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Occupational Diversification in the Rural Sector a State Level Analysis for India: Some Observations

Chitrasen Bhue¹

Abstract

The rural occupational structure of the Indian economy is witnessing a change in between 2003 and 2013. Unlike the ‘traditional’ transition process wherein households moved from the farm sector to the non-farm sector, the Indian case does not present a unique trend in this direction but has multiple movements within the rural economy. Focusing on the two different methods of occupational classification, the present article is an attempt to explain the patterns of diversification of the rural Indian economy. The questions raised here are: Is the share of households in farm sector reducing, if yes, who is diversifying from the farm sector (cultivator or agricultural labour), which occupational groups are increasing their share. The present study uses the National Sample Survey’ (NSS) unit level data on Household Debt and Investment and identifies three different important partial movements in the rural Indian economy. One is the significant decline in the share of ‘other’ households in the non-farm sector. These households might be the households with surplus who have moved out of rural sector to the urban sector. The second movement is the decline in the share of agricultural labour households and a movement towards increasing share of cultivators/self-employed in agriculture (a movement within farm sector) on the one hand and the growth of ‘other labour’ (a movement towards pure non-farm sector) on the other hand. The third movement, if mixed households represent plural households, is an increase in the mixed households in ‘other labour’ category within this group. Maybe this is also a distress driven strategy of marginal farmers to self-cultivate their land as well as sell their labour to households in the non-farm sector. If the above trends are a relative approximation of the process in the real world, there is a need to think the agrarian reforms issue from the side of distress driven segments in the economy.

Key words: Rural, Cultivator, Agricultural Labour, Occupational Diversification, Non-farm sector.

Introduction

One of the features of the transitional process in India is the relatively slow rate of decline in the share of rural households and also a slow decline in the share of households dependent on the farm sector. The need to ‘move’ labour out of agriculture and large productivity differences between sectors presents a major puzzle for theory. One explanation

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advanced for this slow process of transition from farm sector based economy to a non-farm sector based economy is the 'education premium' existing for jobs in the non-farm sector (a demand-side constraint) slowing the mobility of labour from farm sector to non-farm sector (Eswaran et.al, 2009). Given the low mobility of labour from rural/farm to non-farm and a limited rural-urban migration, there are evidences of mobility of farm households to the rural non-farm sector in the post-1990's period (Binswanger, 2013). Interestingly, Binswanger (2013) calls this process of transformation as stunted transformation. This paper attempts to analyse the composition and nature of change in the distribution of the rural sector over different occupational groups. The questions raised here are: Is the share of households in farm sector reducing, if yes, who is diversifying from the farm sector (cultivator or agricultural labour), which occupational groups are increasing their share.

The data source for the present paper is Debt and Investment surveys of the National Sample Survey Organisation (NSSO), Government of India. This paper considers the survey undertaken in 2003 (agricultural year 2002-03) and 2013 (agricultural year 2012-13). These NSSO rounds are also identified as the 59th and 70th round of NSSO. In these rounds, households are classified into rural and urban households and this paper uses information related to rural households only. Fourteen major states of India have been considered in this study based on the reasonable data availability for the institutional indicators used in this study¹. The north eastern states², Himachal Pradesh, Jammu and Kashmir have not been included in this study because of the unreliable data.

The rest of the paper is organised in the following way. Section two describes the compositional change of the rural Indian economy by using two different methods of classification of the households, first by classifying the household into cultivator and non-cultivator and then by using the NSSO's income based classification. The next section tries to present the pattern of diversification in details by further classifying the households into farm, mixed and non-farm sector households. Section four summarises the three partial movements of the Indian economy.

Changes in the Rural Occupational Structure 2003 to 2013

A long term consistent trend witnessed in Indian economy is the declining share of rural households and a declining share of cultivators over time. Between 2003 and 2013 the share of households in the rural sector has declined from 72.73% to 65.09%. But has the composition of the rural sector witnessed a change with a decline in the share of households in the rural sector? One method of analysing the compositional change is to see if the share of cultivator households is changing. The present study classifies the rural households into two groups.

¹ For data sources and list of Indian states see appendix II.

² The report of the Committee on Optimal Sample Sizes For North Eastern States, published by Government of India, MOSPI National Sample Survey Office Survey Design and Research Division in May 2011 states that the data for north eastern states are not adequate prominently due to the constraint sample size and other survey related resources. Separate state-wise estimates are not available on a regular basic except for Assam.

Households who operate 0.002 hectares are identified as cultivators and the rest of the households are identified as non-cultivators. The second group is a very heterogeneous group containing households who depend on the supply of labour to agricultural operations to meet their livelihood, to artisans, to school teachers, to resident landlords. The share of cultivating households has increased marginally from 59.74% to 61.95% in the rural areas. Interestingly the share of cultivator households in urban has also increased from 6.29% to 9.20% implying an increase in the share of cultivators in the overall economy (see Table.1). At the states level also there is an increase in the share of cultivator household both in the rural as well as urban area for almost all the states. In the rural area Kerala experienced a highest increase in the share of CULH (17.07 per cent) followed by Gujarat (10.24 per cent). The other states which experienced an increase in the share of CULH are Andhra Pradesh, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and Tamil Nadu. Among the states which witnessed a decrease in the CULH Punjab has the highest decline in the share of CULH. The other states where CULH were declining were Bihar, Haryana, Karnataka, Uttar Pradesh and West Bengal. In the urban area except Haryana all other states were witnessing an increase in the share of CULH. So between 2003 and 2013, there a decline in the share of rural households but an increase in the share of cultivators, implying a different type of compositional change in the rural economy, when compared to long-term trend. An interesting feature of Indian agrarian economy was that between 1994 and 2004, agrarian sector was in a decelerating mode while in between 2004 and 2013 there was a revival in the agrarian growth (Chand et.al, 2012). Is the increasing share of cultivator households a result of revival of the agrarian economy or a result of partial movements of people within the parts of the rural economy?

Another method to analyse the incremental occupational change in the rural economy is to use occupational classification of households as given by the NSSO. Households are clubbed into five groups based on the major source of income of the households (self-employment in agriculture, self-employed in non-agriculture, agricultural labour households, other labour and others)¹. Distribution of households into five NSSO's occupational classification of household also presents a similar picture of the changes in the structure of the economy. Households who report self-employed in agriculture had the highest share of households in the rural economy followed by agricultural labour households in both the periods. These two categories together form the farm sector in the rural economy and cover 63.59% of the household in 2003 at the all India level (see Table.2). The rest of the categories, which can be altogether clubbed into non-farm sector, had almost equally distributed in the rural sector. Between 2003 and 2013, self-employed in agriculture, agricultural labour and

¹ In scheduled 18.2 of the 59th round's National Sample Survey (NSS) on Debt and Investment (January to December, 2003), NSSO classifies the rural households into five broad categories: self-employed in non-agriculture, agricultural labour, other labour, self-employed in agriculture and other. But the corresponding information is not same for the 70th round NSS on Debt and Investment. The other labour category of 59th round has been replaced by Regular wage/salary earning and Casual labour in non-agriculture. In order to make a comparison of the rural household type for these two rounds, we have added the Regular wage/salary earning and casual labour household together to form Other Labour household for 70th round.

other labour household has experienced a significant change. There is a 5% increase in the share of self-employed in agriculture households in the rural sector who can be broadly identified as cultivator households. The share of agricultural labour household has witnessed a significant decline (10% decline) and households identified as self-employment in non-agricultural sector also witnessed a significant decline (see Table.2). The other group which witnessed a significant increase is the 'other labour' households. Similar is the case at different states level. Table.2 also provides the state level information on occupational change over the period of time. For all most all the states the share of self-employed in agriculture household has increased over the study period. The highest increase in the share of Self-employed in agriculture household is in Gujarat by 15.70 per cent followed by Maharashtra and Haryana. Bihar, Kerala, Punjab and Uttar Pradesh have witnessed a decline in the self-employed in agriculture households. Agricultural labour household is declining in all the states. Likewise the all India case the other labour household have increased for all the states.

One of the partial movements witnessed during this period was a significant decrease in the share of agricultural labour household and an expansion of the share of cultivators. One possible explanation for this trend is that agricultural households are shifting and becoming cultivators or an increase in the share of pure tenant households (household who do not own land but operate land). Between 2003 and 2013, the share of pure tenant households has increased from 7.15% to 11.51%. Village studies present information on two different processes of transformation taking place in rural economy. Firstly, diversification of cultivator households with surplus out of agriculture with ownership of land and leasing out land (Upadhy C B, 1988; Vijay R, 2012; Vakulabharanam V, 2004). Secondly, agricultural labour households leasing in land (Vijay and Sreenivasulu, 2013). Structurally speaking, the culmination of these two processes is a decline in the share of households who are declaring agricultural wage income to be major source of income but an increase in the share of cultivators and/or self-employed in agriculture.

Changes in the Composition of the Rural Household 2003 to 2013: Farm, Mixed and Non-Farm Household

The post-1980's period has witnessed a diversification of farm households into non-farm households. Is there a gradual shift of farm households to plural or multiple sources of income households to pure non-farm sector households or do households shift completely to the non-farm sector? In order to understand the changing structure of the rural economy, the rural households are classified into three categories: Farm, Mixed and Non-farm sector household. National Sample Survey Organisation's 59th and 70th round unit level data on Household debt and investment has been used for this classification. This data gives 14 different kinds of usual principal activity status¹ of the family member in a household. Five

¹ In scheduled 18.2 of the 59th round's National Sample Survey (NSS) on Debt and Investment (January to December, 2003), NSSO classifies the usual principal activity status into 14 major categories: Worked in household enterprises as own account worker, as employer, as helper, worked as regular salaried/wage

usual activity status (Worked in household enterprises as own account worker, as employer, as helper, worked as regular salaried/wage employee, worked as casual wage labour in the public work and in the other type of work) have been taken into consideration and the non-working member of the households are excluded from the study. This classification of NSSO was not so useful except to recognize the working and non-working member of the household. It does not permit us to classify the household into farm, non-farm and mixed category. So the National Industrial Classification (NIC) of the individual/household given the unit level data has been applied to classify the activity of the individual member into farm and non-farm. The NIC uses income as the base to classify the activity status of the individual/household. At the second stage, a household is categorised into farm, mixed and non-farm based on the activity status of the individual member of a particular household. A household is said to be farm sector household if all the members of the household earn their highest share of income from farm sector. A non-farm household is one where the activity status of all the members of the household is categorized as non-farm. If the members of the household are engaged in both farm and non-farm activities, than that household are classified as mixed household. The distribution of the rural household into farm, mixed and non-farm has been presented in Table.3.

Table.3 presents the distribution of households in rural area into the three groups (farm, mixed and non-farm) for the period 2003 and 2013. As expected the households dependent only on farm sector is the most dominant sector in the rural area followed by non-farm sector and then by mixed households in both the periods. But between 2003 and 2013, the share of households who earn only from farm sector has decreased and the share of households who are identified as mixed and non-farm sector has increased. But a dominant tendency in the rural economy is a reduction in farm sector households and a higher increase in the share of non-farm sector households compared to mixed households. Table.4 provides the same information at the state level. For almost all the states the share of farm sector is declining. Gujarat, Haryana, Maharashtra and Rajasthan are the four states where the share of arm sector has increased. For the mixed household except for Haryana, Kerala and Maharashtra the share is increasing for the rest of the household. The share of Non-farm sector is increasing in all the states. The highest increased in the share is in Orissa followed by Bihar. Given these broad tendencies, it will be interesting to see which NSSO' occupational groups within the farm, non-farm and mixed has increased their share of households.

employee, worked as casual wage labour in the public work and in the other type of work, did not work but was seeking and/or available for work, attended educational institutions, attended domestic duties only, attended domestic duties and was also engaged in free collection of goods (vegetables, roots, fire-wood, cattle feed etc.), sewing, tailoring, weaving etc. for house hold use, rentiers, pensioners, remittance recipients etc, not able to work due to disability, beggars and prostitutes. We have classified the first five categories as the working category and the rest as non-working category. The non-working category has been omitted from the sample. The 70th round NSS on Debt and Investment (January to December, 2013) gives only the first five categories.

Table 5, provides information on distribution of NSSO' occupational groups of households between farm, non-farm and mixed households for the year 2003 and 2013. It also gives the changes in the share of household in 2013 when compared to 2003. Between 2003 and 2013 the share of household in the farm sector has witnessed a decline by 4.72%. This decline in the share of farm sector households was mainly contributed by decline in the agricultural labour household by 10.29%. The share of households who are self-employed in agriculture in the farm sector has increased (4.64%) along with the share of 'other labour' (1.14%). A decline in the share of agricultural labour households and increase in self-employed in agricultural household could imply that earlier households whose major source of income was selling labour power might have leased in land or households who had land but had labour income being the dominant source of income might have witnessed a shift in dominant source of income from labour to land. As was presented earlier, there are evidences of increase in pure tenants implying shifting of agricultural labour households to cultivators households.

The share of households in the mixed group was 12.53% in 2003 and had marginally increased by 1.35% by 2013. The major increase has been in the case of 'other labour' households followed by self-employment in agriculture. The share of households in the non-farm sector has been relatively high (around 25% of rural households) when compared to mixed households and has also increased by a higher share when compared to mixed households. The internal composition of non-farm sector shows a significant increase in the category of 'other labour' and a significant decline in the share of households identified as self-employment in non-agriculture and 'others'. Two of the prominent changes in the rural sector are decline in the share of agricultural labour households and decline in the share of households in the 'other' category while the major gainers are self-employment in agriculture and 'other labour' households.

Conclusion

Indian economy, in the period between 2003 and 2013, is witnessing a gradual movement of households from the rural sector to the urban sector. Unlike the 'traditional' transition process wherein households moved from the farm sector to the non-farm sector, the Indian case does not present a unique trend in this direction but has multiple movements within the rural economy. Some of these movements are within the farm sector and some outside the farm sector. The resultant total movement is dependent on the relative strength of partial movements. This paper identifies three important partial movements in the rural sector. One is the significant decline in the share of 'other' households in the non-farm sector (Table 4). These households might be the households with surplus who have moved out of rural sector to the urban sector. Given the nature of these households, one can identify these households as households with 'economic surplus' and have moved out of agriculture and rural economy. This represents one movement in the rural economy in which households with economic surplus migrate out.



The second movement is the decline in the share of agricultural labour households and a movement towards increasing share of cultivators/self-employed in agriculture (a movement within farm sector) on the one hand and the growth of 'other labour' (a movement towards pure non-farm sector) on the other hand. In the general context of unviability in agriculture the expansion of cultivators/self- employed in agriculture is an interesting feature. One possible explanation of the above trend could be a distress induced movement of agricultural labour households into becoming cultivators/ self-employment in agriculture to meet their livelihood.

The third movement, if mixed households represent plural households, is an increase in the mixed households in 'other labour' category within this group. Maybe this is also a distress driven strategy of marginal farmers to self-cultivate their land as well as sell their labour to households in the non-farm sector. If the above trends are a relative approximation of the process in the real world, there is a need to think the agrarian reforms issue from the side of distress driven segments in the economy.

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Tables

Table1 Share of Cultivator (CULH) and Non-Cultivator Household (NCULH): 2003 and 2013

STATES	Rural				Urban			
	2002-2003		2012-13		2002-2003		2012-13	
	Share of CULH	Share of NCULH	Share of CULH	Share of NCULH	Share of CULH	Share of NCULH	Share of CULH	Share of NCULH
ANDHRA PRADESH	43.19	56.81	44.35	55.65	4.57	95.43	5.46	94.54
BIHAR	60.52	39.48	57.01	42.99	11.93	88.07	13.27	86.73
GUJARAT	56.73	43.27	66.97	33.03	4.21	95.79	5.66	94.34
HARYANA	58.78	41.22	57.78	42.22	8.82	91.18	5.69	94.31
KARNATAKA	57.45	42.55	56.14	43.86	6.2	93.8	6.93	93.07
KERALA	49.67	50.33	66.74	33.26	20.99	79.01	43.72	56.28
MADHYA PRADESH	65.11	34.89	69.78	30.22	8.29	91.71	11.78	88.22
MAHARASHTRA	55.18	44.82	57.04	42.96	2.95	97.05	5.24	94.76
ORISSA	64.55	35.45	64.76	35.24	8.59	91.41	10.18	89.82
PUNJAB	53.79	46.21	41.34	58.66	6.85	93.15	6.87	93.13
RAJASTHAN	74.93	25.07	79.92	20.08	9.59	90.41	10.07	89.93
TAMIL NADU	34.9	65.1	38.63	61.37	4.46	95.54	10.09	89.91
UTTAR PRADESH	75.21	24.79	74.59	25.41	8.72	91.28	11.48	88.52
WEST BENGAL	56.61	43.39	52.39	47.61	4.25	95.75	7.78	92.22
All INDIA	59.74	40.26	61.95	38.05	6.26	93.74	9.2	90.8

Source: Author's calculation from the unit level data of NSSO's 59th and 70th round on Household debt and investment.

Table.2 Changes in Income based Occupational Classification of the Rural Household between 2003 and 2013 at all India

STATES	2002-03					2012-13				
	SENAH		OTHER			SENAH		OTHER		
	AGLH	LAB	SEAH	OTHER	AGLH	LAB	SEAH	OTHER		
ANDHRA PRADESH	14.98	34.75	10.57	26.41	13.29	10.81	20.88	21.59	32.36	14.36
BIHAR	14.30	33.11	3.11	40.02	9.46	11.17	23.47	19.31	35.82	10.23
GUJARAT	13.76	25.06	10.04	37.73	13.41	7.54	18.93	17.90	53.43	2.20
HARYANA	14.43	10.70	21.79	34.72	18.36	9.98	5.28	31.23	46.44	7.06
KARNATAKA	11.01	38.55	7.48	35.12	7.86	9.22	24.41	21.15	40.66	4.55
KERALA	16.39	19.01	29.10	18.98	16.52	17.99	11.91	42.24	15.50	12.36
MADHYA PRADESH	9.89	35.13	3.90	44.05	7.04	3.72	19.11	18.26	55.61	3.29
MAHARASHTRA	9.17	35.29	9.79	33.46	12.29	9.98	23.40	15.04	45.74	5.84
ORISSA	14.43	35.83	8.03	29.98	11.73	14.57	14.18	26.48	35.90	8.87
PUNJAB	18.24	19.57	17.60	30.09	14.50	15.55	12.53	38.22	26.82	6.87
RAJASTHAN	14.33	7.80	20.98	46.80	10.09	9.51	4.39	29.99	52.71	3.41
TAMIL NADU	15.48	32.18	18.67	19.40	14.27	11.65	22.81	31.89	24.29	9.36
UTTAR PRADESH	14.31	15.78	7.42	54.37	8.12	9.91	8.82	18.72	58.21	4.33
WEST BENGAL	24.10	26.51	8.81	32.06	8.52	17.66	22.86	23.67	27.27	8.54
All INDIA	14.41	26.22	10.77	37.37	11.23	11.32	16.04	23.47	42.30	6.90

Source: Same as Table.1 Note: SENAH-self-employed in non-farm household, AGLH-agricultural labour household, SEAH-self-employed in agriculture



Table.3 Classification of the Rural Household: Farm, Mixed and Non-Farm

Household Type	Share of Household	
	2003	2013
Farm	62.00	57.29 (-4.71)
Mixed	12.53	13.88 (1.35)
Non-farm	25.47	28.83 (3.36)
Total Household	100	100

Source: same as Table.1. Note: figure in the parenthesis gives the change in 2013 over 2003.

Table.4 Classification of Rural Household: Farm, Mixed and Non-farm

STATES	Farm		Mixed		Non-farm	
	2003	2013	2003	2013	2003	2013
ANDHRA PRADESH	60.36	54.65	12.90	18.72	26.74	26.63
BIHAR	75.78	62.69	6.68	6.88	17.54	30.43
GUJARAT	58.07	65.94	15.74	17.02	26.19	17.04
HARYANA	41.98	48.67	16.61	14.36	41.41	36.97
KARNATAKA	70.38	59.32	11.66	17.97	17.96	22.70
KERALA	33.80	26.84	18.64	16.47	47.56	56.69
MADHYA PRADESH	79.54	73.26	6.56	9.70	13.90	17.05
MAHARASHTRA	67.67	71.04	13.95	10.79	18.38	18.17
ORISSA	65.31	51.48	11.03	10.89	23.66	37.62
PUNJAB	46.36	35.16	13.63	16.16	40.00	48.68
RAJASTHAN	52.43	52.84	19.78	25.13	27.79	22.03
TAMIL NADU	49.19	43.68	15.90	19.95	34.91	36.37
UTTAR PRADESH	68.01	63.52	11.23	12.68	20.76	23.80
WEST BENGAL	54.84	47.72	12.38	13.43	32.78	38.86
All INDIA	62.00	57.29	12.53	13.88	25.47	28.83

Source: same as Table.1

Table.5 Changes in the composition of the rural household: 2003 and 2013

Household Type	Share of FS household		Share of MS household		Share of NFS household	
	2003	2013	2003	2013	2003	2013
Self Employed in non-agriculture	0.96	0.55(-0.40)	2.57	2.04(-0.52)	11.56	9.42(2.14)
Agricultural labour	25.07	14.78(-10.29)	1.99	1.58(0.41)	0.43	0.73(0.30)
Other Labour	0.67	1.81(1.14)	2.62	5.76(3.15)	8.02	17.39(9.37)
Self Employed in agriculture	34.88	39.52(4.64)	3.90	4.42(0.52)	0.20	0.97(0.77)
Others	0.43	0.62(0.19)	1.46	0.08(1.38)	5.25	0.32(-4.93)
Total	62.01	57.29(-4.72)	12.53	13.88(1.35)	25.46	28.83(3.37)

Source: same as Table.1. Note: FS refers to Farm Sector, MS refers to mixed sector and NFS refers to Non-Farm sector households. Figures in the parenthesis give the change in 2013 over 2003.