Policies for Increasing Non-Farm Employment for Farm Households in India

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ABSTRACT

The present paper adopts a diagnostic approach; problems of non-farm employment in rural sector are identified by studying pattern and process of rural employment using data from the NSS quinquennial survey results on employment, unorganized manufacturing and also the CSO Economic Census results. Preliminary analysis shows that the share of non-farm sector in the rural workforce has increased significantly in the recent period. Productive employment in the rural sector however remains important. The share of women in the rural workforce has increased significantly, but one-third of rural female workers employed on the basis of usual status are actually unemployed on the basis of current daily status of employment. The study further investigates pattern of rural diversification using a mix of data for aggregate and disaggregate levels. The findings suggest an increased importance of distress-related factors in rural diversification. In the development-induced rural diversification though agriculture is important; analysis of different sets of data suggests that the role of agriculture in rural diversification is decreasing over the years. Alternate drivers of rural diversification have significant implications for employment, poverty and inequity of the region. The study finds that agriculture, manufacturing and tourism are the engines of rural growth; and development-induced rural diversification in a region warrants growth in one of the above engines. The growth of manufacturing in particular is important. In spite of numerous public institutions to encourage manufacturing and business in rural sector; productivity of rural manufacturing remains low, flight of primary-resource based manufacturing to urban sector continues. The paper therefore argues for different kind of incentives to encourage manufacturing in rural vicinity. A single window integrated service centre to promote rural non farm sector is also important; in this regard rural non-farm development agency (RUDA) of Rajasthan provides an example.

Keywords: Rural non-farm employment, farm households, off-farm income, working poor, rural wages, rural enterprises, industry-business-service related policies, clusters, decentralization

JEL Codes: E24, O14, O15, J21, J31, J43, Q12

1. INTRODUCTION

The recent Agriculture Census data shows that around 84 per cent of agricultural holdings in India are of less than two hectares. Most of these agriculture holdings are not viable; as a consequence many farmers are either leaving agriculture or living in penury (NSSO 2005). Any improvement in viability of these farm households requires that sizeable proportion of their household income comes from off-farm sources. Interestingly, sectors other than agriculture in the last three decades have grown rapidly, as a result the share of services in the aggregate economy (gross domestic product) has increased by around 20 percent while that of agriculture has decreased by similar percentage point; the secondary sector also improved its share marginally (4 per cent) during the same period.[1] The above growth in services and manufacturing industries largely bypass the rural sector.

The expansion of off-farm income for farm households however requires growth of non-agriculture sector in rural vicinity; loosely referred as the rural non-farm sector. The rural non-farm sector includes all non-agricultural activities: mining and quarrying, household and non-household manufacturing, processing, repair, construction, trade and commerce, transport and other services in villages and rural towns undertaken by[2] enterprises varying in size from household own-account enterprises (OAEs) to factories. The rural non-farm sector (RNFS) comprises of diverse activities; policies for RNFS therefore cuts across various ministerial portfolios without it being a central focus for any. In a liberalizing world private sector increasingly influences structure and dynamics of RNFS through a variety of supply chain relationships between large and small firms. A host of public and private agencies also promote rural non-farm activity on equity and environmental grounds mostly on a not-for-profit basis. Performance of these institutions also depends on supportive role of different layers of government.

Government has an array of programmes to increase rural employment in the country. Certain programme designed to increase rural employment is also found to have few unintended implications that actually hurt growth of rural non-farm sector in the selected regions of the country. In this context programmes and policies related to rural non-farm employment need to be evaluated, lessons learnt from these evaluation also need to be incorporated in the programme. The present paper on 'policies for increasing non-farm employment for farm households' is an attempt in the above direction. Any deliberation on

[1] Between 1981 and 2010 the share of services in the gross domestic product of the country increased from 38 to 57 per cent, while that of agriculture declined from 36 to 17 percent, the share of manufacturing during the same period has increased from 22 to 26 percent.

[2] On the basis of population there are different classes of towns; often towns with a population less than 50,000 are referred as rural towns.

policy becomes easier once problems are diagnosed; with that intent Section II and III of the present paper discusses pattern and process of rural employment using the secondary data. A brief review of policies related to rural non-farm employment is discussed in Section IV of this paper; Section V, finally, illustrates some workable points for increasing productive employment of farm households in the non-farm sector of India.

2. PATTERN OF RURAL EMPLOYMENT

Indian economy grew at an impressive rate in the last few decades. Demographic pressure has also slowed down, yet the incidence of unemployment on the basis of current daily status (CDS) of employment has exceeded 7 per cent in the year 2004-05; the corresponding figure for rural India was over 8 per cent. A significant proportion of employed persons are poor; they are generally referred to as the 'working poor.' In this perspective it is important to assess possible reasons for persistence of unemployment and poverty in rural India. What role does non-farm sector play for farm households? Is there a gender dimension to rural employment? The present section attempts to address some of the above issues by studying both the quantitative and qualitative aspects of rural employment. The study uses National Sample Survey (NSS) quinquennial data on employment; it also utilizes information from Economic Census published by the Central Statistical Organisation (CSO), New Delhi.

2.1 Quantitative Aspects of Rural Employment

Table1 presents a comparative account of workers distribution into nine major industries during the selected years of reference 1973, 1983, 1993-94, 1999-00 and 2004-05. The above table shows the percentage distribution of workers, separately for rural and urban sector of India. The details of workers in the present table are based on usual status of employment. As is evident from table, agriculture registers the maximum decline in the share of rural workers during the recent period. In spite of the above decline, agriculture accounted for around 68 per cent of the rural work force in the year 2004-05. Bulk of employment in agriculture (around 97 per cent) is based on the rural sector and such a steep fall in the share of agricultural workers is interesting. This is particularly interesting in the backdrop of some of the recent studies that show significant increase in the number of agricultural workers between 1999-2000 and 2004-05; the increase in the above period is in contrast to the results of the previous period (between 1993-94 and 1999-2000) when number of workers in agriculture has declined/stagnated (Jha 2008).[3] One may note that the

[3] Jha 2005 has found that the number of agricultural workers on the basis of current daily status of employment has increased by 0.006 per cent between 1993-94 and 1999-2000. On the basis of usual status of employment there is marginal decline

above result is based on the number of workers, whereas, the current table (Table 1) is based on percentage distribution of workers into different industries.

Table 1: Sectoral Distribution of Usual Status Workers (principal + subsidiary status) in India by Sex, Residence over the Years

Sectors	Locations	Male					Female					Person
		1972-73	1983	1993-94	1999-00	2004-05	1972-73	1983	1993-94	1999-00	2004-05	2004-05
Agriculture etc.	*Rural*	*83.2*	*77.5*	*74.1*	*71.4*	*66.5*	89.7	87.5	86.2	85.3	83.3	72.7
	Urban	*10.8*	*10.6*	*9*	6.5	6.1	32	31.5	24.7	*17.6*	18.1	8.8
Mining & quarrying	*Rural*	*0.4*	*0.6*	*0.7*	*0.6*	*0.6*	*0.2*	*0.3*	*0.4*	*0.3*	*0.3*	*0.5*
	Urban	*1*	*1.2*	*1.3*	*0.9*	*0.9*	*0.7*	*0.7*	*0.6*	*0.4*	*0.2*	*0.8*
Manufacture	*Rural*	*5.7*	*7*	*7*	*7.3*	*7.9*	*4.7*	*6.4*	*7*	*7.6*	*8.4*	*8.1*
	Urban	*26.9*	*26.8*	*23.5*	*22.4*	*23.5*	*26.2*	*26.7*	*24.1*	*24*	*28.2*	*24.6*
Utilities	*Rural*	*0.1*	*0.2*	*0.3*	*0.2*	*0.2*	-	-	*0.1*	*0*	*0*	*0.2*
	Urban	*0.8*	*1.1*	*1.2*	*0.8*	*0.8*	*0.1*	*0.2*	*0.3*	*0.2*	*0.2*	*0.7*
Construction	*Rural*	*1.6*	*2.2*	*3.2*	*4.5*	*6.8*	*1.1*	*0.7*	*0.9*	*1.1*	*1.5*	*4.9*
	Urban	*4.3*	*5.1*	*6.9*	*8.7*	*9.2*	*3.3*	*3.2*	*4.1*	*4.8*	*3.8*	*8*
THR)	*Rural*	*3.1*	*4.4*	*5.5*	*6.8*	*8.3*	*1.5*	*1.9*	*2.1*	*2*	*2.5*	*6.1*
	Urban	*20.2*	*20.4*	*21.9*	*29.4*	*28*	*9.5*	*9.5*	*10*	*16.9*	*12.2*	*24.6*
TSC	*Rural*	*1*	*1.7*	*2.2*	*3.2*	*3.8*	-	*0.1*	*0.1*	*0.1*	*0.2*	*2.5*
	Urban	*9*	*10*	*9.7*	*10.4*	*10.7*	*1*	*0.6*	*1.3*	*1.8*	*1.4*	*8.6*
Services	*Rural*	*4.8*	*6.1*	*7*	*6.2*	*5.9*	*2.8*	*2.8*	*3.4*	*3.6*	*3.7*	*5*
	Urban	*27.1*	*24.7*	*26.4*	*19*	*20.8*	*27.2*	*26.7*	*35*	*34.2*	*35.9*	*24*

Note: THR refers to trade, hotels, and restaurant; TSC refers to Transport, storage, and communication
Source: Relevant quinquenial round of NSSO.

The contradictory result for subsequent period as obtained from the above table is puzzling. Further investigations reveal that the increase in the number of workers in the recent period (between 1999-2000 and 2004-05) is reported from most of the industries. This increase, to large extent, can be attributed to the increase of workforce participation rate (WFPR) in the year 2004-05. The significant increase of WFPR is reported for all

in number of agricultural workers during the above period.

categories of workers, while WFPR declined in the nineties.[4] A sharp increase of WFPR in the year 2004-05 is, in fact, subject of further investigation (discussed elsewhere, Jha 2008).

Table 1 shows the percentage of rural male workers in agriculture have decreased over the reference period. The decline is considerably high in the recent period (between 1999 and 2004). This decline in the share of agricultural workers has been uniform for males in both status of employment – individual (principal) and combined (principal plus subsidiary). A similar trend is evident for female agricultural workers employed on the basis of combined (principal and subsidiary) status of employment; however, percentage of female workers employed in agriculture on the basis of principal status has not decreased. Therefore, increase in the number of workers, in general, and agricultural workers, in particular, in the year 2004-05 needs to be inferred cautiously.

The non-agriculture industrial categories, depending on pattern of changes in their shares in workforce during the recent period (1999-00 and 2004-05), can be categorized into three groups. In the first group of industries, the share of workers has increased significantly (around one percent); examples are construction and trade. The second group of industries has registered a moderate increase in the share of workers; examples are manufacturing and transport. The third group of industries has recorded stagnation or decline in the share of workers; examples are mining, utilities and services. This trend in employment growth during the above period is slightly different for the rural and urban sectors. In urban India, share of workers has increased in services and declined in trade-hotels-restaurant (THR). Services actually consist of community-social-personal services (CSPS) largely under the public domain and finance-insurance-real estate-business services (FIREBS) primarily under the private initiative.

The above changes in the share of workers across industries can be explained with the employment share of these industries in the base period and also growth of employment of these industries during the previous period. Besides the recent time period (1999-2004), the other two time horizons carved out from the above referred period, i.e., 1983 to 2004-05 and the 1980s (between 1983 and 1993-94), and the 1990s (1993-94 and 1999-00). Some of the industry specific trends and possible reasons for the same are discussed below.

Manufacturing has been the most important of all non-farm industrial categories. In the rural sector, share of manufacturing has been increasing consistently during the reference period. Though this is not the case of manufacturing in the urban sector; the share of workers in manufacturing has been fluctuating during the large part of the 1980s and 1990s. In the

[4] In 2004-05, the WFPR for rural males and females increased by 1.5 and 2.8 per cent over the previous quinquennial survey year (1999-00). The above figure is based on usual status of employment and includes both principal and subsidiary status of employment.

rural sector, the marginal increase in the share of manufacturing may not be construed as very encouraging. There are, in fact, evidences of manufacturing shifting away from the rural to the urban sector of the country in the 1990s (Jha 2006).

The data from the NSS Unorganized Manufacturing sector suggest that Gross Value Added (GVA) per worker in rural manufacturing is significantly lower than the urban manufacturing in all categories of enterprises, namely Own account Manufacturing Enterprises (OAME), non-directory manufacturing enterprises (NDME), Directory Manufacturing Enterprises (DME) (Box 1). This clearly suggests lower productivity of manufacturing in the rural sector and this has implications for the wages of rural workers in manufacturing.

Box 1: GVA per worker in 000' Rs. in year 2005-06

Entrp.	Rural	Urban	All
OAME	10.4	16.3	11.3
NDME	26.9	43.4	36.5
DME	41.9	65.3	55.1
All	16.2	38.2	24.0

Source: NSSO, 2008

The share of employment in construction increased during the 1990s, though it was fairly high even in the 1980s. In the urban sector, employment in construction activity peaked early (in the 1980s); while in rural India high growth in employment was experienced during the 1990s. Various factors influence rural employment in construction activity. Extension of basic infrastructure like roads in rural India, specific economic policies, [5]reduction in the prices of cement-concrete based construction materials, the rate of growth and structure of population are only some of such factors.

Transport-storage-communication (TSC) and finance-insurance-real estate-business (FIREB) services are the industrial categories where share of employment increased in both the sectors, rural and urban. Employment in TSC appears to be influenced by the increased investment in infrastructure such as roads which are being prioritized in the recent years. Increased investment in infrastructure also increases the quality of real estate and, consequently, income and employment in the real estate business. This has spread-effects on the growth of business services. Trade, hotels and restaurants (THR) are the other industrial categories where employment growth is positive and significant in the rural sectors. Though, there are evidences of retail trade emerging as residual in the rural sector of India (Jha 2010).

[5] Favourable policy environment for cement and similar other construction industries and the consequent fall in the relative price of these commodities has encouraged construction activity after the mid-80s. Introduction of tax incentive in house loans towards the end of the nineties is another example of Government incentives for promotion of construction activity.

In the 1990s employment growth was negative in mining and quarrying, utilities and community services. These industries largely fall under the domain of the public sector. Since there was an effort to downsize the role of the public sector, decline in share of these industries in nineties is obvious. In mining, the decline in employment could also have been accentuated because of the strict environmental regulations and an increased focus on clean technologies. Strict environmental regulations have in fact, caused closure of some mining units in certain parts of the country. Again, the focus on cleaner technology, which essentially means a greater use of gas and oil-based technology rather than coal, has discouraged production of coal and similar mineral products. The coal industry as compared to oil and gas is more labour intensive.

As against the high share of employment in agriculture, the share of agriculture, forestry and fishing in the country's real Gross Domestic Product (GDP at constant 1999-2000 prices) has decreased from above 25 per cent in 1999-00 to 17.75 per cent in 2007-08. Though agriculture & allied has become the smallest sector in terms of its contribution to GDP, it is the largest sector in terms of employment share, albeit with underemployment. The share of the manufacturing industry in GDP is not only small but also stagnant at 15.35 per cent in 2007-08; the corresponding figure in the year 1999-00 was 14.78 per cent. On the other hand, share of services has increased from 49.69 per cent in 1999-00 to 55.62 per cent in 2007-08. The annual compound growth rate of GDP between 1999/00 and 2007/08 has been 7.23 per cent (Source: Economic Survey).

The above discussion shows a sharp decline in the share of workers in agriculture in the recent period (1999-00 and 2004-05). Though this decline was noticed for both male and female, the rate of decline was less significant for female. Manufacturing is the next most important source of growth of employment; productivity differences between rural and urban sector leaves sufficient scope of raising productive employment in the rural sector. Employment growth in the rural sector in the recent period appears to have been propelled by construction, trade and transport; however, these industries together account for around 14 per cent of the rural workforce only. These industries have limited linkage effect. There are evidences of trade emerging as a residual sector in rural India. In this context, it is important to assess quality of rural employment in India.

2.2. Quality and Nature of Rural Employment

If the objective of employment is livelihood, quality of employment is more important than the quantity of employment. The quality of employment is discussed with the levels of disguised and seasonal employment of rural workers, types and categories of employment and, most importantly, wages and salary of rural workers. The categories of employment are

important since social security benefits for workers outside the work place are less effective in India, though some social security benefits have been initiated in the recent years. From the perspective of social security, proportion of employment in the organized vis-à-vis the unorganized sector is also important,[6] as are the categories of employment and type of enterprises they work for. Therefore, this subsection in addition to data from the NSS quinquennial survey also utilizes information from the Economic Census, Central Statistical Organisation (CSO).

Table 2: Percentage Distribution of Usually Employed (Principal + Subsidiary) by their broad Current Daily Status (CDS) of Employment in the recent period

Current daily status (CDS)	**Rural Male**			**Rural Female**			**Urban Male**			**Urban Female**		
	2004-05	**1999-00**	**1993-94**	**2004-05**	**1999-00**	**1993-94**	**2004-05**	**1999-00**	**1993-94**	**2004-05**	**1999-00**	**1993-94**
Employed	*89.3*	*89.7*	*90.9*	65.7	*67.6*	*66.4*	*94.5*	*94.2*	*94.8*	*79.8*	79.1	76.6
Unemployed	*6.1*	*5.2*	*4.0*	*4.7*	*4.1*	*3.0*	*3.7*	*2.7*	*2.7*	*3.1*	*2.2*	*2.4*
Not in labour force	*4.6*	*5.1*	*5.1*	*29.6*	*28.3*	*30.6*	*1.9*	*3.1*	*2.5*	*17.1*	*18.7*	*21.0*
All	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*

Source: NSSO (1997), NSSO (2001)

In rural sector, disguised unemployment is probably the most important issue. The NSS data presents a comparative account of usually employed persons and persons employed on the basis of current daily status (CDS) during a year. Difference in the levels of employment in the above status reveals disguised unemployment in the rural sector. Disguised unemployment here means that persons employed on the basis of usual status are not getting employment for sufficient number of man days so as to be called employed on the basis of current daily status (CDS) of employment. Table 2 presents the percentage distribution of usually employed persons by their broad CDS of employment, separately for males and females in rural and urban sectors of India. The table indicates that out of one hundred usually employed rural males more than 10 are either unemployed on the basis of CDS or are not in the labour force during the year 1999-2000 and 2004-05.[7] The above

[6] The size of total employment in organized and unorganized sectors of the country was of the order of 459.0 million, of which around 433.0 million (94.3 per cent) is in the unorganized sector. The workers in the unorganized sector are further distributed as 268.0 million, i.e., 61.89 per cent employed in the agricultural sector, about 26.0 million (6.0 per cent) in construction work and the remaining 32.11 per cent in manufacturing and services. (Source: NSSO 2006)

[7] The NSS measures employment on the basis of three different approaches; usual status with a reference period of one

table also suggests that underemployment is the highest for rural females. It may be noted that women are often employed for specific agricultural operations like harvesting and manual weeding; on these accounts, women, as compared to their male counterparts, are less frequently employed and this is manifested as high disguised unemployment for females.

The relative proportion of different categories of workers, self-employed, regular and casual, also explains the quality of employment. The study assumes that with an increase in the proportion of casual workers in the total work force, the quality of employment decreases since casual workers are devoid of any meaningful social security benefits at the work place. Table 3 presents percentage of distribution of usually employed workers under different categories of employment during the reference years.

Table 3: Percentage of distribution of Usually Employed (Principal status) under different Categories of Employment in Various NSS Rounds

Category	**Sex**	**1983**		**1987-88**		**1993-94**		**1999-2000**		**2004-05**	
		Rural	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**
Self-employed	*Male*	*59.5*	*40.2*	*57.5*	*41.0*	*56.7*	*41.1*	*54.4*	*41.2*	*57.6*	*44.6*
	Female	*54.1*	*37.3*	*54.9*	*39.3*	*51.3*	*37.2*	*50.0*	*38.4*	*56.4*	*40.4*
Regular employee	*Male*	*10.6*	*44.5*	*10.4*	*44.4*	*8.7*	*42.7*	*9.0*	*41.9*	*9.1*	*40.8*
	Female	*3.7*	*31.8*	*4.9*	*34.2*	*3.4*	*35.5*	*3.9*	*38.5*	*4.8*	*42.2*
Casual labour	*Male*	*29.9*	*15.3*	*32.1*	*14.6*	*34.6*	*16.2*	*36.6*	*16.9*	*33.3*	*14.6*
	Female	*42.2*	*30.9*	*40.2*	*26.5*	*45.3*	*27.3*	*46.1*	*23.1*	*38.9*	*17.4*
Casualization index (%)	*Male*	*282.1*	*34.4*	*308.7*	*33.0*	*397.7*	*37.9*	*406.7*	*40.3*	*365.9*	*35.8*
	Female	*1140.5*	*97.2*	*820.4*	*77.5*	*1332.4*	*77.3*	*1182.1*	*60.0*	*810.4*	*41.2*

Note: Casualization is percentage of casual to regular employed workers.
Source: NSSO 2006.

It is evident from the table that in the rural sector a large proportion of the male (57.6 per cent) workers is self-employed; the group of casual workers is a distant second (33.3 per cent), while regular employed workers, accounting for a small proportion (9.1 per cent) of total workers, occupy the last place. As a result of increase in the proportion of casual workers and decrease in the proportion of regular workers, casualization indices for rural males have become as high as 406 percent in the year 1999-00. The casualization index is

year, current weekly status with one week reference period and current daily status based on daily activity pursued during each day of the reference week.

the percentage of casual to regular employed workers and this has been on the rise till 1999-2000; in the subsequent year (2004-05) the casualization figure for rural males has decreased marginally (366 per cent).

The urban sector presents a different picture; the regular employed workers are the most dominant class of worker closely followed by the self-employed workers; while casual workers are the least important in terms of their share in workforce. Across gender, the problem of casualization is more acute for females, especially the rural female. The casualization indices for females have, however, improved consistently in the 1990s. This improvement is evident in both the sectors: rural and urban. Table 3 further shows that the proportion of self-employed workers in the rural sector has declined, while its share in the urban sector has increased during the reference period (1983-2004). The changes in the number of self employed workers as such do not manifest quality of employment. In order to ascertain quality of employment of self employed workers, productivity trend in own account manufacturing enterprises (OAMEs) is important (Box 1). The box presents significant differences in labour productivity in rural vis-a-vis urban enterprises including the OAE.

2.3 Real Wages and Earnings

The wages and salaries are the most widely used indicator of quality of employment. Wages, to some extent, explain the productivity of labour in different sectors of economy. The real wage of an average illiterate person employed as casual worker is presented in Table 4 by industry, sex and sectors for the selected years, i.e., 1987, 1993-94, 1999-00 and 2004-05. The real wage is obtained by dividing daily wage, as obtained from various NSS round surveys, with the consumer price index of agricultural workers (CPIAL) for the corresponding years. Three distinct periods can be carved out of the above reference years, 1987-93, 1993-99 and 1999-2004. In the most recent period (1999-00 and 2004-05), real wages in many categories of workers has declined. Agriculture is of course an exception. In the rural sector, construction is an industry wherein female wage has not declined. In the urban sector, real wage during the above period has not fallen in the non-organic manufacturing (NIC 23-37).[8] A comparison of wages of male workers, between the rural and urban sectors shows that wages for urban workers in most of the industries are higher than the rural sector. The real wage in the urban sector was significantly higher than the rural sector

[8] In the National Industries Classification (NIC-1998) two-digit classification organic manufacturing comprising of NIC 15-22 primarily consists of food products, beverages, tobacco, wood and wood-based products. The inorganic manufacturing comprising NIC 23-37 constitutes chemicals, metals, non-metallic mineral products, equipments related manufacturing activities.

during the year 1993-94. This difference in wages has reduced during the year 1999-00. A significantly higher real wage of agricultural worker in the urban sector and that of non-organic manufacturing in rural sector in the year 1999-00 may be ignored due to the small size of samples.

Table 4: Real wage / salary earnings for an average illiterate casual worker by industries, sex and sector (in Rs. Per day at 1986-87 price)

Industry division	**Rural 2004-05**		**Rural 1999-00**		**Rural 1993-94**		**Rural 1987-88**	**Urban 2004-05**	**Urban 2004-05**	**Urban 1999-00**	**Urban 1993-94**
	Male	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	
Agriculture	*0.157*	*0.134*	*0.145*	*0.127*	*0.111*	*0.108*	*0.068*	*0.202*	*0.164*	*0.183*	*0.167*
Manufacture (15-22)	*0.172*	*0.078*	*0.244*	*0.098*	*0.149*	*0.080*	*0.137*	*0.234*	*0.101*	*0.243*	*0.217*
Manufacture (23-37)	*0.222*	*0.113*	*0.300*	*0.147*	*0.219*	*0.110*	*0.172*	*0.314*	*0.161*	*0.256*	*0.238*
Utilities (40-41)	*0.419*	*0.496*	--	--	*0.342*	*0.251*	--	*0.468*	*0.374*	--	*0.316*
Construction 45	*0.252*	*0.243*	*0.287*	*0.190*	*0.216*	*0.130*	*0.126*	*0.238*	*0.203*	*0.296*	*0.271*
Trade (50-55)	*0.192*	*0.102*	*0.206*	*0.357*	*0.121*	*0.080*	*0.085*	*0.184*	*0.144*	*0.207*	*0.161*
Transport & storage	*0.289*	*0.258*	*0.316*	*0.364*	*0.227*	--	*0.165*	*0.308*	*0.267*	*0.325*	*0.270*
Services (65-74)	*0.152*	*0.294*	*0.267*	*0.318*	*0.126*	*0.017*	*0.232*	*0.188*	*0.135*	*0.269*	*0.220*
Services (75-93)	*0.297*	*0.102*	*0.363*	*0.141*	*0.195*	*0.073*	*0.197*	*0.373*	*0.231*	*0.390*	*0.231*

Source: Relevant quinquenial rounds of NSSO Survey Results on Employment

A glance at the real wage figures, in the year 1999-2000, negates the general belief that wages in rural sector are lower than urban sector. A higher wage in the urban sector, to some extent, is restored in the year 2004-05. In most of the industries barring construction and trade, wages for male workers in the rural sector have been significantly lower than the urban sector. A comparative account of real wages across sex shows that wage for male worker is significantly higher than the female worker in most of the industrial categories,

barring utilities and private services.[9] The sex-wise differences in wages have been the maximum in the manufacturing sector. The gender-wise difference in wage is often explained with the difference in productivity of male and female worker in the respective industry. There is also possibility of females being pushed to very low productive work while they remain part of the same industry. In agriculture, for example, work is classified on an average farm in such a way that low-energy agronomic operations like weeding are being done by female workers, whereas, high-energy agronomic operations like ploughing are done by male workers. The wage rate of workers engaged in ploughing is generally higher than weeding in agriculture.

The growth of rural wages across industries during the above reference points, namely 1987, 1993, 1999 and 2004, shows some interesting trend. In the first period (1987-93) agricultural wages have grown at a rate faster than non-agricultural wages, whereas in the next period (1993-99), growth in non-agricultural wages has been higher than agricultural wages. In the recent period (1999-2004), real wages in industries other than agriculture have declined. The above periodic/temporal trends in real wages, to some extent, can be explained with the real performances of the respective sectors during the earlier period of reference.[10] In agriculture, minimum wage, at times, distorts productivity-wage linkages; industries other than agriculture in the unorganized sector are free from such wage related encumbrances. The decline of real wages in industries other than agriculture during 1999-2004 may be construed as a correction of rural wages since rural wages during 1993-99 increased significantly.

The above analysis of wages and salaries suggests that real wages have increased in all the employment categories during the reference period (1987-2004). The growth of real wages during the entire period of reference (1987-2004) is particularly high in agriculture, construction and trade. Several studies (Jha 2006) report an abrupt increase in agricultural wages during the late-1980s. A relatively higher increase in real wages for these industrial categories might also have been on account of the fact that the base year (1987-88) was not a normal year.[11] The increase in wages has been particularly low in the organic manufacturing.

[9] A higher wage for female workers in certain industries like transport and storage in rural sector and agriculture in urban sector, during the year 1999-00, may be ignored on account of small samples of such workers.

[10] The real performance of agriculture as apparent from several indices (production, productivity, acreage indices worked out by the Ministry of Agriculture (MoA) suggests productivity-induced growth in agriculture during the first period (1987-93). In the mid-1990s (1993-99), the wedge between productivity (as obtained from the above indices) and real wage (as obtained from Labour Bureau, Shimla) has widened in agriculture (Jha 2007a); though this wedge, to some extent, was corrected in the beginning years of this century. The above trend in real wages for agriculture workers was evident from the NSS data as well.

[11] The year 1987-88 was a drought year and lower rural wages on account of adverse weather conditions for agriculture

There are evidences of manufacturing, including organic manufacturing, moving away from rural to the urban sector; the low productivity organic manufacturing appears to have remained in the rural sector; this is evident from lower increase of wages in the above category.

The growth in real wages has passed through different phases. In most of the employment categories, the real wage in the rural sector was significantly lower than the urban sector in the early 1990s. This difference in wages tapered-off during the period 1993-99, only to be restored afterwards during the period 1999-2004.

2.4 Evidence from Enterprise Survey

Evidence from the Enterprise Survey of CSO having implications for quality of employment are discussed. The quality of employment is often influenced by the type of enterprises, for instance, an enterprise employing more than 20 workers is covered under the Factories Act, 1948, and this act, to some extent, protects employee's interests. Since certain social security benefits are associated with the salary of a worker, quality of employment is presumed better for the salaried workers and the proportion of salaried workers increases with the size of enterprises. Enterprises on the basis of social security benefits to its workers are of two types; organized sector enterprises that include factories and workers in such enterprises have better social security provisions and the unorganized sector which consists of smaller enterprises that are devoid of satisfactory social security provisions.[12]

Enterprises classified on the basis of number of persons hired are own account enterprises (OAEs) and establishments. Again establishments identified on the basis of number of people hired are Directory and Non-directory enterprises; these enterprises vary on the basis of type of regulations that encompass them. The study discusses the trend in enterprises on the basis of the above criteria. Enterprise level information, obtained from the Economic Census, is available for the years 1980, 1990, 1998 and 2005. The Economic Census, however, does not include enterprises engaged in crop production and plantations.

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during the year cannot be ruled out.

[12] Enterprises on the basis of scale and applicability of social security and similar other provisions for its workers are of two types, organized and unorganized. The organized sector encompasses enterprises which employ ten/twenty or more workers with/without using power. Enterprises which employ workers less than the above numbers are generally placed in the unorganized sector. The unorganized sector, again depending on the number of workers it employs, can be divided into following categories; i) OAMEs are the household -manned enterprise which at times may engage other family members to run the enterprises; ii) NDMEs are the enterprises which employ up to five workers, of whom at least one is hired; iii) DMEs are the enterprise, which employ 6-9 workers.

Table 5: Real wage / salary earnings for an average illiterate casual worker by industries, sex and sector (in Rs. Per day at 1986-87 price)

Major Activity Groups	Rural				Urban			
	1980	1990	1998	2005	1980	1990	1998	2005
Mining & Quar'g	*0.26*	*0.34*	*0.21*	*0.31*	*0.07*	*0.08*	*0.05*	*0.15*
Manufacturing	*38.78*	*27.65*	*24.59*	*26.02*	*30.35*	*19.26*	*16.47*	*19.87*
Electricity, etc.	*0.20*	*0.22*	*0.17*	*0.21*	*0.20*	*0.17*	*0.10*	*0.14*
Construction	*0.81*	*1.00*	*1.16*	*0.86*	*1.01*	*1.05*	*0.96*	*0.94*
Trade	*31.35*	*34.54*	*37.76*	*42.34*	*42.05*	*44.45*	*47.5*	*51.05*
Hotel & Rest'rant	*4.54*	*4.67*	*4.23*	*4.01*	*5.16*	*4.82*	*4.63*	*4.37*
Transport	*1.19*	*1.79*	*3.21*	*4.30*	*2.91*	*2.79*	*3.53*	*4.14*
Storage & Ware'e	*0.38*	*0.41*	*0.16*		*1.21*	*1.39*	*0.46*	
Communications	*0.84*	*0.68*	*0.64*	*1.55*	*0.24*	*0.21*	*1.27*	*2.45*
FIREB Services	*0.87*	*1.20*	*1.62*	*2.69*	*2.69*	*3.13*	*3.75*	*4.86*
CSP Services	*20.66*	*27.47*	*26.21*	*17.70*	*13.58*	*22.56*	*21.26*	*12.01*
OUP.	*0.12*	*0.01*	*0.04*	*0.01*	*0.54*	*0.08*	*0.01*	*0*
Enterprises (total)	*9741*	*12287*	*14011*	*19827*	*6976*	*9904*	*12078*	*15920*

Note: OUP refers to Other Unspecified Activities, FIREB and CSP is abbreviated in text it is finance-insurance-real estate-business and community-social-personal widely referred as private and public services respectively.
Source: Economic Census 2005 (CSO 2008)

The percentage share of non-agricultural enterprises by major activity group is presented in Table 5. A decline in the share of manufacturing and increase in the share of trade and transport is evident from the Economic Census data. The share of enterprises alone is not sufficient since size of enterprises is not evident from the above table. The distribution of establishments by the size class of employment and persons usually employed in different size class of establishments is presented in the Annexure Table A3. Information at the aggregate level for the year 1990, 1998 and 2005 is presented in the above table. It is discouraging to note that the percentage of establishments employing ten and above workers has decreased while that of smaller establishments employing one to five workers has increased consistently during the reference period (1990-2005).[13] This transition in the size of enterprises has larger implications for persons usually employed in the above

[13] The above trend is discouraging as number of regular workers generally increases with the size of the enterprises. The regular workers as compared to the casual workers have better social security provisions.

enterprises. The proportion of workers usually employed in the larger establishment has reduced to one fourth of total workers in the year 2005; the corresponding figure during the earlier years of reference (1990, 1998) was one-third.

A table in Annexure (Table A6), shows decline in size of an average enterprise on the basis of number of average workers in an enterprise. From the perspective of quality of employment, the above trend is discouraging since one would expect that the size of an enterprise would grow with development as workers in the larger enterprises are often associated with better social security provisions. Data from Economic Census unfortunately do not support this hypothesis (Jha 2006).

The information from enterprise survey shows that the number of enterprises: OAEs and establishments has increased at a rapid pace. Though a bulk of enterprises in the rural sector are OAEs, their share in the recent year has decreased significantly and that of establishments of hired workers has increased. Increase in the share of establishment of hired workers on its own does not assure better quality of employment as long as these establishments do not increase to the extent of being counted in the organized sector. The data from the Economic Census supports many findings of the NSS quinquennial survey results on employment; increase in the number of self employed workers, decline of manufacturing, and rise of trade and transport are some of such results.

2.5 Who are the Rural Poor?

Though sustenance of livelihood is the most important objective of employment, a significant proportion of working persons cannot sustain their livelihood. Livelihood is a subjective concept, often measured with reference to the poverty line. Poverty line, prepared in the early 1970s, is the bunch of commodities that provide an individual 2400/2100 calories of energy per day in the rural/urban setup, respectively. In the year 2004-05, the Planning Commission had computed that a monthly per capita expenditure of Rs 356.30 in the rural (and Rs 538.60 in urban) would provide an individual the bunch of the commodities that would release the above levels of energy. The above expenditure is referred as the poverty line. Poverty lines for rural and urban persons are 16.3 and 24.7 per cent of per capita GDP in the year 2004-05; while these lines were 56 and 64 per cent of per capita GDP in the year 1973-74. The above comparison highlights the limitations of the current poverty line in the country.

The Planning Commission worked out the incidence of rural poverty from the NSS data and reported the same at 21.80 per cent of the population (1702.99 lakh persons) for

year 2004-05 on the basis of mixed recall period (MRP). The above figure was 28.30 per cent (2,209.24 lakh persons) on the basis of uniform recall Period (URP) consumption method. The National Commission for Enterprises in the Unorganized Sector (NCEUS) highlights the inadequacy of the poverty line and has argued that more than three-fourth of Indian is poor and vulnerable with a level of consumption not more than twice the official poverty line. Vulnerable, referred herein, are persons who are above the official poverty line; but any exogenous shock of death or accident, or major hospitalization, or even a temporary loss of job or earning, can drive them into extreme poverty.

Table 6: Per cent Distribution of Households by Household type for each Household Monthly Per Capita Expenditure Classes in Rural India 2004-5

Expenditure class (Rs)	Self – employed in		Agricultural labour	Other Labour	Other h'h's (incl. not reported.)
	Agriculture	Non-agri			
Less than 235	*19.2*	*8.5*	*45.0*	*10.2*	*17.1*
235-270	*26.3*	*10.5*	*47.2*	*10.2*	*5.8*
270-320	*25.4*	*13.4*	*43.8*	*11.3*	*6.0*
320-365	*28.8*	*14.7*	*37.5*	*12.3*	*6.7*
365-410	*33.5*	*15.3*	*33.1*	*11.8*	*6.4*
410-455	*35.0*	*16.0*	*29.5*	*13.1*	*6.3*
455-510	*38.1*	*15.3*	*27.3*	*11.6*	*7.6*
510-580	*39.2*	*17.2*	*23.9*	*10.8*	*8.8*
580-690	*41.8*	*17.7*	*19.5*	*9.8*	*11.1*
690-890	*42.8*	*16.7*	*14.6*	*10.4*	*15.5*
890-1155	*42.4*	*17.4*	*9.3*	*9.1*	*21.9*
1155 & above	*33.7*	*16.9*	*4.2*	*8.1*	*37.2*
Average MPCE (Rs)	*573*	*576*	*424*	*512*	*645*

Source: NSSO, 2006

Table 6 illustrates occupation groups/types in different income classes; income being represented as expenditure classes and the same is based on 2004-05 prices. The table clearly shows that as expenditure class increases, the proportion of households working as agriculture labour decreases and that of self employed in agriculture, alternately cultivator, has increased. Persons self employed in agriculture are in fact cultivators and they are of different land size classes. Bulk of agricultural labour is in fact casual workers. In the

non-agriculture sector also, a large proportion of workers are actually casual workers, though there are regular workers as well. This group, to some extent, is indifferent to the expenditure classes. Agricultural labour, marginal and small farmers, therefore, constitute bulk of the rural poor in India. These poor are often identified as people without assets, with less income and insufficient work.

2.6 How Important is Off-Farm Income for Farm Households?

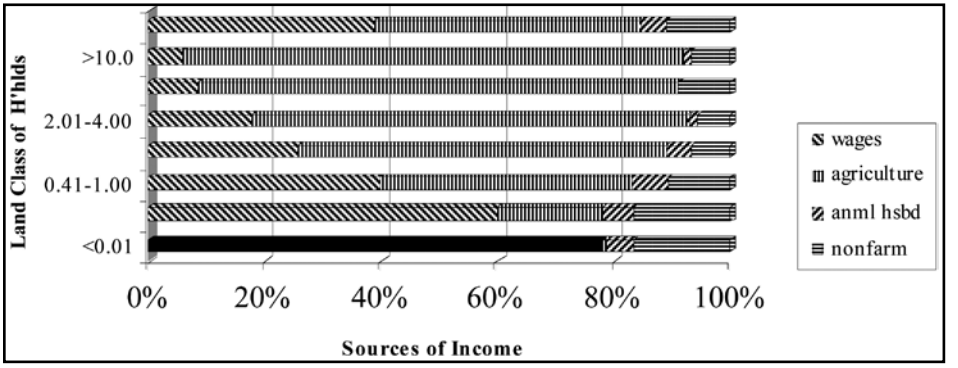
The above discussion shows that a significant proportion of small and marginal farmers are poor and that they require income from different sources. The NSS Situation Assessment of Farmers, 2005, provides information about the sources of income of farmers. A figure drawn from the above information (Fig. 1) presents farm households of different land sizes on the basis of sources of income.

The different sources of farm household incomes are wages, as obtained from casual work, income/receipts available separately from cultivation of crops, farming of animals, and non-farming business. In Fig. 1, farmers, on the basis of size class of land, are classified as large (more than 10 hectare), medium (4-10 hectare), semi-medium (2-4 hectare), small (1-2 hectare), and marginal (less than one hectare). With the increased pressure on land, numbers of marginal farmers are increasing. These farmers are particularly important for studying the dependence of farmers on off-farm income. The NSS 2003 Report further categorizes marginal farmers of less than one hectare into three groups: 0.41-1.00 hectare, 0.01-0.40 hectare and less than 0.01 hectare. Figure 1 presents contribution of different sources of income on the farm house holds of different land size classes. The above figure shows that as the size of land holding decreases, contribution of crop husbandry decreases and income from wage and non-farm business increases. Farming of animals is an important source of income for small and marginal farmers.

The contribution of farm animals in household income started decreasing with the increase of size class of land; the above contribution declined significantly on the medium and large farms. It is widely recognized that in India rearing of cattle on small farms is profitable, largely with the surplus family labour. As the size of land holding increases, surplus family labour available for cattle rearing decreases; therefore, intensity of farm animals on medium and large farms is low. Farmers with the marginal holdings, in fact, earn a significant proportion of their household income from wages. The contribution of non-farm business in household income decreases with the increase of land size. The role of non-farm business has suddenly increased for the medium and large category of farmers.

This is not in harmony with the above trend; the non-farm business for farmers of the medium and large category would possibly be a development-induced phenomenon; while non-farm business for lower size class of holdings is possibly a distress-induced phenomenon.

Figure 1: Different Land Classes of Farm Households with Sources of Income/Receipts



Source: Situation Assessment of Farmers, NSSO 2005

The casual work for wages can be in agriculture or non agricultural activities, but it would definitely not be on the own farm. Income from wages and receipts from non-farm businesses are together grouped as off-farm income of farmers and the same is discussed in the subsequent paragraphs. At the all India level, 50 per cent of household income of an average farmer is originating from off-farm income. The situation varies across states. Table 2.7 presents states on the basis of dependence of an average farm on off-farm income. In Rajasthan, Kerala, Tamil Nadu, and West Bengal, off-farm sources account for 75, 68, 64 and 61 percent, respectively, of household income for an average farmer; whereas, in states like Meghalaya, Uttaranchal, Punjab, and Bihar, off-farm income accounts for 25, 31, 38 and 39 per cent of household income, respectively. The above examples suggest that resource endowment, distribution of land, status of non agricultural sector in a state and similar other factors are responsible for the differential share of off-farm income for farm households in India.

In a nutshell, the above discussion illustrates pattern of employment with different sets of data. The NSS data on employment shows a sharp fall in the share of agriculture in total rural workforce in the recent period (1999-00 and 2004-05). Rural employment, in the recent period, has been propelled by construction, trade and transport; in rural India, employment in trade has emerged as a residual. Though manufacturing is the most important industry in the non-farm sector; low productivity of manufacturing in the rural sector leaves sufficient scope of its further improvement. In rural India, women now account for around

30 per cent of the workforce and a bulk of them (85 per cent) are working in agriculture. Other industries that account for a significant proportion of female workers are manufacturing, community services, trade and construction. Interestingly, share of female workers is increasing in the former and decreasing in the latter group of industries.

Table 7: Extent of Dependence of an Average Farm Households on Off-farm Income across States

Extent of Dependence	States with Percentage Values in Parentheses
More than 50 percent of FHH income/receipts as off-farm	*Arunachal Pradesh (71.9), Chhattisgarh (50.1), Haryana (56.4), Himachal Pradesh (63.6), Jharkhand (54.7), Kerala (68.2), Manipur (64.3), Orissa (66.8), Rajasthan (75.7), Tamil Nadu (62.9), West Bengal (60.8)*
Less than 50 percent of FHH income/receipts as off-farm	*Andhra Pradesh (48.8), Assam (38.8), Bihar (38.6), Gujarat (39.7), Jammu and Kashmir (48.8), Karnataka (46.6), Madhya Pradesh (46.2), Maharashtra (42.8), Meghalaya (25.2), Mizoram (35.7), Nagaland (47.5), Punjab (38.3), Sikkim (46.2), Tripura (46.3), Uttar Pradesh (45.5), Uttarakhand (31.3)*

Note: OUP refers to Other Unspecified Activities, FIREB and CSP is abbreviated in text it is finance-Off-farmincome consists of income from wages and non-farm business of farm households as reported in NSS Report No. 497 entitled Income Expenditure and Productive Assets of Farm Households 2003.
Source: Situation Assessment of Farmers (NSSO 2005)

The quality of rural employment, as is evident with the status of employment, and extent of disguised unemployment has deteriorated in the country. The quality of employment for rural women is even worse; around one-third of rural females, employed on the basis of usual status of employment, are actually unemployed on the basis of current daily status of employment. Rural wages for casual workers in most of the industrial categories is significantly lower than the urban sector; this difference to some extent has reduced in 1999-00 only to increase in the subsequent year, 2004-05. Real wages for all categories of non-farm workers has declined in the recent period (1999-00 and 2004-05). The real wage for female workers is around 80 per cent of wages for male workers in agriculture. The gender disparity in wages is higher for workers in manufacturing, trade and service. The available information from the Enterprise Survey shows that share of own account enterprises have reduced and that of establishment with hired workers has increased significantly. The average size of establishments has, however, reduced during the reference period.

3. RURAL DIVERSIFICATION AND POVERTY

As an economy develops, the proportion of the non-farm sector in total income and employment of a farm household increases; an increased proportion of the non-farm sector in rural employment is referred to here as rural diversification. Table 8 presents states with different levels of rural diversification. The RNFE percentage in some states is less than 20 per cent; the corresponding figure in some of the other states is more than 35 per cent. A glance at the list of states in Table 8 suggests that a variety of factors possibly influence the extent of rural diversification in the country. The table also suggests that rural diversification may not be construed as an indicator of rural prosperity. Following from the above, this section attempts to answer the question what are the determinants of rural diversification and how this influences poverty and livelihood in rural India.

Table 8: States with Different levels of Rural Diversification in the Year 2004-05

RNFE percent (%)	States
<20 %	*Arunachal Pradesh, Chhattisgarh Karnataka, Madhya Pradesh, Meghalaya, Mizoram*
20-24.9%	*Bihar, Gujarat, Maharashtra, Nagaland, Uttarakhand*
25-29.9%	*Andhra Pradesh, Assam, Rajasthan, Uttar Pradesh, India*
30-34.9%	*Himachal Pradesh, Jharkhand, Manipur, Orissa, Punjab, Tamil Nadu*
>35%	*Delhi, Goa, Haryana, Jammu and Kashmir, Kerala, Sikkim, Tripura, West Bengal*

3.1 Process of Rural Diversification

The rural non-farm sector actually consists of several heterogeneous industries and employment growth in each of these industries is influenced by a host of separate factors (Jha 2006). Available literature often associates rural diversification either with development or distress-related factors. In development related factors, agriculture historically assumes an important position[14]. In other development related factors, Visaria and Basant (1994) argue that development of urban centres give impetus to non-farm employment in the adjoining rural areas because of low factor prices. The urban centres, however, need to be integrated with the nearest rural town. Urbanization is often associated with infrastructure and, in this context infrastructure is reported to have encouraged rural diversification. Islam

[14] Mellor (1978) illustrates production and consumption linkages between agriculture and non-farm sector. Later, Hossain (1988) found a third important link between agriculture and rural non-farm sector; he termed it as labour market interaction effect.

(1997) highlights the importance of certain human resource related parameters like education and skill development on rural diversification in India. Vaidyanathan (1986), in his residual sector hypotheses, argues that in a situation where the labour absorptive capacity of agriculture becomes limited and the urban industrial sector is not able to accommodate the ever growing labour force, the RNFS tend to act as a 'sponge' for the surplus labour.

The above discussion suggests that pull as well as push related factors promote growth of rural non-farm employment (RNFE) in the country. Many of the above studies are based on state level information, while the state actually is a mix of poor and prosperous regions. The determinants of rural diversification have, therefore, been studied by combining district level information with that of states. Thirteen states are selected purposively for the present analysis. Again, in each state two districts representing low and high concentrations of RNFE have been chosen (Table A7 in Annexure). Thus, on the basis of RNFE three observations from each of the above state are chosen, these represent high, low and average rural non-farm employment situations.[15]

The RNFE percentage in selected states and districts are regressed on different development and distress related factors to investigate possible determinants of rural diversification in India. In development related factors, agriculture has been the most important and two variants of agriculture: agriculture income per hectare (PHAO) and agricultural income per worker (PCAO) are considered. Infrastructure is another development related factor and infrastructure indices (INFI) as percentages, to a large extent, reflect the situation of districts/states in a wide range of infrastructure.[16] Population density (PDS) per sq km reflects pressure on existing resources and this represents the distress related factor of rural diversification. The data for most of the variables are for the year 2001-02.

The above variables for districts and states are regressed on RNFE percentage with linear and log-linear specifications. The above regression was run separately for alternate values of agricultural income. The ordinary least square estimates are presented in Table 9. Number of observations in the present analysis is 39 (Table A7 in Annexure). In all four sets of specifications, the adjusted R-square are not very high, intercept in all the specifications

[15] The average figures for states have been worked out by excluding figures of chosen districts from state's aggregate.

[16] Infrastructure index is the ratio of infrastructure of individual district/state in relation to the country's average. Various infrastructure facilities considered for calculating the index were electrified village, railway route length per 100 sq km of area, surfaced and un-surfaced road per 100 sq km of area, gross irrigated area in percent, bank branches and post offices per lakh of population, telephone lines per 100 persons, primary school per lakh of population, hospital beds and primary health centres per lakh of population. These indicators were grouped together conveniently as sectors; these sectors with their relative weight in parentheses are transport facilities (26), energy (24), irrigation facilities (20), banking facilities (12), communication infrastructure (6), educational institutions (6), health facilities (6). (Source: CMIE 2002)

are strong, and these suggest that variation of rural non-farm employment in the sample requires more explanatory variables in the model. The present study attempts to test the prevalent hypotheses about rural diversification from a mixture of states and district level information.

Table 9: Determinants of Rural Diversification in India

Particulars	Linear Estimates		Log-linear Estimates	
Constant / Intercept	*-22.61* *(8.96)*	*-20.42* *(8.71)*	*-5.26* *(1.42)*	*-4.72* *(1.97)*
Agricultural output per worker	*1.6* *(1.5)*	---	*0.2* *(0.1)*	---
Agricultural output per hectare	---	*0.4* *(0.3)*	---	*0.1* *(0.1)*
Infrastructure Indices in per cent	*0.3*** *(0.1)*	*0.3*** *(0.1)*	*0.8** *(0.3)*	*1.1*** *(0.3)*
Population Density per sq. km	*2.8*** *(0.9)*	*2.3*** *(0.9)*	*0.5*** *(0.1)*	*0.4*** *(0.1)*
Adjusted R-square	*0.54*	*0.56*	*0.54*	*0.54*

Note: Figures in parentheses are standard error of the OLS estimate. Asterisks (**) and (*) show level of significance at one and five per cent respectively

The signs of coefficients in Table 9 are along the expected lines. The estimated coefficients of variables other than agriculture are robust (significant at 1 per cent level of significance). It is interesting to note that variables related to agriculture are the weakest determinants of rural non-farm employment. In a linear form of relationship, the infrastructure index is the most important determinant followed by population density and both of these variables are significant at 1 per cent. In the log-linear form of specification population density remains equally important, importance of infrastructure has decreased in one particular specification (column 4). Importance of these variables on RNFE growth can be corroborated from certain studies of the late 1980s and 1990s. It is, however, difficult to accept that agriculture does not play a significant role in rural diversification; the issue of agriculture and rural diversification has, therefore, been discussed separately in the following subsection.

3.2 Rural Diversification and Agriculture

The weakening of linkage between agriculture and rural non-farm sector is a matter of further investigation. The above relationship between agriculture (AGRI) and rural non-farm

employment growth (RNFE) is formalized by regressing agricultural performance as measured by agriculture income per hectare (Rupees per hectare of cultivable land) on concentration of rural non-farm employment (RNFE in total employment in per cent) in states. It may be noted that the data set for present analysis is different than the previous estimation of rural diversification.[17] The regression with a log-linear form of specification is tried for four most commonly used reference years, namely, 1983, 1993-94, 1999-00, 2004-05. The estimates for the same are presented in Table 10.

Table 10: Estimates of Regressing Rural Non-Farm Employment in percent (RNFE) on Agricultural Income per hectare (AGRI) in States during 1983, 1993-94, 1999-00 and 2004-05

Year 1983,	*RNFE = -0.022 + 0.783AGRI* *t-value (0.07) (9.77)*	*adj-R-sq = 0.855*	*N = 17*
Year 1993-94,	*RNFE = -0.481 + 0.799AGRI* *t-value (1.19) (9.11)*	*adj-R-sq = 0.837*	*N = 17*
Year 1999-00,	*RNFE = -0.022 + 0.744AGRI* *t-value (1.16) (7.43)*	*adj-R-sq = 0.772*	*N = 17*
Year 2004-05,	*RNFE = -1.892 + 0.491AGRI* *t-value (1.38) (3.79)*	*adj-R-sq = 0.372*	*N = 27*

Note: In the above equations N stands for number of observations, figures in parentheses are t-value of estimates, abbreviation 'adj-R-sq' is for adjusted R-square.

The R-square values suggest that the relationship between agriculture and rural non-farm employment was quite strong in the earlier years; the strength of this relationship has however reduced over the years (decreasing R-square). The elasticity coefficients as evident from high t-values in parentheses are significant in all the above equations; the significance of elasticity coefficients has, however, reduced over the years and so has the coefficient of determination (R-square). Findings from the above equations are not against the available litterateurs on determinants of rural diversification; most of the recent studies highlight the role of factors like urbanization and infrastructure facilities on rural diversification.

Interestingly, most of the studies which emphasize the role of agriculture in rural diversification in the Indian context generally pertain to the late 1970s and 1980s when positive linkages of green revolution in agriculture had spread in the rural economy of the selected part of

[17] Employment data in the previous estimation of determinants of rural diversification using multiple regression technique is based on usual status of employment as available from the decennial Census (GOI) and involves a cross section of data from states and districts; whereas, employment data in the present estimation is based on current daily status of employment and is sourced from the NSSO quinquennial survey of employment.

the Northwest India. In the subsequent decade, though the green revolution to a limited extent was extended to certain other resource rich regions of the country, growth of agriculture in the region has probably not provided the same level of impetus to the rural economy of these regions as it provided to some states like Punjab during the 1970s. This disconcerting trend appears to have strengthened over the years as leakages in the rural economy have increased during the liberalization years (after 1994). It is also possible that the pattern of growth in agriculture and manufacturing sector have weakened the linkage effects. The kind of growth of agriculture in recent years having implications for production and consumption linkages in the rural economy is discussed below in brief.

The CSO Income data shows high growth of agricultural income during the initial years of trade liberalization (1994-97), the growth in agriculture tapered off towards the end of the 1990s (1997-00) and it started fluctuating in the subsequent years (Jha 2008).[18] The Ministry of Agriculture (MOA) statistics on crop-production indices however suggest marginal growth in production indices during the period (Table 11). The crop area indices have stagnated in the recent decade (Table 11). The MOA statistics on yield indices show that growth in agricultural productivity has decelerated. These disconcerting trends are supported by other sources of data as well; production and productivity in agriculture is associated with fertilizer and fertilizer consumption has declined during the period (1999-03). All these suggest that much of the hype around the growth in crop economy in the recent period is not duly supported by the growth of the real factors of production in agriculture.

The land utilization statistics in the recent decade show that the share of non food grain crops in the gross cropped area (GCA) has increased. The increase in area is more significant for fruits, vegetables, condiments and spices. Most of the increase in area under these crops has been the result of acreage substitution between crops since cropped area has almost remained stagnant during the period.[19] This is supported by the National Accounts Statistics on agricultural output (Table 12). A comparison of percentage changes in the cropped area under a specific crop group with that of its values in agricultural output basket suggests phenomenal increase in value of fruits, vegetables and similar crops like spices during the reference period (Table 12). The above increase in value is also evident from the price statistics. The wholesale price indices of agricultural commodities during 1994-2006 increased by 4.4 per cent; while prices of certain commodities like fruits during the same period increased at a rate of 7 per cent. The present study, therefore, argues that a significant growth of crop economy in the recent period has been on account of price rather than

[18] Some of the weakening of linkage between agriculture and non-farm sector in the year (2004-05) could be possible due to annual fluctuation in agricultural income, particularly after the mid-1990s and its effect on regression estimate.

[19] The proportionate area under pulses and oilseeds declined during the 1990s.

productivity of agriculture. The following paragraphs argue that the linkage between agriculture and the rural economy varies with the sources of growth of agriculture; the above linkage in the price induced agricultural growth is not as strong as that of the technology induced growth in agriculture.

Table 11: Index Numbers of Area, Production and Yield of Food grain and Non-food Grains, in India (triennium ending 1981-82=100)

Year	**Food grains**			**Non-food grains**			**All principal crops**		
	Area	*Prod'n*	*Yield*	*Area*	*Prod'n*	*Yield*	*Area*	*Prod'n*	*Yield*
1980-81	*99.8*	*104.9*	*105.1*	*99.4*	*97.4*	*99.2*	*99.7*	*102.1*	*102.9*
1990-91	*100.7*	*143.7*	*137.8*	*120.0*	*156.3*	*128.0*	*105.2*	*148.4*	*133.8*
1991-92	*96.0*	*137.6*	*136.5*	*124.8*	*158.8*	*123.7*	*102.7*	*145.5*	*131.0*
1992-93	*97.0*	*144.3*	*142.0*	*123.2*	*164.0*	*130.2*	*103.1*	*151.6*	*137.2*
1993-94	*96.7*	*150.2*	*146.5*	*127.3*	*169.5*	*132.7*	*103.8*	*157.3*	*140.7*
1994-95	*97.6*	*155.9*	*150.4*	*126.2*	*180.9*	*138.9*	*104.2*	*165.2*	*145.5*
1995-96	*95.3*	*146.1*	*143.1*	*131.8*	*185.5*	*135.7*	*103.8*	*160.7*	*139.8*
1996-97	*97.4*	*160.9*	*154.5*	*134.6*	*200.9*	*143.8*	*106.0*	*175.7*	*149.8*
1997-98	*97.6*	*155.7*	*148.4*	*133.6*	*181.6*	*132.3*	*105.9*	*165.3*	*141.2*
1998-99	*98.6*	*165.2*	*154.0*	*134.8*	*200.2*	*141.2*	*107.0*	*178.2*	*148.4*
1999-2000	*97.0*	*169.7*	*159.8*	*130.7*	*189.0*	*136.4*	*104.8*	*176.9*	*149.6*
2000-01	*95.4*	*158.4*	*152.8*	*127.0*	*178.2*	*133.2*	*102.7*	*165.7*	*144.3*
2001-02	*96.7*	*172.5*	*164.1*	*128.1*	*190.3*	*138.6*	*104.0*	*179.1*	*153.0*
2002-03	*89.7*	*140.4*	*143.2*	*116.1*	*166.4*	*124.7*	*95.8*	*150.1*	*135.0*
2003-04	*97.3*	*172.0*	*165.3*	*125.6*	*201.0*	*150.9*	*103.8*	*182.8*	*159.1*
2004-05	*94.6*	*159.9*	*156.5*	*137.8*	*205.7*	*147.3*	*104.6*	*176.9*	*152.4*
2005-06	*95.8*	*169.2*	*162.3*	*140.6*	*227.9*	*158.2*	*106.2*	*191.0*	*160.5*
2006-07	*97.7*	*171.6*	*175.6*	*138.7*	*224.4*	*161.8*	*107.2*	*191.2*	*178.3*

Note: : Figures for year 2006-07 are based on third advance estimates.

Source: GOI, 2008.

The kind of growth of agriculture during the 1990s has possibly deteriorated spatial and personal distributions of income. Fruits and vegetable induced agricultural diversification in India is associated with the infrastructure facilities like roads (Jha 2007b). Joshi et al.

2007 also found that horticulture based agricultural diversification is associated with the urbanization. In other words, benefits of horticulture induced agricultural diversification percolated to farmers situated in villages around the urban centres. In such villages, the consumption linkage between agriculture and rural economy are generally weak because of higher leakages in the rural economy[20] (Hazell and Haggblade 1991, Harris and Harris 1984). There can be other reasons for leakages in rural economy.

Again in agriculture, wholesale prices of certain commodities like fruits have increased at a relatively higher rate; the above increase in the wholesale price is often not transmitted to producer's level.[21] Transmission losses are generally high for horticulture commodities because of inadequate infrastructure and market information.[22] These imperfections have implications for interpersonal equity of individuals involved in production and marketing of these crops. A large part of price margins are actually cornered by traders of horticulture commodities. An inequitable distribution of income further increases leakage in rural economy (Vyas and Mathai 1978); the consumption linkages are generally weak in such situation (Harris 1987).

Production linkage of agriculture in forward direction emanates from supply of agricultural products to agro-processing and similar industries often referred as organic manufacturing activities. If we consider employment as a comprehensive indicator of performance of an industry, employment has increased in manufacturing; particularly organic manufacturing23 (Rani and Unni 2004). The organic manufacturing is mostly village resource-based; the above trend in manufacturing, thus, supports the production linkage. The increase in organic manufacturing not necessarily pertains to the rural sector. There is ample evidence to suggest that manufacturing activities in India are shifting from rural to the urban sector.24

[20] Leakage here refers to the proportion of farmers' income being spent on commodities not produced in the rural sector of the economy.

[21] For many important agricultural commodities growth in wholesale price is significantly higher than the growth in farm harvest prices (Jha 2007b).

[22] For any agricultural commodity data on productivity and price are important. Productivity for important agricultural commodities is derived from crop cutting experiments; such practice is not adopted for horticultural commodities. Prices for horticultural crops unlike many agricultural commodities are not available easily.

[23] The organic manufacturing units referred here are NIC14-NIC22, while inorganic manufacturing units are commodities classified under NIC-23 to NIC-36. The NIC refers to National Industries Classification, 1998.

[24] Statistics that clearly distinguishes performance of rural vis-à-vis urban manufacturing is difficult to obtain. The CSO Economic Census shows that proportion of rural enterprises engaged in manufacturing has declined from 38 per cent in 1980 to 27 per cent in 1990 and 24 per cent in 1998 respectively. The NSS quinquennial survey on employment also shows that employment growth in rural manufacturing has decelerated during the nineties. The growth in rural manufacturing is also lower than the rate of growth of urban manufacturing in the country (Jha 2006).

In this situation, growth in agriculture has limited linkage with the rural economy in the forward direction.

Production linkages of agriculture in the backward direction originate from demand of agriculture from other sectors of the economy. In agricultural production, limited amount of manufactured commodities are used; fertilizer is the most important. Fertilizer, especially chemical fertilizer, is produced in large units; such unit has limited linkages with the rural economy. This holds true for agricultural machineries as well. The mechanization of agriculture has, however, led to mushrooming of service industries in rural vicinity. Agricultural services in the recent period have emerged important from the point of view of rural employment in the country.

Table 12: Share of Individual Crop/ Crop groups in Gross Cropped Area and Value of Output during the Selected Years

Crops / Items	**Share in Gross Cropped Area**		**Share in Value of Crop Output**		
	1991-93	**2004-06**	**1990-93**	**2000-03**	**2005-6**
Cereals and millets	*54.7*	*52.0*	*36.3*	*33.0*	*31.6*
Pulses	*12.5*	*12.0*	*6.1*	*4.6*	*4.3*
Sugar	*2.3*	*2.3*	*7.8*	*8.0*	*5.7*
Condiments & spices	*1.4*	*1.6*	*3.0*	*3.7*	*5.1*
Fruits and vegetables	*3.7*	*4.9*	*18.2*	*25.7*	*23.1*
Oilseeds	*14.4*	*15.8*	*11.3*	*9.2*	*9.1*
Fibres	*4.9*	*4.9*	*4.5*	*3.5*	*4.9*
Others	*6.1*	*6.5*	*12.8*	*12.3*	*16.2*
	100.0	*100.0*	*100*	*100*	*100.0*

Note: "Others" are not same in the above table; this has different connotation for Land Utilization and Agricultural Output Data series. The source for Land Utilization Statistics is Agricultural Statistics at a Glance, whereas for value of agricultural output source is National Accounts Statistics, CSO, New Delhi.

The consumption linkage emanates from expenditure of income that farmers receive from market surplus; a significant proportion of this expenditure is supposed to encourage production of labour-intensive goods and services produced within the rural vicinity for local household consumption. This holds true in a relatively closed rural economy, where leakages are minimal. The consumption linkages are generally high if leakage in the rural economy is low (Harris 1987). Leakages in rural economy have increased in the recent decade as demand for products

produced in towns and cities have increased. Though there can be various reasons for this, increased road-connectivity between the rural and urban sector in the recent period has been one of the most important. The rural road led growth of the rural sector with a dearth of assured power appears to have reduced consumption linkages in the rural economy.

The discussions above suggest that the kind of growth of agriculture in the 1990s has widened rural inequity. Leakage in the rural economy has increased with the increased inequity of income in the system (Harris 1987). Some of the increased leakage in rural economy is also associated with the kind of growth of manufacturing and the process of rural development in the country.[25] Few of the earlier studies have also downplayed the linkage effect of agriculture on rural economy. Vyas and Mathai (1978) argue that skewed income gains in agriculture limits consumption linkages, while inadequate rural infrastructure limits the ability of rural firms to supply to the modest increase in input and consumer demands. These tendencies appear to have further increased in the recent years. Hart (1998) argues that agriculture-industry linkage does not emerge automatically from market expansion. Rather, they are shaped by the social relations of production and forged through the exercise of power in multiple institutional frameworks.

3.3 Implications of Pattern and Processes of Rural Employment for Poverty Alleviation

The above discussions suggest significant changes in the pattern of growth in agriculture and rural economy; this may have different kind of implications for welfare of the rural society. Though welfare is too subjective a term, poverty as measured with the number of persons below the poverty line is considered as an indicator of welfare for the present discussion. In order to understand the welfare implications of employment growth in the rural sector, some of the important parameters related to the quantity and quality of rural employment have been observed for its association with the incidence of rural poverty in states. The important parameters relating to rural employment considered in the present study are: (i) agricultural performance as measured by the per hectare agricultural income, (ii) labour productivity as measured by the agricultural income per worker, (iii) real wages in agriculture as obtained by deflating nominal wage with the CPIAL, (iv) pressure on land is primarily labour to land ratios, (v) concentration of RNFE. Association between the above variables and incidence of rural poverty in states are computed for the selected reference years (2004-05, 1999-00, 1993-94 and 1983) and the same is presented in the Box 2.

[25] Our textual knowledge suggest that as income of an individual increases larger proportion of expenditure will be allocated for purchase of non-food items; large proportion of non-food item is not produced in rural vicinity.

Box 2: Correlates of Rural Poverty across States Correlation Coefficients between Incidence of Rural Poverty and Levels of certain indicators related to Agriculture and Non-Agri. Employment

Indicators	1983	1993-94	1999-00	2004-05
Agriculture performance	-0.11	-0.22	-0.35	-0.47
Labour productivity in agr	-0.62	-0.55	-0.62	-0.62
Real wages in agriculture	-0.68	-0.48	-0.49	-0.49
Labour-land ratio	0.34	0.47	0.36	0.05
Concentration of RNFE	-0.24	-0.54	-0.46	-0.42

Note: The 2nd, 3rd, 4th and 5th column shows correlation coefficients between incidence of rural poverty and levels of the respective indicators, At n=15, the significant correlation coefficients with their levels of significance in parentheses are 0.65 (at 0.01%), 0.52 (at 0.05%) and 0.44 (at 0.10%).

Though the effect of agricultural performance on rural employment has decreased over the years, it remains an important determinant of rural poverty. The correlation coefficients presented in the box have the expected sign; the coefficients are, however, not significant at even 10 per cent levels of significance. The productivity of labour is an important indicator of rural welfare since the tenet of rural development rests on the surplus produced through agriculture (Lewis 1954). Surpluses and labour productivity in agriculture has similar connotations. The association between labour productivity in agriculture and the incidence of rural poverty is significant at 5 per cent only. The negative sign suggests that states with higher labour productivity in agriculture have a lower incidence of rural poverty; the same is plausible.

The real wages in agriculture is the other indicator of the quality of rural employment; its association with the incidence of poverty yields results similar to the labour productivity. It is however interesting to note that the association between real wages in agriculture and rural poverty in states has weakened during the nineties. Jha (2007a) shows that the increase of real wages in agriculture towards the end of nineties was not duly supported by the real factors in agriculture. The labour-land ratio, which shows pressure on land and also reflects a distress-like situation in rural sector, has not affected rural poverty significantly; though the positive sign of the coefficient is on the expected lines. Association between non-farm employment and rural poverty was not significant in the early eighties; this coefficient has however emerged significant (at 10 per cent) in the nineties.

The discussions in the present section conclude that both distress and development related factors are important determinants of rural diversification in India. In development

related factor infrastructure is the most important. Though agriculture has traditionally been the most important determinants of rural diversification, neither of two agriculture related variables, i.e., agriculture income per hectare and agricultural output per worker is not affecting growth of rural non-farm employment in the recent period. The weakening of linkage between agriculture and rural non-farm sector is corroborated with other sets of data as well. The present study has illustrated the same with the kind of growth in agriculture and rural economy.

The study argues that production linkage between agriculture and rural non-farm economy in the backward direction has weakened as much of growth of agriculture in the 1990s is not supported by the real factors. Price, rather than technology, plays an important role in the growth of agriculture in the recent period; the price-led growth has widened spatial and personal inequity in the rural sector. This further weakens consumption linkage between agriculture and the rural economy. Production linkage in the forward direction has also weakened as growth of rural manufacturing with a dearth of suitable incentive has suffered, while village-resource-based-organic manufacturing has grown at an impressive rate in the recent decade. The alternate processes of rural diversification have different implications for welfare of the rural society. A positive correlation of labour productivity and wages in agriculture with rural poverty emphasizes the importance of agriculture induced rural diversification in the country.

4. REVIEW OF POLICY FOR RURAL NON-FARM EMPLOYMENT

Some of the problems of rural non-farm employment diagnosed in the previous sections are: slow growth of productive employment in rural sector, the increased feminization of agriculture and their disguised unemployment in the rural economy, low labour productivity of manufacturing in the rural sector, the weakening of linkages between agriculture and rural non-farm economy. One of the important objectives of the present study is to illustrate policy recommendations to address some of the above problems of rural non-farm economy. The policy recommendations will largely draw from the experiences of rural non-farm employment related policies and programmes in India. The present section, therefore, attempts to review the policies related to rural non-farm sector in India and the same are discussed in brief under five headings as below:

- Macroeconomic Policies
- Policies related to specific Sectors
- Institutions and Incentives for Increasing Rural Employment

- Direct Employment Generation Programme or Active Labour Market Policies
- Decentralization and Institutions for Rural Development

Historically there have been several fiscal and monetary incentives that may have played a role in encouraging an excessive use of capital relative to labour. Some of these measures were originally conceived as instruments for encouraging investment and productivity of industries. An indirect effect of such measures has, however, been to distort the relative prices of (critical factors of production) capital vis-à-vis labour in the region. Review of economic policies suggests that several economic policies encourage use of capital, while labour is the most abundant factors of production in India. One possible way of correcting the bias against labour intensive production is to subsidize labour intensive enterprises. This can be in different forms and investment subsidy conditional on realizing a targeted level of employment per unit of investment is one of them. This may encourage concentration of certain labour intensive industries in the rural areas. Creation of industries in the rural areas is, however, beset with several problems and those include land acquisition as well. There are different dimensions to problems of land acquisition. The present study argues for setting up of an apolitical statutory body to look into any acquisition of land beyond a certain limit (250 hectares). This body must be assigned the responsibility of pricing of land. The land price must not ignore the long run cost of land and that besides other factors must be a function of agricultural productivity of land. The statutory body must also be responsible for compensation and resettlement of the affected people.

Rural non-farm employment includes several heterogeneous non-farm activities that have different demand and supply conditions in their respective input and output markets. The industry-specific policy is, therefore, important for increasing rural non-farm employment in the country. Though as per CSO classification there are nine industries, policies related to manufacturing and business services are discussed here in brief. Since OAEs dominate the rural sector, small enterprises are important for the rural sector. Policies related to micro and small enterprises are, therefore, reviewed in the present section. In the initial years of planned development, village and small scale industries were largely perceived to fulfil the demand of consumer goods. Such industries were promoted with the help of Khadi and Village Industries Corporation (KVIC). Subsequently, many of the consumer goods were reserved for production in the small scale industries. Further, to protect these industries from each other and from the organized sector, a cluster approach for development of small industries was adopted. The policy of reservation has, however, become obsolete in an open economy. Therefore, the Micro, Small and Medium Enterprises Development (MSMED) Act was enacted in 2006. The MSMED Act is a supportive policy and is a significant departure from protective policies of the past to facilitate similar kinds of enterprises in the country. Though the MSMED

Act encompasses manufacturing, business and services as well, the MSMED has an urban bias and, in this context, the initiative of the state government of Rajasthan in creating a rural non-farm development agencies (RUDA) to promote rural non-farm enterprises is important.

Certain government policies, though basic for the growth of industry, are not industry specific. Examples under this category include technology generation, skill formation, and infrastructure creation. In provision and access to the above facilities, there are frequent cases of 'market failure' due to existence of 'externalities' and 'free riders' in the industry.[26] The role of the state is, therefore, important though different non government organizations are also emerging as important. The role of the government is important in increasing capabilities of workers by providing better education and health facilities. Since the bulk of workers are in the unorganized sector and safety nets for workers in the unorganized sector are poor, governments also need to protect vulnerable workers from contingencies such as illness, accident, untimely death of bread-winner, old age and unemployment. Though the Union Governments expenditure on some of the above accounts has increased significantly in the recent years, Government interventions are largely perceived inadequate. They must involve the private sector, voluntary organizations, producers' association, and other interested groups in extending many of the above facilities. Though new institutional alternatives are emerging, at times Government support is needed to encourage such trends.

Though growth is essential but it is not sufficient for increasing employment and reducing poverty in rural sector. Growth has a limited trickle down effect for certain disadvantaged sections of the society generally left out of the developmental process (Lipton 1983). The direct employment generation programmes (EGP) have, therefore, become part of our development planning in the last few decades. The importance of such programmes further increases with the high incidence of unemployment in the rural economy. The employment generation programmes largely fall under two broad categories; self-employment generation and wage-based employment generation programmes. The first set of EGPs attempt to remove chronic unemployment by providing economic assets to the beneficiary, while the second group of programmes provide supplementary employment to stave off seasonal unemployment. The National Rural Employment Guarantee Programme (NREGP) is an example in the latter group. The NREGP guarantees employment of one person of every poor household for a minimum of 100 days on asset

[26] Skill development is an example of such facilities that transgresses across industries / sectors since production units are interlinked. The question of who will make investment in and pay for skill development of the labour force in a system which causes frequent 'market failures' due to existence of 'externalities' in skill and prevalence of 'free riders' in the industry remains. Free rider, here, refers to the tendency of a firm to 'poach' workers trained by another firm.

creating public works. In NREGP, rural assets may be presumed as important as wage based employment generation programmes. Unfortunately increase in expenditure on such programmes is often associated with a decrease of public expenditure in the social sector (Mahendra Dev 2000).

There is a general feeling that implementation of developmental programmes has not been satisfactory and though reasons are numerous, inadequate understandings of local situation, lack of participation of targeted groups in development process are a few of the important reasons. The panchayati raj institution (PRI) is being encouraged to initiate the bottom-up approach in development planning. The 73rd amendment of the constitution makes three-tier elected bodies mandatory for all state governments. The Eleventh Five Year Plan further mandates every Annual State Plan to be consolidated from district plans and each district plan has to be approved by the district planning committee (DPC). Several multilateral organizations are also encouraging participation of alternate institutions for rural development. The Right to information Act, 2004, and the provision of social audit in National Rural Employment Guarantee Act (NREGA) attempt to improve transparency in the government programmes at the bottom. Voluntary organizations are important in strengthening of participatory development. This is instrumental in replicating a new form of cooperatives named as self help groups and the same have emerged as an important institution for development programmes. The National Policy on Voluntary sector (2007) envisages government collaboration with the voluntary organizations in poverty alleviation, skill promotion and entrepreneurship development.

In brief, the present section argues that in a labour surplus economy such as India, government policies must not encourage capital over labour intensive technological options. The present study argues that growth in agriculture, manufacturing and tourism would trigger growth of productive employment in other sectors of the rural non-farm economy. Manufacturing, in particular, is important for a broad-based growth of productive employment in rural India. Though there have been numerous public institutions to encourage rural manufacturing, these institutions, however, failed to reduce the burgeoning gap between the productivity of rural and urban manufacturing. This has also failed to check the flight of manufacturing enterprises away from the rural sector. The present study, therefore, argues for sufficient incentives to encourage manufacturing in the rural vicinity. Promotion of the non-farm sector in a country as diverse as India requires need based innovations. RUDA in Rajasthan is an example. Considering the higher proportion of females in the rural work force, the study argues for streamlining the issue of women's employment in the policy discourse. Fruits of

development often exclude certain disadvantaged sections/groups of people; the direct employment generation programmes, therefore, remains important. There is no dearth of government programmes and policies to address various concerns of the rural non-farm economy. Most of these programmes, however, suffer from one or other implementation related problems. A significant amount of public resource is being transferred to the rural sector under these programmes. Efficiency of public expenditure on these programmes and the growing wedge between outlay and outcome of programmes are, however, matters of concern. Some of these concerns can be addressed at the micro level through the district plan.

5. STRATEGIES FOR INCREASING NON-FARM EMPLOYMENT FOR FARM HOUSEHOLDS

In development literature two broad strategies to increase rural non-farm employment are often mentioned. First, the agriculture led development paradigm presumes that with the increase of productivity in agriculture, manufacturing and other sectors of the rural economy would take off. Many regions of India were adhering to the above development process in the 1990s. Second, the urban and export led growth of rural non-farm employment presumes that as structural transformation proceeds, share of agriculture in rural employment and income declines, and external forces from urban areas and even from abroad increase in importance. The second strategy assumes importance in the recent period since rural non-farm sector in some of the East Asian Countries has transformed with the adoption of the above strategy.

In a diverse country like India, strategies for increasing productive employment in the rural sector must vary across regions. The present study, while recognizing pivotal position of agriculture in rural transformation, suggests for a manufacturing and tourism led transformation of the rural non-farm sector in the country. Considering

Box 3: Emerging Rural Activities

Emerging Rural Activities
Manufacture of wooden implements, furniture
Manufacture of bamboo and cane articles
Manufacture of leather footwear, objects
Manufacture of carpets, rugs and other covering
Embroidery and embossing of leather article
Preparation of dolls and toys
Manufacture of matches
Potteries and clay making
Wood carving, stone carving
Folk paintings on textiles etc,
Processing of Agri-based products

the decreasing land-man ratio, a significant part of growth of agriculture in India has to come from the allied activities. The allied sector in the Indian economy is also growing. The growth of the allied sector is, however, feared to taper-off with the weakening of the complementary relationship between crop and livestock activities. The present study, therefore, focuses on manufacturing; the village resource-based organic manufacturing, the labour-intensive products in ancillary units and skill-intensive rural artisans' work are typology of manufacturing activities of interest for the rural sector. Box 3 enlists some of the important manufacturing activities in the latter group of manufacturing. In certain regions of the country, rural tourism may also emerge as the engine of rural non-farm growth. The study proposes that a district may be identified with certain manufacturing or tourism activities. With the increased importance of decentralization a district-level planning and such identifications are emerging a reality.

There are numerous government programmes and policies for promotion of productive employment in the rural sector; though performance of these programmes leaves sufficient scope for further improvement. This also warrants involvement of alternate institutions like civil society, self help-groups, and corporate houses. This section presents seven essential elements, implementation of which may transform the rural non-farm sector.

5.1 Encouraging Primary Resource-based Capital Intensive Manufacturing Activities in a Cluster Approach

The present study argues that a robust growth of manufacturing in the rural vicinity is important to increase off-farm income opportunities for farm households. The rural vicinity referred here is a town, connected with the villages of that region in such a way that workers from surrounding villages commute to their work place on a daily basis. Interestingly, in the 1990s, while the gap in rural and urban infrastructure was widening, rural and urban wages for unskilled workers had converged, but dearth of assured electricity had also been a problem in the large part of country. All these discouraged technology induced manufacturing industry in the rural areas. In this situation, investment for manufacturing in the rural vicinity requires a strong incentive. In an open economy this incentive can be in the form of creating infrastructure (rural industrial estates, Common Facility Centres [CFCs], etc.), provisioning of subsidized land and cheap electricity for manufacturers. The requirement of infrastructure and incentive varies across manufacturing activities. The present study, therefore, argues for selection of certain manufacturing activities for a district after undertaking industrial potentiality survey of the region. The survey must take note of resource endowment of the region. While a large number of rural districts are agriculturally prosperous and organic manufacturing is the most favoured option, many districts in India

are also rich in minerals and manufacturing activities based on these minerals may, therefore, be planned for such districts.

The district level rural industrialization may be planned in the form of a cluster of clusters. The forms (horizontal and vertical) and tier of cluster depending on the type of products identified for the district. This kind of infrastructure in the CFCs will also depend on the products designated for the district.[27] The creation of such infrastructure requires enormous funds, beyond reach of a government. The present study suggests that a committee of possible stakeholders (producer association, government bodies, corporate house) to look into several micro level issues, including funds, may be formed. Besides domestic private investment, there is also the possibility of attracting foreign direct investment in such ventures since some expatriates would also be interested to invest in their native district.

Ministry of Food Processing Industry established the Mega Food Park (MFP) as a cluster of clusters. One central processing centre (CPC) has around six primary processing centres (PPCs), each of the PPC has some (2-5) collection centres with mobile collecting vans. The PPC is further linked with farmers and farmer groups at the farm gate level. The PPC is involved in the farm proximate sorting, grading, temp and pre-cooling at the farm gate level. The CPC has backward linkage with eight to ten PPC and forward linkage with the market. The execution, ownership and management of MFP would rest with a special purpose vehicle in which processor, government bodies, service providers, farmers groups would be equity holders.

The numbers of such MFP is grossly inadequate. One of such MFP has opened in Ranchi, the capital of Jharkhand. The merit in selecting Ranchi over other places can be debated, but one must take note of the fact that this was the parliamentary constituency of the then Union Minister of Food Processing. In due course, with the change of Union Ministry, this place may not find favour on certain economic criteria. Similar cluster based approach of industrialization are there for several commodities though their performances vary widely on a range of issues. The present study argues for selection of commodities and clusters for each district on a political consideration.

[27] A common facility for agro-processing requires cold storages, pre-cooling chambers, ripening chambers, quality control laboratory, sorting, grading and washing lines, bulk aseptic packaging lines, factory shed for tiny units, effluent and sewage treatment plants. These specialized infrastructures also need to be supplemented with basic infrastructures like roads, water, power, parking bay and weighing bridge.

5.2 Encouraging Manufacturing with Artisan-based Rural Clusters

Artisans are often associated with the unorganized manufacturing enterprises. Productivity of these enterprises is low primarily on account of the low level of technology, capital stocks and unfavourable price for their products. Illiteracy restricts them to utilize developmental assistance. Lack of modern inputs like assured power further increase their cost of production and, at times, not only reduce their margins/profits but also make them price-inefficient. As a consequence of the above factors rural artisans in India are trapped in a vicious cycle.

Institutional interventions that help artisans to break the above vicious cycle will be very helpful. Public institutions like KVIC are supposed to take care of certain needs of artisans; but they are grossly inadequate. This requires improvement in the functioning of the existing quasi-public institutions and also creation of alternate institutions to look into the artisan's concerns. A cluster of rural artisans has the potential to remove some of the price and cost related disadvantages of an average artisan. Though there are artisan's clusters, numbers of such clusters are not enough. The present study, therefore, argues for artisan-based clusters or self help groups (SHGs) in each village federated at the level of the district, state and country as producers associations/interest groups. Such producer-based organization will articulate their specific requirements and concerns to the central and state governments. These organizations in collaboration with Government will also be helpful in organizing need-based training for artisans since structural unemployment is conspicuous for certain categories of rural artisans.[28]

The civil societies may be encouraged to create producers group. The civil societies with the help of government could organize melas / exhibitions for sale of the rural artisan's work. Such sale exhibitions may be organized more frequently in towns and cities of different tiers so that an average artisan may realize a good price for his work. Civil societies may organize such training programmes to reduce unemployment.

5.3 Encouraging Rural Tourism

The present study argues that with the increase of road based infrastructure, leakages in rural economy have increased in the recent period. Rural tourism is an easy way of injecting income into the rural economy. Though tourism is traditionally associated with the historical antecedents, scenes and beauties of nature of a region (example hills, sea), there is a latent

[28] In the course of time some of artisan's work become obsolete; whereas, demand for certain other kind of artisan's work increases. Artisans in the former group become unemployed; their employability may, however, increase after imparting training in some related vocations which have better demand. This is referred here as structural unemployment.

demand for another kind of rural tourism as well. The present study argues that demand for cultural tourism would increase with globalization and increased number of expatriates as non-resident Indians may look for their roots in the country. The study further hypothesizes that demand for orchard-, horticulture-based tourism will increase with the increased urbanization. The potential of historical tourism in certain regions of the country is large, and for this a place needs to be advertised adequately. The advantages of tourism to its potential can be harvested once we identify certain tourist spots in a region on specific criterion and advertise adequately. These require creation of suitable infrastructure. A pro-poor growth of rural tourism also requires the right kind of institutions that helps the money injected by tourists to percolate down to poor of the region.

5.4 Training, Skill and Entrepreneurship Development

Considering the kind of annual addition to the existing workforce and the quality of workforce in the country, skill formation and entrepreneurship development should become part of our school level education. The eleventh Five Year Plan lays emphasis on training and skill development. Resource allocation in certain departments and Ministries has also increased substantially. Yet the existing training capacities with the public institution will not be sufficient. The study warrants for involvement of various NGOs (non government organizations) on a regular basis. Governments may concentrate their energy in innovating new trade and avenues for training and skill development, organizing trainers' training courses, and devising innovative ways of regulating the quality of training at different levels. The structure of computer training programmes is an example. The micro-enterprises, wherein producer, manager and worker are not distinct, dominate the rural sector of the country. The study, therefore, argues that production skill must be accompanied with the soft skill of enterprise management. Nevertheless, training must be followed with post training assistance in organizing the enterprise of the trained personnel. The National bank for Agriculture and Rural Development (NABARD), in this regard, provides an example (Jha 2010).

5.5 Integrated Village Development Centre, Rural Clinics

Organization of any non-farm activity requires different kind of services, often difficult for the owner of a micro-enterprise to access all of them. To cater to the diverse needs of farm and non-farm activities, many institutions under the public domain have been created. The performance of these institutions varies.[29] The more frequently cited reasons for their poor

[29] Efforts of Government institutions are often disjointed; at times higher government officials are less sensitive to the

performance is dearth of accountability. The present study argues that for a service centre to be accountable, it is important that a significant part of their income come from the fees charged for the services. The study proposes the idea of fee-based rural clinics or village development centres. This is rooted in the idea of agri-clinics mooted in the late 1990s by the Union government, a single window knowledge and service provider as that of the rural non-farm development agency (RUDA) in Rajasthan.

The viability of agri-clinics is often questioned. The present study argues that viability of these centres can be improved by increasing the subjects. The same can be achieved by incorporating consultancy, curative, marketing and network related services related to agriculture and non-agricultural activities, and the same may be referred to as 'Rural Clinics'. In the initial stage such clinics may start with the provisioning of knowledge services; physical services may further be added to increase their viability. Though requirement of physical services depends on the socioeconomic characteristic of area, the present study argues that demand for physical services would increase as the size of our agricultural holdings is decreasing and the number of micro enterprises increase. In brief, 'Rural Clinics' will be integrated service centres to cater all the developmental needs of small and micro-enterprises around that centre.

With the expansion of information technology, the above technical services are possible under one roof with the help of an individual or team of workers. The above development centre may collaborate with the regional technical institutes/Universities for dissemination of their technology and seeking opinions of experts on specific problems of villagers. An agriculture graduate may be trained and supported to initiate such a venture. The government support may take different forms; assistance in establishing physical infrastructure and provisions of interest free loans are some examples.

5.6 Strengthening Alternate Process of Development, Institutions and Civil Society

An increasing reliance of the government on NGOs for implementation of some developmental programmes is a testimony to the increasing role of NGOs in development. Some NGOs are doing credible work in different spheres of development, while there are few with doubtful credentials. It is important for the movement of civil societies that

requirement of rural people. Government officials recruited on tenure for a fixed assignment are often not interested in undertaking far-reaching changes in development of a region. The lower government officials at the level of village (gram sewak) have limited development-related knowledge and capabilities.

the incredible NGOs are isolated from the mainstream. This requires, amongst others, also a union of NGOs at both the country and state levels. A strong and credible union of NGOs may be able to guide development-finance institutions about the activity of particular NGO. Ranking of NGOs by development banks like NABARD and peer review of NGOs are some of the more frequently cited suggestions to distinguish credible NGOs from the sea of civil societies.

5.7 Encouraging Convergence of Government Programmes and Policies

Development of rural enterprises and industries in India is the subject of several Ministries/ Departments/ Organisations like Ministry of Rural Development, Ministry of Agriculture and Cooperation, Ministry of Mines, Ministry of Food Processing Industry, Ministry of Micro, Small, Medium Enterprises (MSME), Ministry of Textiles, Ministry of Commerce and Industry, Ministry of Panchayati Raj, Ministry of Labour and Employment, Ministry of Environment and Forest, Ministry of Human Resource Development, Ministry of Science and Technology, Ministry of Tribal Affairs, Ministry of Woman and Child Development, Ministry of Health and Family Welfare, Ministry of Power, Ministry of Non-conventional Energy Sources, Ministry of Finance, etc.

Promotion of one non-farm activity at times involves many government departments and ministries.[30] Multiplicity of agencies often causes delay in coordination between different government departments and multiplicity of agencies also leads to multiple programmes related to development of the rural non-farm sector. The multiplicity of programmes causes distribution of scarce resources thinly into many programmes. Resources allocated in government programmes at times are not utilized efficiently. Though there can be various reasons for the same; confusion in implementing programmes with different norms and procedures are important. In spite of the above problems associated with the multiplicity of ministries/departments related with the rural non-farm sector, they are in the recent period being fragmented into smaller entities.

The present study, therefore, argues for convergence of programmes at the level of the district. Possibility of such convergence is not remote since the Development Commissioner in a District is responsible for implementation of most of the programmes planned at the central and state levels. The eleventh Five Year Plan attempts to address this concern with a mandatory District Plan approved by the Panchayat Samiti. The district plan aims at

[30] Promotion of clay-based pottery for example is related to the Department of Agriculture and Cooperation (MOA), Department of Land Resource, Development Commissioner MSME (Ministry of Industry) and KVIC (Ministry of Rural Development). Similar examples are available in Annexure (Annexure Table 10) in Jha 2010.

converging different developmental programmes. The possibility of village levels convergence of various programmes is reported from the 'Hiware Bazar village' in Ahmednagar district of Maharashtra (Source: The CEO, National Rainfed Area Authority (NRAA) as seen in Hindustan Times). Some of the government programmes like Rashtriya Krishi Vikas Yojana (RKVY)[31] also attempt at sector level convergence.

Though few of coordination related problems can be minimized by merging certain departments and Ministries at the macro level, this is difficult considering the political economy of the country. The present study, therefore, suggests for formation of certain groups of Ministries to fulfil special purposes/objectives like strengthening of rural manufacturing and enhancing skill development.

The strategies to increase productive employment in the rural non-farm sector assign a pivotal role to rural manufacturing and tourism. The study argues for a labour intensive and primary resource based manufacturing activities in the rural vicinity of most of the districts. The kind of products industry for a district may be chosen after proper industrial potentiality survey of the region. Rural industrialization may adopt a cluster-based approach, wherein large and medium size enterprises are linked with micro and small enterprises. Some of the institution related problems of the rural non-farm sector can be addressed by encouraging the single window integrated service centre. A robust growth of productive employment in the rural non-farm sector requires massive investment in skill formation and entrepreneurship development provisions. There is no dearth of government programmes and policies to address various concerns of the rural economy. However, for these programmes to have a significant effect at the micro level it is important that the programmes converge at the bottom and this is possible with the district plan.

6. IN CONCLUSION

The NSS data on employment for the recent period (1999-00 and 2004-05) shows a sharp fall in the share of agriculture in the total rural workforce in India. Manufacturing leads the rural non-farm sector with 8.1 percent of rural workers; other industries in decreasing order of their share in the rural workforce are trade-hotels and restaurant (THR, 6.1), construction (4.9), community social and personal services (4.5), finance-insurance-real estate and business services (0.5), mining (0.5) and utilities (0.02). Though manufacturing has traditionally been the most important

[31] In Rashtriya Krishi Vikas Yojana (RKVY) Central grants to states are linked with the district agricultural plans (DAP). The DAPs while formulating demand for RKVY are supposed to factor in opportunities created in related programmes like National Food Security Mission (NFSM), National Horticulture Mission (NHM), Bharat Nirman, Backward Region Grant Fund (BRGF).

industry in the non-farm sector, productivity of manufacturing in rural sector is significantly lower than the urban sector. Information from the Enterprise Survey shows that share of own account enterprises have reduced and that of establishment with hired workers has increased. The average size of establishments has however reduced during the reference period.

Women account for around 30 per cent of the rural workforce, a bulk of them (85 per cent) are in agriculture. Interestingly, around one-third of rural females employed on the basis of usual status of employment are actually unemployed on the basis of current daily statues of employment. Rural wages for casual workers in most of the industrial categories is significantly lower than the urban sector. The above difference reducing in the 1990s has further widened in the recent period (1999-00 and 2004-05). The real wage for female workers is around 80 per cent of wage for a male worker in agriculture; similar gender disparity in wage prevails for workers in manufacturing, trade and services.

The NSS quinquennial survey on employment shows that 27.3 per cent of rural workforce on the basis of usual status of employment is in the non-farm sector. The state level statistics for rural non-farm sector show significant variation in share of industries in the rural non-farm sector. The percentage of rural non-farm worker varies widely across states creating interests about determinants of rural non-farm sector in the country. Analysis of data from the selected districts of 13 states suggests that both distress and development related factors lead to the growth of rural non-farm employment in the country. In development related factors, infrastructure has emerged as the most important determinant of rural diversification. Interestingly, neither of the two agriculture related variables, i.e., agricultural income per hectare and agricultural output per worker is affecting growth of rural non-farm employment in country in the recent period. The weakening of linkage between agriculture and rural non-farm sector is corroborated with other set of data as well. Alternate sources of rural diversification have different implications for welfare of the rural society. A positive correlation of labour productivity and wages in agriculture with rural poverty emphasizes the importance of agriculture induced rural diversification in the country.

The present study argues that growth in agriculture, manufacturing and tourism would trigger growth of productive employment in other sectors of the rural non-farm economy. Manufacturing, in particular, is important for a broad based growth of productive employment in rural India. Though there have been numerous public institutions to encourage rural manufacturing, but the gap between the productivity of manufacturing in the rural and urban sector continues to widen. This also failed to check flight of manufacturing enterprises away from rural sector. The present study, therefore, argues for sufficient incentives to

encourage manufacturing in rural vicinity. Incentives can be in the form of creating suitable infrastructure like CFCs and cheap electricity. Rural industrialization must adopt a cluster based approach, wherein large and medium size enterprises based on local resources are linked with the micro and small enterprises. A robust growth of rural manufacturing also requires massive investment in skill formation and entrepreneurship development.

The RNFS in public domain suffers from multiplicity of institutions without it being focus of any. The rural non-farm sector therefore remains an institutional orphan. RUDA in Rajasthan is an example. The present study argues for single window integrated service centre to promote the rural non-farm sector in the country. Considering the higher proportion of workers in the unorganized sector, the government has to come forward for provisioning of social security benefits. Promotion of the non-farm sector and extension of facilities for rural persons in a country as diverse as India requires need-based innovations and replication of successful model (institutional arrangement) in a large part of country. While fruits of development and benefits of policies will be realized by different groups of people with the varying degree of success, in a country as diverse and big as India, direct employment generation programme would remain important. Review of government policies suggests that there is no dearth of programmes for the rural non-farm sector; implementation of these programmes has however been a matter of concern. Many implementation related concerns can be addressed by effective district plan that may encourage convergence of related programmes at the level of the district.

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ANNEXURE

Table A1: Per cent Distribution of households by household type for each size class of land owned in rural India in 2004-05

Size of owned land (0.00) hectare	Self employed (SE) in		Labour (L)		All h'hlds (SE+L)
	Agriculture	Non-agric.	Agriculture	Other	Total
0.00	*4.8*	*16.0*	*23.3*	*19.7*	*36.2*
0.001 – 0.004	*3.2*	*20.2*	*46.5*	*16.4*	*13.7*
0.005 – 0.40	*15.0*	*22.2*	*25.7*	*14.9*	*12.2*
0.41-1.00	*57.8*	*10.9*	*17.4*	*6.2*	*7.6*
1.00-2.0	*76.2*	*6.4*	*8.7*	*2.6*	*6.1*
2.01-4.00	*85.0*	*4.9*	*3.0*	*1.7*	*5.5*
4.01 & above	*87.5*	*4.2*	*1.6*	*1.4*	*5.2*

Note: All households also include households that did not report,
Source: NSS Report No. 515 (NSSO 2006)

Table A2: Percent distribution of Usually Working Persons Available for Additional Work and their Percent Distribution by Reasons for Seeking Work during 2004-5

Sectors and Sex	Workers available for add'l work(%)	Per cent distribution of workers with suitable reasons			
		Supplement income (R1)	Not enough work (R2)	Both the reasons	Others
Rural male	*10.7*	*55.5*	*20.6*	*18.3*	*2.7*
Rural female	*7.4*	*52.7*	*26.2*	*16.6*	*3.1*
Urban male	*6.2*	*54.4*	*20.1*	*20.1*	*3.4*
Urban female	*6.5*	*56.0*	*16.6*	*22.5*	*3.2*

Source: NSS Report No. 515 (NSSO 2006)

Table A3: Distribution (in per cent) of Establishments by Size Class of Employment during 1990-2005

Size Class of Employment	Establishment			Persons Usually Employed		
	1990	*1998*	*2005*	*1990*	*1998*	*2005*
one-five	*93.4*	*94*	*95.1*	*54.5*	*58.6*	*64.2*
six-nine	*3.46*	*3.3*	*3.42*	*8.44*	*8.3*	*10.3*
ten and above	*3.13*	*2.8*	*1.51*	*37.11*	*33.1*	*25.52*

Source: Economic Census (CSO 2008)

Table A4: A comparative account of agricultural and non-agricultural enterprises across locations

Location		Share of Enterprises				Growth rate	
		1980	**1990**	**1998**	**2005**	**1990-98**	**1998-05**
Rural	*Agriculture*	*11.58*	*14.5*	*18.51*	*22.36*	*5.42*	*8.62*
	Non-Agri	*88.42*	*85.5*	*81.49*	*77.64*	*1.66*	*4.56*
	no. in mill.	*11.02*	*14.37*	*17.2*			
Urban	*Agriculture*	*2.42*	*2.3*	*2.2*	*2.28*	*1.93*	*4.42*
	Non-Agri	*97.58*	*97.7*	*97.8*	*97.72*	*2.52*	*3.67*
	no. in mill	*7.15*	*10.14*	*12.35*			

Source: Economic Census (CSO 2008)

Table A5: A comparative account of Own Account Enterprises (OAEs) and Establishments by their locations

Locations	Share of own account enterprises (OAEs)				Growth rate	
	1980	*1990*	*1998*	*2005*	*1990-98*	*1998-05*
Rural	*77.7*	*77.22*	*77.02*	*70.92*	*2.25*	*4.18*
Urban	*65.54*	*62.23*	*61.45*	*54.2*	*2.4*	*1.83*
	Share of establishment with hired workers				**Growth rate**	
	1980	*1990*	*1998*	*2005*	*1990-98*	*1998-05*
Rural	*22.3*	*22.78*	*22.88*	*29.08*	*2.27*	*8.83*
Urban	*34.46*	*37.97*	*38.55*	*45.8*	*2.69*	*6.3*

Source: Economic Census (CSO 2008)

Table A6: Trend of Average Employment across different Sectors and Types of Enterprises

Enterp. Type	Rural				Urban			
	1980	1990	1998	2005	1980	1990	1998	2005
Agricultural enterprises								
OAE	*1.65*	*1.76*	*1.72*	*1.53*	*1.71*	*1.68*	*1.71*	*1.46*
Establishment	*3.39*	*3.95*	*3.64*	*3.20*	*4.30*	*4.47*	*4.26*	*3.73*
OAE+Estab	*1.91*	*2.02*	*1.91*	*1.78*	*2.29*	*2.26*	*2.24*	*1.98*
Non-agricultural Enterprises								
OAE	*1.50*	*1.44*	*1.47*	*1.3*	*1.49*	*1.43*	*1.47*	*1.24*
Establishment	*4.68*	*4.84*	*4.63*	*3.75*	*8.98*	*7.63*	*6.61*	*5.04*
OAE+Est.	*2.24*	*2.28*	*2.29*	*2.11*	*4.09*	*3.80*	*3.47*	*3.02*

Source: Economic Census (CSO 2008)

Table A7: Selected States and Districts for Studying Process of Rural Diversification

States	High RNFE Districts	Low RNFE Districts
Andhra Pradesh	*Nizamabad*	*East Godavari*
Assam	*Kamrup*	*Jorhat*
Bihar	*Bhagalpur*	*Kishanganj*
Gujarat	*Baroda*	*Mehsana*
Haryana	*Gurgaon*	*Jind*
Himachal Pradesh	*Shimla*	*Kullu*
Karnataka	*Dakshin Kannada*	*Raichur*
Madhya Pradesh	*Damoh*	*Jhabua*
Maharashtra	*Satara*	*Wasim*
Punjab	*Ludhiana*	*Bhatinda*
Tamilnadu	*Kanniyakumari*	*Perambalur*
Uttar Pradesh	*Muzaffarnagar*	*Kannauj*
West Bengal	*Jalpaiguri*	*Bankura*

Note: From the selected states two districts representing high and low concentrations of rural non-farm employment were chosen.