CHAPTER II
AGRICULTURE AND RURAL NON-FARM EMPLOYMENT: CONCEPTS, THEORIES AND EMPIRICAL FINDINGS

2.1 Introduction

Economic diversification is among the crucial dimensions of structural change in the economy. This diversification is manifested through the shift from the agricultural sector to industries and later to services, which is generally captured through the changing composition of income and employment over a period of time. The development economics literature had put a great deal of emphasis on this process. However, it was only at a later stage that the role of the rural non-farm activities in alleviating poverty and in generating a process of growth in the rural economies received specific attention. The purpose of this chapter is to identify the conceptual and theoretical underpinnings of the burgeoning literature on rural non-farm sector, particularly focusing on the linkages with agriculture.

2.2 Rural Non-Farm Employment: Definition and Concepts

Rural Non-Farm Employment (RNFE) refers to all economic activities that mark a shift away from agricultural sector to non-agriculture activities. The rural nonfarm economic activities may be captured through employment and income data, and nature of economic activities classification. The RNFE may be understood by at least three categories: the activities undertaken, employment and labour use time. All these categories, to some extent, overlap but have distinct advantages and limitations (Mishra, 2007). Income classification includes those things that are not reflected in employment data like transfer and rent, whereas employment data captures different other aspects of employment like its nature and duration. Time-use data, on the other hand, captures transient and marginal shifts in activities that might not be captured through the categories like employment and earnings.

Rural nonfarm sector is an important component of rural economy. It is the sector that comprises of all economic activities except agriculture in rural areas. Thus, the rural nonfarm economy is defined as all those non-agricultural activities, which generate income to rural households including income in kind and remittances. In his background paper for World Development Report, Lanjouw and Lanjouw (1995) have defined RNFS
as incorporating all economic activities in rural areas except agriculture (only crop production), livestock, fishing and hunting. RNFE includes all economic activities in rural areas except agriculture, hunting and fishing (Lanjouw and Lanjouw, 2001). Similarly, many Indian scholars have also followed the common convention of including animal husbandry, hunting and trapping, forestry and logging, fishing etc in agriculture and accordingly all other economic activities in rural areas as falling within the purview of the RNFS (Chadha: 1993, 2002). The RNFS then would include activities like handicrafts, mining and quarrying, household and non-household, manufacturing, processing, repairs, construction, trade and hotel, commerce, transport and communication, financial services, community and personal services in rural areas. This implies that the sector includes a large set of economic activities including tertiary and secondary activities along with transfer payments and remittances. All economic activities, which compensates or bypasses agricultural constraints, shall be within non-farm sector (Davies, 2001).

Also this sector is heterogeneous in terms of nature of skills, scale of operation, nature of technology, level of productivity and time duration. It is immaterial whether it is located in rural or urban areas so long as it brings income in rural areas. All economic activities that generate income in rural areas are included in RNFS irrespective of whether it is located in rural or urban place (Ranjan, 2006). The rural nonfarm economic activities may be linked to agricultural sector, urban centers and with international trade. It may be linked to local and distant market with different income and employment generating capacity. It may be large and productive, generating income above returns in agriculture or it may include activities of last resort for rural households.

Although shift to RNFE means moving away from traditional agricultural sector to non-agricultural activities, the level of diversification at the individual and households are quite different conceptually. It can be defined by three important economic variables: the employment or labour use data, the income or the earning data, data on the nature of economic activities undertaken. These three categories bring into the analysis different dimensions of the rural non-farm economy.
2.3 Emergence of the Rural Non-farm Sector as an Independent Subject in Rural Development Theory

The two-sector development models of 1950s and 1960s explained development as structural transformation of the economy with reallocation of surplus labour in agriculture to industrial sector; while agriculture was assigned a passive role of producing food and labour for industrialization (Lewis, 1954; Ranis and Fei, 1964). In these two-sector models, industries held the centre stage; whereby structural transformation of rural areas is facilitated by abundant supply of cheap labour in rural areas. In other words, excess labour gets absorbed in urban areas and rural areas specialize in producing food crops. These models were industry-focused. The rural nonfarm sector was neglected by economists who were mainly working in the two-sector growth model. Most of the developing countries also took up industry-focused path for economic growth. It was based on the understanding that manufacturing offered better growth prospects because of greater demand, higher productivity and superior growth enhancing linkages with rest of the economy. Engel’s law showed that household demand would diversify to nonfarm products as income increases. Further, evidence on terms of trade suggested that the world demand for agriculture would remain sluggish as compared to international market for manufactures (Haggblade, 2007). Likewise, Hirschman (1958) prescribed pro-industrialization development model because agriculture had weak production linkages with the rest of the economy.

However, in late 1960s and early 1970s, it was found that massive rural urban migration created new development challenges in the cities. All migrants could not be absorbed in employment partly due to misalignment of skill and training with demands of formal sector jobs and partly due to low rate of job creation. Urban informal sector expanded rapidly which led to congestion, increasing pressure on urban resources, emergences of slums and host of other negative problems in cities. In order to tackle the problem of large-scale migration, new rural development measures were adopted. It brought rural development at the centre-stage of development economics. But it became synonymous with agricultural development. Policies were made to improve the institutional, technical, infrastructural and technical aspects of agricultural sector. Even within such framework, the rural nonfarm sector did not get independent analytical significance. It was subsumed under the broad definition of agriculture. The dominant
belief was that RNFS comprises of low productive residual sector activities that would decline with agricultural development and greater rural urban economic interlinkages.

However, developing countries experienced an increasing role of RNFS rather than contraction of its role in rural economy. Most of the economies experienced increasing diversification to non-agricultural activities. Rural informal sector emerged like the counterpart of urban informal sector. Economies faced increasing challenges of urban and rural unemployment. New research findings challenged the conventional perspective on rural non-farm sector. The idea of RNFE as a set of transitory low productive economic activity, which withers away with structural transformation of the economy was negated. There emerged three important findings contradicting traditional wisdom (Haggblade, 2007)— firstly, it was found that RNFE included not only rural industries but also many other activities including trade and commerce. It significantly contributed to income, employment and equity in rural areas. Secondly, it was shown that small-scale and intermediate technologies are almost technically efficient i.e., with same labour-capital combination no other technology can produce greater output. Also, when inputs are priced at their opportunity cost, much labour intensive and intermediate technologies are economically efficient in low wage countries. Thirdly, in case of consumption preferences, empirical findings highlighted that there exist positive income elasticity of demand for many rural non-farm products. It differed across different commodities but it wasn’t zero. The new empirical findings highlighted that RNFE played an important role in rural livelihoods and hence, RNFE became the centre of studies across different economic settings in developing countries.

2.4 Rural Non-Farm Employment: Analytical Perspectives, Determinants and Empirical Findings

2.4.1 The Primacy of Agriculture

It assigns primary significance to agriculture as the main engine of rural growth and creator of rural nonfarm employment. Agriculture-led growth in non-farm sector expansion is conceptualized in three important routes- firstly, growth in agriculture income increases demand for non-farm products (which assumes well commercialized agriculture with smoothly operating agriculture output and input market apart from credit markets). Secondly, the farmers demand for agricultural inputs sustains many small-scale
rural enterprises. Increase in agriculture productivity has the potential to stimulate new economic activities in the RNFS via consumption linkages. Modern agriculture growth is based on strong backward and forward linkages with industry and other non-agricultural activities some of which may partly be located in the rural areas themselves (Mellor, 1976). Thirdly, it expands scope for development of agro-based food processing units. Moreover, the development of non-farm sector via increased demand for farm products increases the income of the farmers. Thereby, conditions ensuring a positive cycle of growth of both agriculture and non-agriculture sector emerge in rural areas which basically endorses productivity induced development of non-farm sector, leading to dynamic inter-linkages in rural economy, which implies that the expansion in rural non-farm activities shall ensure employment opportunities. The various linkages between agricultural and non agricultural sectors in the rural economy include capital flow (investment of agricultural surplus in non agricultural activities), labour flows (the counter cyclical involvement of agricultural labour in tune to changes in agricultural seasons, production linkages (supply of agricultural inputs like fertilisers, equipments etc to farmers), forward linkages (agro-processing), consumption linkages(demand for housing, consumer durables, and other non-food items as a result of rising agricultural incomes (Visaria and Basant, 1994). Studies have found a number of advantages of rural non-farm sector growth viz, use of local resources, complementing rural income, reducing pressure on urban centres, reducing rural economic inequality.

A number of empirical findings substantiate the agriculture led spinoff of RNFS growth. In Punjab, green revolution led growth in farm income generated large demand for locally produced labour intensive goods and services (Mellor, 1976). Growth in agriculture productivity also stimulates new economic activities in the RNFS via consumption linkages. In Japan and Taiwan, growth in agriculture has provided investible surplus in rural areas. The set of inter-linkages between farm and non-farm sector has the potential to stimulate positive cycle of growth for rural economy (Mellor, 1976; 1991). The growth of agriculture is likely to stimulate growth of rural non-farm sector (Bhalla, 1981; Unmi, 1991). There is virtuous flow of resources between agriculture and non-agricultural economic activities in rural areas (Vasant and Visaria, 1994). The performance of rural industrial sector is associated with agricultural productivity and has higher correlation with the growth rate of agricultural output (Papola, 1987). A number of Indian studies suggest that growth of agriculture is likely to stimulate growth and
development of rural nonfarm employment (Dev 1990; Shukla 1991; Unni 1991, 1996). The role of agriculture in governing the size and composition of RNFS was widely studied. The agriculture growth spins off via its production linkage, consumption linkages, and factor market linkages and reverse linkages in creating multiple income and employment in RNFS. A cross section of econometric study across 85 different districts in India estimates agriculture to rural nonfarm multiplier averaging 1.37 (Hazel and Haggblade, 1991b). In Haryana, India’s fastest growing agricultural state, it was observed that the 1960s produced dramatic growth in factory employment, commerce and services (Bhalla 1981).

However, this theoretical perspective on agricultural growth linkage was based on three necessary preconditions viz, the input linkages must be with local resources, agriculture income must be spent on local products, agricultural savings must be invested in the local economy. If these conditions are absent, the rural nonfarm sector may not grow, even if there is agricultural growth (Vyas and Mathai, 1978; Harris and Harris, 1984; Hart, 1987, 89). One finding in Tamil Nadu shows that though agricultural output and income increased, it failed to increase adequate demand for labour intensive rural products, rather demand for urban manufactured goods went up (Harriss, 1991). Hymer and Resnick (1969) argue that rural non-farm activities produce inferior goods, demand for which declines as rural income increases as it happened in Philippines, Thailand and Burma, where rural industry corroded between 1870 and 1938.

On the other hand, absence of growth in agriculture also pushes farm households to shift to RNFE. It is well captured by the theory of distress push entry in RNFS. Distress in agriculture also shapes the nature of rural nonfarm economic activities. A large number of empirical work showed that sluggish agriculture gives rise to low rural nonfarm income and low wage rate. Fall in agricultural income has led to fall in rural nonfarm activity and income (Hazell and Ramaswami, 1986). One of the important formulations on distress push RNFE growth is the Residual Sector Hypothesis, which argues that excess supply of labour in rural areas spill over to nonfarm economic activities. When both urban industrial sector and agriculture fails to provide sufficient employment, the excess labour in rural areas gets employed in rural non-farm sector in different low productive activities. The RNFE growth is primarily a distressed induced phenomenon (Dev, 1990; Verma and Verma, 1995; Visaria and Basant, 1994).
The factors like low productivity, poverty, increasing population, fragmentation of landholdings, low commercialization and marketable surplus, increasing casualisation of workforce, incomplete input and output market, high transaction cost, disguised unemployment and increasing population etc. farmers are pushed out of farming activities due to distress and engage themselves in low productive non-farm sector to compensate for the declining farming income which may involve off season temporary migration of rural labour (Ranjan, 2009; Vaidyanathan, 1986; Verma and Verma, 1995). In such cases, non-farm sector may end up as residual sector, which absorbs the excess labour force of the rural area. The wage rate in non agricultural sector or return to family labour is likely to be lower than returns in farming, but it is taken up to compensate the dwindling capacity of farm sector to sustain livelihood. Mishra (2007) provides two example of workers driven to RNFE due to distress factors viz, a subsidiary worker without any main occupation but engaged in some subsidiary work to supplement household income and a person with main occupation but engaged in subsidiary works as compensating mechanism. The condition of distress in farm has also been understood as the by-product of the very processes associated with commercialisation of agriculture. Vaidyanthan (1994) in his study points out that the incidences of wage labour and casualization of wage labour are positively and significantly correlated with the commercialisation of agriculture.

2.4.2 Spatial Perspectives on Rural Non-Farm Employment

Studies have been undertaken on the issue of RNFE from the geographical perspective focusing on different spatial dimensions of RNFE. This perspective looks at the interlinkages between emergence of RNFS and spatial dispersion of population, production and settlements. Researchers examine concentration of demand as well as supply side determinants such as setting up of rural infrastructure and government services. Studies have investigated the reasons behind interregional differences in levels of RNFE both at the inter-state and inter-district level. It is found that RNFE shares vary spatially across the spectrum from rural to increasingly urban areas. Evidence from India suggests that RNFE shares rises from 15 per cent in rural areas to 76 per cent in rural towns and 95 per cent in large urban areas (Renkow, 2007). In this regard, empirical works suggest inverse relation between the rural non-farm activity and economic distance from the nearest town. The rural non-farm employment shares roughly 10 per cent higher
in rural areas within a one hour commute of the nearest urban centre than in more isolated rural settlements (Haggblade, 2007)). The size of the market is crucial in determining the size of RNFE (Vaidyanathan, 1986; Dev, 1990; Kumar, 1993). Spatial accessibility to the market in an economically viable way is another important dimension of market linkages. Cost incurred in transport from the nearest market limits the capacity of firms to access the potential customer base. It is found that less than 10 per cent of the sales of rural nonfarm firms are made more than five miles from where the goods are produced (Renkow, 2007). However, distance is conceptualised here in the sense of economic viability factor. Physical distance is or may be more but the cost may be less due to efficiency in the modes of transportation. Narayana Murthy et al (2002) find that percentage of literacy, percentage of pucca road and percentage of irrigated field are significant determinants of inter-district variation in RNFE. Improved roads facilitate the development and expansion of industries located in the country side by lowering the cost of bringing inputs and moving goods to final markets.

Lanjouw and Stern (1998, 2003) distinguish between two types of rural nonfarm activities- casual and regular on the basis of longitudinal study of Palanpur. Diversification of rural income and workforce varies from one geographical and economic context to another (Dev, 2007). Shukla (1991) developed an econometric model for nonfarm sector that takes into account its functional linkages with agriculture and urban activity through explicit recognition of their spatial dimension. The role of cities and towns in spatial concentration of RNFE has been theorized and policy implications have been drawn. It is found that rural town settlements generate economies of scale for location of the firms at a specific zone due to pooling together of facilities in different linkages viz, input linkages, labour linkages, capital market linkages, and product market linkages which reduces transaction costs. It is found that spatial pattern of firm location and settlement size fundamentally depends on benefits of spatial concentration and also the cost of economic distance or both. The interplay of three variables- economies of scale in production, structure of demand (and related pecuniary external economies), and transport costs- largely governs linkages between differently sized concentration of consumers and producers, and thereby the location of nonfarm firms and nonfarm production in the rural space (Renkow, 2007).
2.4.3 The Study of RNFE from the Perspective of the Firm

A large numbers of study try to unfold the different aspects of RNFS by studying firms as the unit of analysis. It investigates the enterprise start-up, enterprises supply chains, growth and closure in rural areas. It covers supply side dynamics of rural firms, their determinants and impact on rural economy. The Rural firms may grow in response to increase in local demand for the products, due to linkages with external market, and also due to spatial shift of urban firms in rural areas. The main idea is that the expansion of rural nonfarm economic activities may also grow independent of the local economy, but its growth has positive impact on other sectors of rural economy. Demand for agriculture products will increase improved infrastructure, may support increase of agriculture productivity, investible surplus may be generated for agriculture and hence new inter-linkages may be generated for rural development. Literature on individual firms highlights the significance of entrepreneurship, technical efficiency, rural infrastructure, credit, education and other factors affecting the supply of nonfarm commodities. The dynamics of rural non-farm products are also studied with respect to urban linkages. The role of rural nonfarm firms in providing employment and income to rural population is studied. It focuses on the constraints, incentives and the ability of rural nonfarm firms to respond to the opportunities in Rural Nonfarm Sector created by agricultural growth spinoff, external market linkages, natural resources linkages, public investments and urban linkages etc. It also focuses on the scale of operation, level of technology and nature of products, market sustainability and viability of the nonfarm units in different macro-economic policy environment.

The need for study of rural nonfarm firms is broadly supported by some significant empirical findings in recent times. Firstly, it was found that with increase in rural income demand for rural nonfarm products does not fall down across all commodities. Consumer expenditure on rural nonfarm products particularly on commerce and service rose with increases in income. Thus, the proposition that all the household based rural nonfarm products are inferior in nature and would be substituted by superior imports was rejected (Deb and Hossain, 1984; Hazel and Ramaswamy, 1986). Though labour intensive household based declined but the rural factories, commerce and services expanded (Ranis and Stewart (1993). The RNFS provides employment for 20 to 30 per cent of the rural labour force and another 20 per cent part time or seasonally (Haggblade, 2007). It has
been found that due to low capital requirements and barriers to entry; more than 90 per cent of rural nonfarm enterprises operated fewer than five workers. Secondly, it has been found that the sub-contracting of works from urban to rural areas has emerged as growing sources of rural nonfarm employment as urban firms' sub-contract production to rural firms seeking lower labour and rental costs. In Latin America, non-agricultural motors such as tourism and mining play a prominent role (Haggblade, 2007). It is found that the profile of rural nonfarm firms vary across different region and provide employment to rural population. Thus, the study of firm level dynamics of RNFS has become very relevant for rural development.

2.4.4 The Study of RNFE from the Perspective of the Household

Many of the studies on rural non-farm employment have taken households as the unit of analysis. Household level analysis complements the aggregate level analysis by providing the dynamics of change at the micro level. Such perspective provides insight into the supply-side causal mechanisms that propel households to diversify to nonfarm economic activities and also to the different kinds of impact on household livelihood pattern. The livelihoods diversification framework has been used to understand diversification dynamics as response to risks, shocks and opportunities (Ellis,1998;Ellis and Freeman,2005;Farington et.al,2006). The household based coping and diversification literature has contributed in several important ways to our understanding of rural nonfarm activities. It has helped document income distribution consequences of RNFE. It has also provided considerable evidences on factor market linkages between agriculture and non-agriculture. By examining the determinants and impact of household livelihood diversification, research emerging from this perspective has helped pin pointing the factors that influence diversification of households under distress and also factors taking households on better accumulative trajectory. There are two distinct types of distress diversification- one, person without any main occupation diversifies and second, person with main occupation decides to diversify (Bhalla, 2005)

The household based coping and diversification literature has contributed in several important ways to our understanding of rural nonfarm activities. In particular, it has helped document income distribution consequences. Growth of rural nonfarm sector is likely to reduce the degree of inequality in rural income distribution (Bhalla and Chadha, 1983). It has been found that growth in rural nonfarm employment leads to increase in
earning and reduces rural poverty (Chadha, 1994). The growth of RNFS is also likely to ensure higher participation of women in non-farm activities (Unni, 1991; Misra, 2000). It has also provided considerable evidences on factor market linkages between agriculture and non-agriculture. By determining factors, determinants and impact of household livelihood diversification, research through this perspective has helped in pin pointing appropriate policy measures for households under distress and also those households on accumulative trajectory. In developing countries including India, regional and household diversification to non-farm sector such as services and industries has been accompanied by increasing or at least continuing diversification of economic activities rather than specializing.

The conventional wisdom of development economics says that with economic development, division of labour accompanied by mobility of resources facilitates specialization of economic activity. This results in higher efficiency and productivity. Such a system depends on a stable economic system. But in the context of many rural areas in developing countries, where basic preconditions of market system are absent or incomplete, economic activities are not smoothly regulated by pricing mechanism. There exist multiple risks of livelihood failure. The existing economic activities are unstable or risky, household diversify their economic activities to spread risk and mitigate loss. Farm household resort to multiple cropping and diversify household working members to nonfarm economic activities. The strict agriculture industry divide of the standard dual sector models has been broken down, and scholars have recognised the implications of both theoretical and policy related to the existence and development of pluractive rural households that derives its income from a variety of sources alongside agriculture.

Farm households in developing economies pursue a wide range of agricultural and non-agricultural economic activities. In a given economic, ecological, and regional setting, households may show different patterns of diversification on account of variation in household’s socio-economic conditions. Similarly, difference in economic, regional and ecological settings may generate different macro preconditions for pattern of household diversification to RNFE. Household diversification to RNFE refers to the class of factor allocation behaviour of rural households.

Household diversification to RNFE may be a part of the overall readjustments in the household livelihood strategy when the existing economic activities are risky and
unstable. In such cases, households are motivated by apriori adjustments in portfolio of economic activities to ensure livelihood security and in some cases, to maximize returns from different combinations of economic activities.

Household diversify their economic activity outside agriculture both on seasonal and regular basis. In case of seasonal diversification, the surplus labour or capital is allocated in nonfarm sector to complement household earning. While regular diversification refers to shift of capital or labour from farming activities on relatively permanent form, seasonal labour allocation is typically a short-term allocation mechanism. Regular shift refers to allocation of factors to non-agricultural activities; it may have different dimensional features with respect to size of activities undertaken, choice of the sector, location of the activity and functional forms i.e. self-employment or wage labour. The objective of household diversification to non-agricultural activities along with the opportunities available to them varies across household income groups and rural contexts.

Here also, there are broadly two theories that explain it viz, distress induced diversification and growth induced diversification. It is also called diversification driven by pull factors and diversification driven by push factors. The pull factors are associated with diversification associated with accumulation objectives. When relative returns are higher to the RNFE than to farming, returns to farming are relatively more risky, pull factors are at work. It is associated with upward spiral of income and assets of the households. The conditions for pull factors driving a household depend on the strength of growth motor in the given regional context. High returns in rural nonfarm activities occur in areas where some rural economic activity has developed viz, agriculture, mining, tourism, rural industries, trade and services etc. In other words, the presence of high effective demand for nonfarm commodities plays as an important economic factor. The green revolution area in Punjab, fruit producing zone in rural Chile, coffee producing zone of southern Brazil have all witnessed periods of agriculture led growth in their rural nonfarm economies (Reardon, Berdegué and Escobar, 2001).

The presence of any initial engines of rural growth may initiate a dynamic interactive process among different sub sectors of the rural economy provided there exists substantial inter-sectoral linkages comprising of backward, forward and production inter-dependencies. Access to urban market may sustain rural growth engine that also pull up
the rural nonfarm economic activities. Access to huge urban market at Delhi, Haryana and Punjab has ensured production of high value horticulture and commercial crops in Himachal Pradesh and generated rural nonfarm economic activities (Sharma, 2007). The pull factors generate inter-sectoral resource and capital flows that leads to employment and income growth in rural areas. It includes higher earnings, higher return to investment, and comparatively lower risks, generation of cash income, socio-cultural factors like demonstration effect of urbanized life styles (Davis and Pearce, 2000).

On the other hand, diversification driven by push factors involve the objective of managing risks in livelihood or attempt to ensure livelihood security through alternative avenues of earnings. It may involve immiserization of households due to shift in low earning activities. It represents escape from extreme poverty situation in agriculture. On the other hand, push factors may be operating specific to a particular household situation and may also be related in common to a group of household in a particular regional setting.

The incentive for diversification due to push factors may be generated if there is a fall in farm income, transitory drops in agricultural income, climatic change in agriculture, poor resource zone, missing credit and insurance market, landlessness, poor agricultural productivity and weak factor market etc. Distress push diversification is found in rural areas which are characterised by geographical isolation, low quality physical infrastructure, low human capital, underdeveloped market, resource scarcity, low farm productivity and low returns to farm, high population growth, increasing scarcity of arable lands, absence or lack of access to rural financial markets (Davis and Pearce, 2001)

The evidence from many Latin American case studies show that as size of land holdings declines, the share of nonfarm income in total household income rises (Reardon, Bardegue and Escobar, 2001). The share of rural non farm income in total household income is usually highest for small farm sizes (Hossain, 2004). The households may be driven by *ex ante* risk management and *ex post* risk coping strategies through both seasonal and regular diversification.
2.4.5 Determinants of Rural non-farm employment:

The set of analytical perspectives discussed in the section 2.4.4 above captures different dimensions of RNFE. Each takes different unit of analysis and also has different levels of aggregation with different structural, environmental and behavioural parameters. By highlighting on particular aspect, each of the approach can unfold the story of RNFE in the given regional, economic and environmental settings. All the four analytical perspectives are complementary in getting holistic understanding of RNFE in terms of its linkages in rural economy.

Notwithstanding the different causal dynamics, agriculture and RNFS are crucially interrelated in terms of complementarities in rural areas, which make any change in them as having multiple implications for the rural economy through linkage effects. Therefore, each of the perspectives can unthread the linkages between agricultural and rural nonfarm employment from a specific standpoint. The network of market linkages can be captured through forces of demand and supply in operation. Demand stimulus and supply responsiveness in turn depends on a variety of structural features of the rural economy like population density and distribution which determine the market size which influences the economies of scale for firms, government tax policies on local enterprises or general policy framework for rural enterprises viz tax rates, interest rates, and labour market legislations etc.

Literature review on the study of rural nonfarm sector and the variety of its interlinkages with agriculture, urban areas, trade and business, industries and other subsectors of the economy in different parts of the developing country and in India has identified many determinants of RNFE growth in the economy. It has been found that a vibrant nonfarm sector depends on a strong engine that drives it upwards. The central locomotive of RNFE growth has varied across different region. In state like Punjab, agriculture became the main locomotive that pulled up a wide range of forward and backward economic activities. In Himachal Pradesh, the growth of high value horticulture drove up rural nonfarm sector. Likewise, rural industrialisation, reallocation of industries to rural areas, large scale mining and forestry, tourism and services, trade linkages etc might also become engine of rural economic growth. To the contrary, absence of any engine of economic growth may actually expand the low earning and inferior RNFE in an economic landscape.

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Given the main engine of rural economy, there are a large number of associated variables at larger aggregation and at household level that significantly determines the household access to RNFE. Rural income which determines the MPC for non-food consumption, the quality of public goods namely infrastructure, quality of roads, transport and communication networks, Governance, access to information, credit and social capital and growth enabling economic institutions and availability of entrepreneurial, technical skills, natural resources and geographical conditions are also important determinants of RNFE.

Research findings show that access to RNFE is also determined by factors like education, ethnicity and caste, gender, financial capital, physical infrastructure and access to information (Ferrerra and Lanjouw, 2001). It has been found that both ability to get employment and level of earning tends to rise with increase in the level of education. Lanjouw (1999) found that probability of employment in regular and salaried employment increases with rise in the level of education. There are many factors that influence household diversification to RNFE, which varies across different economic context. Researchers have identified many capacity variables like human capital, social capital, financial capital, and physical capital. Capital may be public or private. Public good like quality of infrastructure facilitates development of RNFE. Good infrastructure leads to low cost of transportation. Proximity to urban centre and access to electricity, water and roads are important determinants of rural nonfarm employment. Public goods were crucial in household RNFE participation choices in Mexico (Winters, Davis and Coral, 2002). Households located in central mountain area of Peru have significantly lower RNFY than to those well served by infrastructure near towns (Reardon, Bardege and Escobar, 2001). Basically good infrastructure provides mobility to economic inputs and facilitates inter-sectoral linkages. Good network of transportation and communication expands scope for participation in RNFE. Organizational and social capital assets such as membership of organizations and connection enable participation in RNFE. It has been found that social capital may also facilitate relevant information, credit, market and other logistic requirement to people to start nonfarm enterprises particularly in context of imperfect market conditions. Social capital reduces transaction cost and helps in addressing constraints arising from imperfect markets (Davis, 2003). Further, non-economic determinants like asymmetric distribution of power due to caste, ethnic and
gender status among the workers also determine access to rural nonfarm employment. Access to rural nonfarm employment is crucially affected by non economic social identities (Harriss White, 2005). At the micro level factors like education and skill, household landholding size, capital assets act as important capacity variables. Less educated are involved in low earning nonfarm activities (Lanjouw and Sheriff 2002; Hossain, 2004).

2.5 Conclusion

There exist structural interlinkages between farm and rural non-farm sector through production, consumption and input linkages. Both development and absence of development in farm sector may fuel expansion of nonfarm activities. Also development in non-farm sector from other exogenous factors may generate conditions for development of farm sector. Empirical findings support the need to develop rural nonfarm sector as source of alternative rural employment and income particularly in the context of inadequate job creation in industrial sector and unsustainable pressure on resources due to expanding urban informal sector.

There exists diversity in socio economic conditions of rural landscape in developing countries. The differences with respect to distribution of development indicators, social and cultural institutions, natural resources endowment, and institutional preconditions of development across regions have led to variation in the nature, extent and impact of diversification to RNFE in the different economic landscape. Agricultural growth, urbanization, literacy rate, poverty land ownership, infrastructural development, access to credit, commercialisation of agriculture, rural industrialisation, trade linkages, have been identified as important determinants of RNFE. It has been found that distribution of capacity variables among the households also determines their entry into different kinds of RNFE. Thus the vast heterogeneity in rural farm and non-farm linkages over different economic settings requires different analytical perspectives and levels of aggregation undertaken to capture specific research questions at different contexts.