., 2009-10.

All India Trend

Table 5: Logistic Regression: Participation Of Rural Population In The Non-Farm Works In 1993-94 In India

Explanatory variable	Coefficients	Odds Ratio
Female	-0.606(-21.09)**	0.545(-21.09)**
Age Group (reference group is 30-59)		
agegroup:15-29	0.003(0.11)	1.002(0.11)
agegroup:60-79	0.059 (1.07)	1.06 (1.07)
Social Group (reference group is ST)		
SCs	0.116(2.48)*	1.122(2.48)*
Others	0.216(5.55)**	1.241(5.55)**
Household size (Reference group is HH size 1-4)		
Householdsize:5-8	0.049 (1.74)***	1.05 (1.74)***
Householdsize:9-12	0.086(1.74)***	1.09 (1.74)***
Householdsize:13&above	-0.017(-0.21)	0.983(-0.21)
Level of Education(Reference group is not literate)		
Literate no formal schooling	0.569(5.66)**	1.767(5.66)**
below primary	0.31(7.52)**	1.363(7.52)**
primary to middle	0.465(14.56)**	1.592(14.56)**
Secondary to HSC	0.432(9.55)**	1.539(9.55)**
Diploma/certificate	0.931(2.11)*	2.536(2.11)*
Graduate & above	0.404(4.77)**	1.498(4.77)**
Landsize(Reference group is Landless)		
marginal landowner	-0.229(-6.64)**	0.795(-6.64)**
Small landowner	-0.234(-5.79)**	0.791(-5.79)**
semi-large landowner	-0.234(-4.57)**	0.791(-4.57)**
larger landowner	-0.35(-3.76)**	0.704(-3.76)**
Technicaleducation	-0.195(-1.83)	0.822(-1.83)
constant	-2.018(-45.02)**	0.132(-45.02)**
Number of Observation	59185	
LR Chi2(22)	1286.86	
Prob>Chi2	0	
Pseudo R2	0.0286	
Mcfadden's R2	0.029	
Log likelihood ratio	-21824.183	

Source: Unit level data from NSSO employment and unemployment situation in India,1993-94(50th round)

Note: ** significant at 0.01 level, *significant at 0.05 level and *** significant at 0.1 level. Figures in brackets are computed Z-values

The Study of Nature and Characteristics of Rural Non Farm Sector in India

The tables 5 estimates results of logit model for All India at 1993-94. The males have high probability of entering nonfarm sector. The Individuals in the age group of 30-59 have a high probability of participation in nonfarm activities compared to other age groups. Age group 15-29 and 60-79 shows the positive impact on nonfarm sector but they are not statistically significant. The young population which was out of labour force in 1983 entered in nonfarm sector rather than agriculture (Eswaran et.al 2009). Others (general & OBCs) have high probability of entering rural nonfarm sector than other social groups. This implies that forward caste and OBCs might join higher-level occupation in non-farm sector. large household (5-8 members and 9-12 members) more favourable to enter the rural nonfarm sector. The literate seems to enter nonfarm sector is greater than illiterates are. The Diploma /certificate educated individuals have higher probability to join the non-farm activities than other educational groups. Literate with no formal schooling likely to enter non-farm sector. The landless are more likely to enter the Rural nonfarm sector compared to the land owned households. This implies that agricultural surplus has not much role in entering the nonfarm sector. Technical expertise individuals are entering the nonfarm sector.

Table 6: Logistic Regression :Participation of Rural Population in the Non-farm Work in 2009-10

Explanatory variable	Coefficients	Odds Ratio
Female	-0.911(-48.72)**	0.402(-48.72)**
Age Group (reference group is 30-59)		
agegroup:15-29	-0.12(-6.95)**	0.886(-6.95)**
agegroup:60-79	-0.759(-25.05)**	0.468(-25.05)**
Social Group (reference group is ST)		
SCs	0.025(0.94)	1.025(0.94)
Others	0.079(3.73)**	1.081(3.73)**
Household size (Reference group is HH size 1-4)		
Householdsize:5-8	-0.002 (-0.13)	0.997 (-0.13)
Householdsize:9-12	-0.03(-1.01)	0.97(-1.01)
Householdsize:13&above	-0.145(-2.70)**	0.864(-2.70)**
Level of education(Reference group is not literate)		
literate no formalschooling	0.406(4.08)**	1.501(4.08)**
below primary	0.218(7.56)**	1.243(7.56)**
primary to middle	0.514(25.04)**	1.671(25.04)**
Secondary to HSC	0.999(41.75)**	2.714(41.75)**
diploma\certificate	1.915(18.91)**	6.787(18.91)**
graduate&above	2.154(56.76)**	8.615(56.76)**
Landsize(Reference group is Landless)		
marginal landowner	-0.4(-11.34)**	0.67(-11.34)**
Small landowner	-0.73(-26.79)**	0.481(-26.79)**
semi-large landowner	-1.49(-70.91)**	0.225(-70.91)**
larger landowner	-2.531(-116.07)**	0.0795(-116.07)**
Technical education	0.855(8.93)**	2.35(8.93)**
constant	0.683(24.44)**	1.98(24.44)**
Number of Observation	95008	

LR Chi2(21)	28358.58
Prob>Chi2	0
Pseudo R2	0.2158
Mcfadden's R2	0.216
Log likelihood ratio	-51539.681

Source: Unit level data from NSSO employment and unemployment situation in India,2009-10 (66th round)

Note: **significant at 0.01 level, *significant at 0.05 level and *** significant at 0.1 level. Figures in brackets are computed Z-values

The table 6 shows the results of logit model for All India for 2009-10. In general results suggest that males, in comparison to females have greater probability of joining non-farm sector. Individuals in the age group of 30-59 have a greater probability of participation joining the nonfarm sector compared to other age groups. Eswaran et.al, (2009) made observation that members which may in education system in 1983 in the later period entered the nonfarm sector rather than agriculture sector. Keeping the STs as reference category shows that others (Forward castes & OBCs) seem to have higher probability of entering the rural nonfarm sector in rural India compared to other social groups. Though SCs have positive impact on nonfarm sector but they are not statistically significant. Household size shows that 5-8 and 9-12 members are not statistically significant. Small households are more likely to enter than the nonfarm sector than larger household size. Education might have positive impacts on the growth of nonfarm sector in the Rural India. Illiterate is considered as reference category. Higher education achievements have greater probability of the entering the nonfarm sector than low level of educated individuals. Graduates and Diploma holder individuals are more likely to participate in the nonfarm sector than other educational groups.

The size of the landholding have inverse relationship of entering the rural nonfarm sector. There is clearly observation that landless more likely to enter the rural nonfarm sector than individuals in the landed households. The participation of the individuals members in the rural nonfarm sector declines with increase in the land size of the household. Technical knowledge individual educated individuals have greater probability of entering the non-farm sector.

Comparison of empirical results between 1993-94 and 2009-10 for All India level

The comparison between logit results for two periods. Female participation in nonfarm sector declined for the both period but female participation exhibits larger decline in 2009-10 than 1993-94. Individuals in the age group of 30-59 have a higher probability of participation compared to other age groups in the both period. There might young cohort (1983) between 18-26 age group who out of labour force (studying) entered in labour force later period entered nonfarm sector rather than agriculture (Eswaran et.al, 2009). Social groups showed others which consists of OBCs and general castes showed that favourable participation in the nonfarm sector in the other social groups. Large family size (5-8 and 9-12 members) are more likely to enter the nonfarm sector in 1993-94, while small family (1-4 members) more likely enter the nonfarm sector in 2009-10. Education has systematic effect on employment choices. 1993-94 showed diploma/certificate educated individuals have probability to join than other educational groups. Interestingly Literate with no formal schooling more likely to enter the nonfarm sector. However 2009-10 Graduate individuals are more likely to participate in the nonfarm sector than other educational groups. Land size plays important role to enter nonfarm

The Study of Nature and Characteristics of Rural Non Farm Sector in India

sector. During both the periods there is probability that landless are more likely to enter the rural nonfarm sector compared to the landowning households. Interestingly 1993-94 no technical however the technical educated individuals have favour participation probability of entering the nonfarm sector than no technical educated individuals.

Conclusion

There is aim to understanding the characteristics of rural nonfarm sector in India The nature and structure of employment shows that casual labourer was rising both in rural and urban non-fixed location in at All India level. This shows that much of the work is done by rural workers. The multivariate analysis for period 1993-94 and 2009-10 carried out for All India .There is not enough opportunities in farm sector which push labour to move out of the farm sector. The females participation in the nonfarm sector is lower than males . Individuals from age group of 30-59 showed the higher participation in nonfarm sector. OBCs and general castes have higher probability of entering nonfarm sector than marginalised social groups. Members of large family were entering nonfarm sector at all India level. Higher education has effects on entering the nonfarm sector in the country. Landless are more likely to participate in the nonfarm sector in comparison to other landowning groups in the country. This implies that investment from agricultural surplus is not the major causes of joining non-farm sector.

References

- Mellor, John W (1976): The new economics of growth- A strategy for India and the developing world, Cornell University Press, Ithaca
- Lewis, W.A (1954); Economic development with unlimited supplies of labour, Manchester School of Economic and Social Studies, vol 22, no 2, pp 139-91.
- Vaidyanathan, A. (1986), "labour use in rural India: a study of spatial and temporal variations", Economic and Political Weekly, Vol.21, no .52
- Haggblade, Steven, Hazell, Peter B. R, and Reardon, Thomas, Introduction, Transforming the rural non-farm economy (Opportunities and Threats in the Developing world (edited Steven Haggblade, Peter B.R.Hazell and Thomas reardon).
- Dennis Anderson and Mark W. Leiserson (1980), Rural nonfarm employment in developing countries, Economic Development and Cultural Change, vol -28, no 2 (Jan, 1980) pp 227-248.
- Enyina Chuta and Carl Liedholm (1979) Rural non-farm employment: A review of the state of the art, MSU Rural Development, Paper no-4, 1979.
- Hazell, Peter B.R and Haggblade, Steven (1991), Rural-Urban Growth linkages in India, Indian Journal of Agriculture Economics, Vol -46, no-4, Oct-Dec, 1991, Pg 515-529
- Vinoj Abraham (2009), Employment growth in rural India: Distress-Driven? Economic and Political Weekly, April 18, 2009, Vol XLIV no-16.
- Kilby, Peter and Liedholm, Carl (1986), "The role of Non-Farm Activities in The rural economy", EEPA Discussion Paper no-7, Nov, 1986.
- McGee, T. G. (1971) rpt.1975, The Urbanisation Process in the Third World, London: G. Bells and Sons Ltd.
- Jatav, Manoj and Sen, Sucharita (2013), The Drivers of Non-farm employment in Rural India, Economic and Political Weekly, Vol XLVIII, No 26 and 27.
- Gustav Ranis and Frances Stewart (1993). "Rural Nonagricultural Activities in Development: Theory and Application," Journal of Development Economics, 40(1), pp. 75-101.

- Jean O. Lanjouw and Peter Lanjouw (2001). "The Rural Non-farm Sector: Issues and Evidence from Developing Countries," *Agricultural Economics*, 26(1), pp. 1-23
- Basant Rakeshand Kumar, B. L. (1989), "Rural Non-agricultural Activities: A Review of Available Evidence", *Social Scientist*, Vol. 17, No. 1/2 (January-February), pp. 13-71.
- Barbara Hariss(1987), *Regional Growth Linkages from Agriculture and Resource Flows in Non-Farm Economy*, *Economic and Political Weekly*, Vol. XXII, Jan-02,1987.
- Hazell, P.B.R. and Haggblade, S. (1991), "Rural Growth Linkages in India", *Indian Journal of Agricultural Economics*, Vol. 46, No. 4, pp. 515-29.
- Kuznets, Simon S. (1966), *Modern Economic Growth: Rate, Structure, and Spread*, Yale University Press, New Haven.
- D. Jayaraj, (1989) *Rural nonfarm employment: An analysis of the village level data for Tamil Nadu*, MIDS Working Paper No. 91.
- D. Jayaraj (1989) *Determinants of rural non-agricultural employment, 1989*, Working MIDS Paper No. 90
- Anderson, Dennis and Leiserson, (1978) *Mark. Rural Enterprise and Nonfarm Employment*, A World Bank Paper. Washington, D.C.: The World Bank.
- Hart, Gillian. (1998). "Regional Linkages in the Era of Liberalization: A Critique of the New Agrarian Optimism," *Development and Change*. (29), pp.27-54.
- Himanshu, Lanjouw Peter, Mukhopadhyay Abhiroop and Murugai Rinku(2009), *Non farm Diversification and Rural Poverty decline; a perspective from Indian sample survey and village study data*, LSE asia Research centre, Working Paper
- Eswaran Mukesh, Kotwal Ashok, Ramaswami Bharat and Wadhawa Willma(2009), *Sectoral Labour flows and agricultural wages in India, 1983-2004; has Growth trickled Down?*, *Economic and Political Weekly*, Vol.44, No.2, pp.46-55
- Prasada Rao Mecharla, *The Determinants of Rural nonfarm employment in two villages of Andhra Pradesh (India)*, PRUS Working Paper No-12, University of Sussex, Brighton, UK
- Murty C.S & C.Durga(1992), *Rural non-agricultural employment with reference to employment with reference to employment in Handloom weaving in Andhra Pradesh*, *Manpower Journal*, Vol.XX VII, No-3, December, pp.5-21
- Rizwanal Islam (1986), *Non farm employment in rural Asia; Issues and Evidences*, In Shand, R. T, *Off-farm employment in the development of rural Asia*, National Centre for Development of Rural India, National Centre for development studies, Australian National University, Australia, pp.153-173
- lanjouw, Peter and Abusaleh Shariff (2004) *Rural nonfarm employment in India: Access, Incomes and Poverty Impact*", *Economic and Political Weekly*, Oct 2
- Jatav Manoj (2012), *Extent of casualisation in rural non-farm workforce of India: what does recent national sample survey data reveal?*, *Journal of social and economic development*, Jan-June 2012, Vol-12.