Chapter VIII

Summary and Conclusions

According to the traditional development theories like the Lewis model, the problem of surplus labour, unemployment and underemployment in rural economies of the developing countries could be resolved by transferring the excess pool of labour force from the agrarian sector to the urban large-scale manufacturing sector (LSMS). However, this did not happen in reality. The LSMS failed to generate adequate employment to absorb the surplus labour in rural areas. On the other hand, with migration of labour from the rural to the urban areas, problems such as pressure in urban infrastructure, urban congestion and so on cropped up. So, alternative employment generation programs within rural areas are emphasized.

In this context, the rural non-farm sector has been receiving increasing attention for rural employment generation. During the 1950s and 1960s, the policymakers and the researchers were not much aware about the existence of the rural non-farm activities. However, since early 1970s, the earlier belief that the rural non-farm sector was inefficient and inferior goods producing sector has been belied by a large number of empirical studies that indicated its dynamic character and its instrumental role in fighting the problems of unemployment and poverty. The empirical evidences suggested that, in most of the developing countries, the rural non-farm sector generates significant employment and income, though in varying degrees among countries and regions.

According to the reports of the Census of India (2011), as much as 28 per cent of the rural workers in all-India are employed in the rural non-agricultural sector. This share was about 18 per cent in 1991. It is thus clear that the share of the non-farm employment increased to a great extent during the last two decades. It is now believed that the non-farm activities need to be promoted further for reduction of rural poverty and unemployment in India and other developing countries of Asia, as elsewhere. The rural non-farm activities might also contribute to easing out the problem of urban congestion and also reducing the pressures on limited urban infrastructures. What is more, the expansion of such activities may not only reduce rural
poverty but also to strengthen the agriculture-industry linkage which is so essential to establish the regime of the balanced sectoral growth in the country.

Although, the term ‘non-farm sector’ has gained wide acceptance in the field of rural development economics in recent years, strictly speaking, there is still no consensus on its definition due to its intrinsic heterogeneous nature. The rural non-farm economy (RNFE) includes a highly heterogeneous collection of rural economic activities outside of agriculture. It includes self-employment, wage employment, full-time, part-time, formal, informal, seasonal, and episodic non-farm production. The rural non-farm sector can broadly be defined as the sector which includes not only activities outside farming, such as trade, transportation, construction, household and small-scale manufacturing, and services of various kinds, but also covers income earned by the rural residents who commute to the urban areas or abroad. The diverse income portfolios in the rural non-farm economy can include income from: (1) seasonal/longer-term domestic/overseas migration and remittances, (2) daily travel to nearby urban employment, (3) local wage labor opportunities, (4) self-employment in trade, agro-processing, services etc.

Empirical evidences suggest that there are broadly two types of motivations on the part of the rural people to participate in the non-farm activities, which are termed as the ‘demand-pull’ and ‘distress-push’ factors. The demand-pull factors work where rural people respond to the new opportunities. Reardon et al. (1998) suggest that when relative returns are higher in the non-farm sector than in farming and also the returns to farming are relatively more risky, pull factors are at work. The demand-pull factors include increase in the demand for the rural non-farm products resulting from increase in farm- non-farm linkage as advocated by Mellor (1976) and increased demand from urban areas. Moreover, urbanization, development of rural infrastructures like rural electrification, road connectivity, and increase in human capital through expansion of educational facilities are viewed as the demand-pull factors by some scholars. Conversely, when rural people engage in the non-farm economic activities that are less productive than agricultural production, and are motivated by the need to avoid further deterioration in their income, the distress-push factors are at work. Poor land-man ratio, illiteracy, unemployment and poverty have been identified as the distress-push factors. Thus, in rural areas, there would be two clusters of ‘low-return’ and ‘high-return’ activities, which are engaged in by the poor and affluent households, respectively. If the distress-push
diversification dominates, we would expect poorer households to be engaged more in diversification than others. However, in the case of predominance of demand-pull diversification, the higher income households are more likely to be engaged in the nonFarm diversification processes.

A lively debate was initiated in India on the issue of whether growth in the rural non-Farm employment is a consequence of distress diversification, or because it is responding to demand as the rural economy develops. There is a considerable amount of literature investigating the linkage between the agricultural development and the non-agricultural sector. Much of this literature refers to Mellor’s growth linkage theory (1976) which argued that the initial increase in agricultural income consequent upon the increase in agricultural productivity due to the adoption of the green revolution technologies generates a sequence of multiplier effect through various linkages. Here the consumption linkage would arise out of increased incomes of farmers and agricultural labourers, generating increases in demand for goods and services produced by the rural small-scale, labour-intensive, enterprises. The production linkages would also be derived from the development of the agricultural sector. While the backward production linkage would result from increased demand for inputs supplied by the non-agricultural sector, the forward production linkage would develop from the increased need of the agro-processing industries.

A number of Indian scholars believed that the growth of agriculture does stimulate the growth of the rural non-Farm sector (Hazell and Haggblade, 1991; Dev, 1990; Unni, 1991; Bhalla, 1981; Chadha, 1994). However, Vaidyanathan (1986) found a positive correlation between the incidence of non-Farm employment and unemployment rate, and postulated that the non-Farm sector absorbed surplus labour when the potential for agricultural employment gets reduced, suggesting a distress-induced growth of the non-Farm sector. In the context of West Bengal, the study by Chandrasekhar (1993) is widely referred as it demonstrated the absence of a clear relationship between agricultural growth and the rural non-Farm sector. He argued that agricultural growth-induced expansion of the non-Farm activities might be possible only when agriculture is in a matured stage of commercial farming. However, most Indian states are yet to reach such a stage of fully commercialized agriculture. Basant (1994), however, argued that such an observation could not be generalized for the rest of India.
The controversies among the scholars regarding the factors responsible for the increase in the rural non-farm employment arise from the high degree of heterogeneity of the sector and also from the inter-regional, socio-economic, historical and geographical differences. Thus, more studies should be undertaken both at the micro and macro levels to appreciate the significance of the rural non-farm sector. In this study, we used both the secondary and primary data to understand the factors that might promote the rural non-farm activities in West Bengal. Of course, our study also aimed at analyzing the extent and nature of the non-farm activities, examining further their role in reducing the incidence of rural poverty and the income-distribution inequality in rural West Bengal.

More specifically, our objectives have been: (1) To examine the extent of employment and income generation through the non-farm activities in rural West Bengal; (2) To identify the factors, ‘demand-pull’ or ‘distress-push’, that are responsible for the emergence of the non-farm activities in rural areas; (3) To look into the various types of non-farm activities pursued by the rural households and understanding their employment and earnings implications; (4) To identify the main determinants of the rural households’ access to non-farm employment / income opportunities of various types; (5) To identify the factors influencing the individual worker’s choice between the farm and non-farm activities; (6) To understand the impact of non-farm incomes on poverty status of the rural households; (7) To examine the role of the non-farm sector in reducing the income inequality in rural areas; and (8) To suggest some policies to promote poverty-reducing non-farm activities in rural areas.

As mentioned earlier, we used both the secondary and primary data for the purpose of our study. We began our study by analyzing the rural employment scenario in West Bengal and her 15 districts using data available from the Census of India reports for 1991, 2001 and 2011. Wherever necessary, we also used data available from the quinquennial survey reports on Employment and Unemployment by the NSSO, for the 27th (1972-73), 32nd (1977-78), 38th (1983), 45th (1987-88), 50th (1993-94), 55th (1999-00), 61st (2004-05), and 66th (2009-10) rounds. As regards the correlates (explanatory variables) of the non-farm sector employment, we collected data from other secondary sources like Statistical Abstract of West Bengal (various years), Economic Review of West Bengal (various years), CMIE report (for district level data on certain variables) etc.
In order to understand the characteristics (employment and income generating capacities) of the non-farm sector at the disaggregated level, we collected primary data from a sample district in West Bengal. We purposively selected Murshidabad district of West Bengal because of its geographical and historical significance, socio-economic diversity and rather high concentration of the non-farm workers in rural areas. The Census data for 2011 showed that Murshidabad ranked sixth among all districts of West Bengal in terms of percentage of the non-farm workers to total workers in rural areas. Moreover, the district ranks first in terms of percentage of female workers in the non-farm sector. We selected four blocks from Murshidabad of which two are agriculturally developed and the other two are relatively backward. Berhampore and Kandi were selected as ‘advanced’ blocks and Raghunathganj-I and Suti-I as backward blocks on the basis of agricultural performance and availability of agro-infrastructures like irrigation facilities etc. All these blocks displayed concentration of a fair mix of the non-farm activities. In the next step, we chose two gram-panchayats from each block and one village from each gram-panchayat thereby giving a total of eight villages for field survey. After selecting the villages, we randomly selected 50 households from each village. Thus, we had a sample of 400 households from eight villages. Field data were collected using a well-structured and pre-tested questionnaire. The reference period for our field survey has been July 2009 – June 2010. We collected field data in two rounds covering two seasons, namely, the Kharif and the Rabi/Boro. We adopted a ‘direct-personal-interview method’.

To begin with, we provided a brief historical account of the rural non-farm activities in the district of Murshidabad. We observed that although Murshidabad has been fundamentally an agrarian district, it has also been experiencing the coexistence of both the farm and non-farm activities, to a considerable extent, for a long period of time. We restricted our historical analysis of the non-farm activities in Murshidabad for the time period of 1575-1947, i.e., from the time of establishment of the Moghul supremacy in Bengal to the time of the Indian independence. Murshidabad became one of the important centers of trade and commerce from the 18th century. Availability of cheap labour and raw materials, plenty of navigable water routes and concentration of political power for a long time created a favourable environment for the industrial expansion in this district. The emergence of Kashimbazar port and the consequent arrival of foreign traders and merchants made the excellence of industrial products produced in the rural non-farm sector of the district to be familiar to the rest of the world. This
caused structural changes in the district which had immense long-term effect. In fact, a rural transformation from purely agricultural subsistence-economy to an agro-based non-farm economy had taken place during that period which brought about immense economic prosperity to the district. However, that prosperity did not last long due to some political, economic and social reasons. From the middle of the eighteenth century, the advent of the industrial revolution in Britain led to a gradual breakdown of the traditional indigenous structure of the district and there emerged a purely colonial economic structure influenced and controlled by the British. The district ultimately became the supplier of raw materials to facilitate the British industrialization under the colonial rule. Since then it has not yet been possible for the district to make a comeback due to various demand and supply side constraints for rural industrialization in spite of its lot of potentiality for industrial expansion in sectors like food-processing, tourism etc. Given its historical background, we thought the selection of Murshidabad district for field survey was very much relevant to facilitate our present study.

In the following, we present some of the findings emanating from the analyses of secondary and primary/field data.

**Findings from the Analysis of Secondary Data**

- We found that the overall rural work-force participation rate in West Bengal was lower than the corresponding national figure throughout the period 1991-2011. This is much more so for the female workers compared to the male workers. We observed a declining trend in the work-force participation rate for all rural main workers (persons) in West Bengal as a whole and majority of her districts during the period 1991-2011. Such a declining trend in work-force participation rate is observed for both the male and female rural workers. However, taking into account both the main and marginal workers, we found an increasing trend for both male and female work-force participation rate during this period. Thus, the observed trends point towards distress-push expansion of the rural marginal activities for both the male and female workers during this period (1991-2011). It has been also evident that there is wide inter-district variation in the work-force participation rate for both the rural male and female workers. This differential performance of the districts in terms of worker-population ratio indicates the variations in rural employment opportunity in response to the prevailing socio-
economic and agro-climatic attributes of the regions. The female participation rate is much less in rural West Bengal and in all her districts as compared to the participation rate for the males. This indicates the presence of gender discrimination as regards employment opportunities in rural West Bengal.

- Despite the observed lower rural work-force participation rate, the percentage of the non-farm workers to total workers was higher in West Bengal than the corresponding national figure during the period of 1991 to 2011, both for the males and females. Moreover, the percentage of female non-farm workers in rural West Bengal was always higher than its male counterpart all through this period in spite of the fact the rural female worker–population ratio is much less as compared to the participation rate of the rural male workers.

- Our district level analysis of Census data for West Bengal revealed that there are wide inter-district variations as regards the incidence of the non-farm employment (workers). As per the Census 2011, there are three districts, Darjeeling, Howrah and Jalpaiguri, where the incidence of rural non-farm employment is very high (more than 50 per cent). Howrah, which occupied the top position both in 1991 and 2001, has lost its rank taking the second position in 2011 showing a fall in the percentage of the non-farm workers. The districts that reported very low incidence of the rural non-agricultural employment (less than 30 per cent) are West Dinajpur, Cooch Behar, Birbhum and Bankura. This differential performance of the districts in terms of the incidence of non-farm employment indicates the influence of inter-regional differences in agro-climatic and socio-economic features on the promotion of the non-farm sector. However, the relative positions of the districts of West Bengal in terms of the percentage of the rural non-farm male workers remained more or less same over the period 1991-2011.

- It is also observed that the percentage of the non-farm workers increased in the state and all its districts during the period 1991-2001. However, this trend got reversed during 2001-2011 in almost all the districts of West Bengal and also for the state as a whole as against the national trend of increase in the incidence of non-farm employment. The same declining trend has been observed for both the male and female non-farm workers. It is thus clear that West Bengal failed to sustain its previous growth momentum with regard to the non-farm employment in rural areas. This might be due to the declining growth of the agricultural production as experienced by the state, especially during the period 2001-2010.
- It is also evident that the share of the non-farm employment in the tertiary sector for male workers is higher than that of the secondary sector. It is also evident that the proportion of the non-farm employment in tertiary sector has not changed much during the period 1987 to 2004-05. However, the proportion has declined during the period 2004-05 to 2009-10. Conversely, the share of the secondary sector has increased during the same period. Within the secondary sector, manufacturing sector provides more employment to the male workers. On the other hand, the contribution of wholesale and retail trade has been more within the tertiary sector in terms of employment of the male non-farm workers. However, for the female non-farm workers, the secondary sector provides higher employment than the tertiary sector. Furthermore, within the secondary sector, the manufacturing sector has been playing a dominant role in absorbing the female labour force. On the other hand, services have been the major non-farm employment provider for the female workers within the tertiary sector.

- We examined whether the observed occupational diversification in rural West Bengal has been motivated by the development of agriculture. Our observation here is that no significant relation exists between the growth of the rural non-farm workers and the growth of agricultural production during the period 1991-2011. While the percentages of the non-farm workers are higher in some of the agriculturally advanced districts due to agricultural growth-led activities, there are some other agriculturally backward districts where a large number of workers are also engaged in the non-farm activities possibly due to some distress-driven factors and/or other demand-pull factors like higher rate of urbanization, literacy rate, infrastructural development etc. Therefore, the expansion of the non-farm activities in West Bengal during the period of 1991 to 2011 has not been universally driven by the growth in agricultural production in West Bengal. In other words, the agricultural growth induced expansion of the non-farm activities is found to be limited in so far as West Bengal is concerned. Moreover, our analysis at the aggregate state level also revealed that while lower agricultural growth rate was accompanied by higher growth rate of the of male and female non-farm workers in the decade of 1990s as compared to the 1980s, the subsequent decade (2001-2010) experienced a much lower agricultural growth rate accompanied by a lower (negative) growth rate of both the male and female non-farm worker as compared to the previous decade (1991-2001). Thus, a monotonic relationship between agricultural growth and the non-farm employment as postulated in past literature is absent in West Bengal when
considered for the period 1991-2011. This finding supports Chandrasekhar’s (1993) view on the relationship between rural occupational diversification and agrarian change in West Bengal in the pre-1991 period. Therefore, the picture is yet not very clear regarding the relationship between agricultural growth and growth of the non-farm employment in West Bengal. There appears to be a lot of irregularity in this regard all through the period 1981-2011.

- Our attempt to examine the relation between the rate of urbanization and the expansion of the non-farm activities in rural West Bengal using district level data on the rate of urbanization and the proportion of rural non-farm employment revealed that the districts with higher rate of urbanization also have higher ranks on the basis of the proportion of the non-farm workers over the period 1991-2011. It is thus clear that there is some evidence of the urbanization-led growth of the non-farm activities in West Bengal. This finding lends support to the views of Eapen (2001) and Bhalla (1993, 1997) regarding the role of urbanization in expanding the non-farm employment opportunities in rural areas that are close to the urban centers.

- Apart from the urbanization, we found that the proportion of the rural non-farm workers has strong and positive correlations with the literacy rate, number of village electrified, consumption of chemical fertilizers and commercialization of agriculture. The development of rural infrastructure and formation of human capital builds strong base for rural industrialization pulling the rural workers in the non-farm sector. However, the push factors like marginalization of land holdings also appeared significant throughout the period 1991-2011. Thus, both the demand-pull and distress-push factors have been operating simultaneously for the expansion of the non-farm activities in various districts of West Bengal. The contribution of the distress-driven factors in the emergence of the non-farm sector in rural West Bengal supports Vaidyanathan’s (1986) view. The coexistence of both the demand-pull and distress-push factors also point out the presence of both the high-return and low-return non-farm activities in rural West Bengal.

- We also attempted to examine the relationship, if any, between the incidence of poverty and the incidence of the non-farm workers. We found that the rank correlation coefficient computed between the ranks of the districts in terms of human poverty index and the percentage of non-farm workers is negative (-0.41) which suggests that the incidence of human poverty is higher in the districts that have lower percentage of the non-farm workers.
Having understood the prevailing employment scenario and the factors that are responsible for the expansion of the non-farm activities in rural West Bengal and her districts, we moved to the analysis of primary (household level) data collected through the field survey. Analysis of such data helped to develop a better understanding about the rural non-farm sector in the state. Some of our findings are highlighted below.

**Findings from the Analysis of Primary Data**

Examining the extent of diversification among the sampled households, we found that the degree of employment diversification in our study areas (as revealed by the households’ dependence on the farm and non-farm sectors) has been quite high. As high as 85 per cent of the sampled households in our study district were dependent on both the farm and non-farm sectors for their livelihoods. This is true both for the agriculturally advanced and backward regions of the district. The majority of the households in both the regions have to depend on both the sectors as the earnings from the farm sector alone are not sufficient for their survival. However, the extent of diversification is higher in the agriculturally backward region due to the low and uncertain return from the farm sector.

We observed an inverse relationship between farm-size and the extent of diversification in the advanced region. The reason is that the households belonging to small and marginal farm-size groups fail to earn sufficient income from the farm sector and hence they are compelled to diversify their livelihoods towards the non-farm sector. However, the picture is somewhat different in the backward region where even the households from the large farm-size groups are under the compulsion to diversify their livelihood due to low and uncertain income from the farm sector.

As regards per household employment days generated annually from the farm and non-farm sectors, our study revealed that the non-farm sector generated more employment per household than the farm sector in the advanced region. However, in the backward region, both the farm and the non-farm sector generated almost equal amounts of employment per household. Our data show that while the non-farm sector generated 181 man-days/household per annum in the advanced region, the corresponding figure in the backward region has been 149 man-days/household per annum. In the advanced region, the share of the non-farm sector
in total employment days generated per household has been 56 per cent, which in the backward region has been 51 per cent. Therefore, the rate of employment creation in the non-farm sector is higher in the advanced region as compared to the backward region. Clearly, the agriculturally advanced region generated higher employment opportunities in the non-farm sector. Combining both the regions, it is observed that the non-farm sector generated 165 man-days per household as against 144 man-days/household generated from the farm sector per annum.

In both the regions, there exists an inverse relationship between the farm-size and percentage of the non-farm employment. Almost 80 per cent and 66 per cent of total employment days per household in the advanced and backward regions, respectively, are generated from the non-farm sector for the landless households. As the landless and the land-poor households are unable to obtain adequate employment from the farm sector, they are rather compelled to access employment opportunities available in the non-farm sector for survival.

The importance of the non-farm sector in terms of income generation is also revealed by our study. We observed that per household annual earnings from the non-farm sector in the advanced region is higher (Rs. 30.47 thousand) than that (Rs. 18.47 thousand) in the backward region. Moreover, while the non-farm sector, in the advanced region, generated almost 53 per cent of per household earnings, the corresponding figure is nearly 48 per cent in the backward region. However, both the farm and the non-farm sectors generate higher incomes in the advanced region than the backward region. Thus, the agriculturally advanced region fetches higher income for the households not only from the farm sector but also from the non-farm sector as compared to the backward region.

Having examined the extent of diversification in our study areas, our research interest led us to estimate multiple linear regression models to identify some important determinants of income/employment diversification by the households in our study areas. We regressed the percentage of the non-farm income of the households on the average education of the working members, percentage of non-farm assets, total number of working members, caste status of the households, operational land holdings, cultivable land per worker, availability of irrigation facility, average age of the workers, and distance of the household from the nearest town. The results of regression show that the proportion of the non-farm income of the household is positively related to average education of the working members, percentage of non-farm assets,
total number of working members and caste status of the households, and negatively related to operational holdings, cultivable land per worker, average age of the workers, and distance of the households from the nearest town, in both the advanced and backward regions. Thus, the households with lower operational holdings, lower cultivable land per worker and lower average age of the working members, and having better educational status, superior caste status, better non-farm asset base, more younger members, and more working members have higher proportion of income from the non-farm sources, in both the regions. When we ran separate regressions by considering all households together (combining advanced and backward areas), it was revealed that the households in the advanced region have significantly higher proportion of non-farm income compared to the households in the backward region. We have also estimated the multiple linear regression models by considering the proportion of non-farm employment (in man-days) to total employment as the dependant variable with the same set of explanatory variables. The results and conclusions are by and large the same except that the distance variable turned out to be statistically insignificant.

Considering the heterogeneous nature of the non-farm sector, we further examined the sampled households’ participation in ‘high’ / ‘low’ return non-farm activities. We found that the percentage of the households engaged in the high-return non-farm activities is higher in the advanced region as compared to the backward region. This is true for the households irrespective of their farm-size. This seems to imply that advanced agricultural system promotes the high-return non-farm sector, which lends some support to Mellor’s growth-linkage theory (1976).

We carried out binary logistic regression exercises to identify the factors which cause inter-household variation in access to high-return non-farm activities. The participation in high-return/low return activities is taken as the dependent variable here. We found that the households with higher operational holdings and better education but lower average age, lower proportion of female and child workers to total workers and living nearer to town are more likely to be engaged in the high-return non-farm activities. As regards caste variable, we found that while the households from superior castes are more likely to be engaged in high-return activities in the advanced region, no statistically significant relation exists between these two variables in the backward region.
We extended our discussion on the non-farm sector further to the individual worker level to understand the occupational choice of the workers in our survey areas. From the 400 households surveyed, we found 1374 workers (657 in the advanced areas and 717 in the backward areas). Examining the extent of diversification by the individual workers, we found that the percentage of the rural workers engaged in the farm sector alone is quite high in the advanced region (62 per cent) as compared to the backward region (37 per cent). On the other hand, the percentage of rural workers engaged in the non-farm sector alone is quite low in the advanced region (nearly 9 per cent); the corresponding figure for the backward region is relatively higher (17 per cent). Moreover, the percentage of workers involved in both the farm and non-farm sectors is also higher in the backward region (46 per cent) as compared to the advanced region (29 per cent). Thus, in both the regions, a significant proportion of the workers are ‘multi-active’ who participated in both the sectors as neither the farm sector nor the non-farm sector alone provided them adequate employment/income for survival. However, the extent of ‘multi-activity’ is quite low for the female workers in the advanced region. The picture seems to be different in the backward region in that no significant difference seems to exist between the male and female workers as regards participation in the non-farm sector (fully/partly).

We estimated some binary logit regression models to identify the factors that determine the rural workers’ choice of employment in the farm or non-farm sector. Our overall conclusion here is that the workers belonging to higher landholdings categories and having higher cultivable land per worker are more likely to be engaged in the farm sector. On the other hand, the younger male workers with better education and non-farm asset base are more likely to be engaged in the non-farm sector. It is also found that the workers in the backward region have a higher probability of getting involved in the non-farm sector. This contradicts the finding of other studies that the rural workers belonging to agriculturally advanced areas enjoy better possibility of getting involved in non-farm works. Actually, in our backward region (villages), agriculture is so backward that a high proportion of workers are compelled to get involved in non-farm works for sheer survival.

Examining the distribution of the rural non-farm workers (main plus marginal) under different modes of employment, we found that majority of the non-farm workers in both the regions are involved in casual wage employment, which is followed by self-employment.
However, the percentage of wage employed non-farm workers in the backward region (almost 76 per cent) is higher than that in the advanced region (53 per cent). The picture is by and large the same when we consider the male and female workers separately. Moreover, the percentage of the non-farm female workers engaged in casual wage employment is higher than their male counterpart in both the regions. These findings indicate the predominance of distress-push and low-return activities in the non-farm sector.

In order to identify the factors responsible for the worker’s choice between different modes of employment, we carried out multinomial logistic regression exercises. Our results here reveal that the workers’ probability of getting involved in self-employment over wage employment is greater for the male and aged workers, those having higher education and higher non-farm asset base, and belonging to superior caste category. However, as far as the choice between regular employment and self-employment is concerned, education plays a significant role. The workers with higher educational status prefer regular employment over self-employment. Moreover, workers with higher age prefer self-employment possibly because they want to avoid physical strains associated with regular employment.

As the rural non-farm sector is highly heterogeneous in nature consisting of a variety of activities, we extended our discussion further by decomposing the non-farm sector into different sub-sectors following the 2-digit classificatory scheme of the National Industrial Classification 1998 (NIC-1998). We found that there are as many as 23 sub-sectors (at 2-digit level) within the non-farm sector in the advanced region and 19 sub-sectors in the backward region. Among all these sub-sectors, while ‘construction’ has been the most important in the advanced region from the point of view of absorbing the rural non-farm workers, ‘manufacture of tobacco products’ has been the most dominant sector in the backward region. Besides these, ‘education’, ‘private households with employed persons’, ‘retail trade’, ‘public administration’, ‘health and social work’, ‘manufacture of food products and beverages’, ‘other services activities’, ‘manufacture of tobacco products’ in the advanced region and ‘construction’ and ‘retail trade’ in the backward region are other important sub-sectors. On the whole, it can be said that diversified employment opportunities are available more in the advanced region as compared to the backward region.

However, the structure of the non-farm sector varied between the male and female workers. Among the 23 sub-sectors identified in the advanced region, male workers were
engaged in 21 sub-sectors, but the female workers were engaged in 10 sub-sectors only. On the other hand, in the backward region, male workers were engaged in 18 sub-sectors and female workers in 6 sub-sectors only. This indicates that there are less employment alternatives for the female workers in both the regions, though this trend was more prominent in the backward region. Among different sub-sectors, for males, the most dominant sector has been ‘construction’ (absorbing 34 per cent of all non-farm male workers in the advanced region and as high as 50 per cent in the backward region). For females, the most important sub-sector in the advanced region has been ‘private households with employed persons’. The other sub-sectors, for the female workers in the advanced region, are ‘manufacture of tobacco products’, ‘health and social work’, ‘manufacture of food and beverages’ and ‘education’. However, in the backward region, almost 88 per cent of female workers were engaged in ‘manufacture of tobacco products’ implying very limited employment opportunities in other sub-sectors.

We examined the poverty implication of the non-farm incomes/employments. For this purpose, we calculated the percentage of poor households under different farm-size groups in our survey areas. It is found that the incidence of poverty increases for all groups of households in our surveyed areas if their incomes from the non-farm sources are excluded. This is much more so in the case of the households belonging to the smaller farm-size groups and landless households.

As regards the role of the non-farm sector in reducing the intensity of poverty, our observation is that a vast majority of the ‘destitute’ households are able to improve their poverty status through their earnings from the non-farm sources thereby reducing their degree of deprivation. Thus, the poor households in our study areas find the non-farm sector as a weapon to fight against the abject poverty.

We examined the factors that determine the poverty status of the households in our survey areas. The results of regression show that the households with higher proportion of the non-farm incomes are in a better position as far as the poverty status is concerned. Besides this, households with better land base, better land-man ratio and higher educational status are more likely to be non-poor. However, caste status does not play any significant role in determining the poverty status of the households in our study area. It is also found that the households in the agriculturally advanced region are more likely to be non-poor compared to their brethren in the backward region.
Realizing the fact that mere reduction in absolute poverty may not necessarily change the situation with regard to the relative poverty, we extended our analysis to look into the inequality impact of the non-farm incomes in our study regions. It is found that inequality in the income distribution of the rural households is higher in the advanced region as compared to the backward region. Moreover, in both the regions, the inequality in the distribution of the non-farm income is greater than that of the farm income. It is further observed that the overall inequality in income distribution in both the regions is largely explained by the inequality of the non-farm income. While 66 percent of the overall income inequality in the advanced region is explained by the inequality of the non-farm sector income, the corresponding figure for the backward region is 60 per cent. Thus, our overall conclusion here is that the income from the non-farm sector is inequality-increasing in our survey regions.

As the non-farm sector is highly heterogeneous, we felt the need for investigating the components of the non-farm income that are responsible for producing the inequality-increasing effect for the sector. For this purpose, we decomposed the inequality in the distribution of the non-farm income by its different sources. We decomposed the rural non-farm income into incomes from casual wage employment, self-employment and regular employment. It is observed that while 67 per cent of overall non-farm income inequality in the advanced region is explained by income from regular employment, the corresponding figure for the self-employment income is 32 per cent in the same region. However, casual wage income contributes only 1 per cent to the overall non-farm income inequality in the advanced region. On the other hand, in the backward region, while self-employment contributes the largest in overall non-farm income inequality (65 per cent), the contribution of income from regular employment is 25 per cent. However, the contribution of casual wage income inequality is only 10 per cent in the overall non-farm income inequality. Thus, while regular employment contributes the most in the overall non-farm income inequality in the advanced region, the contribution of self-employment is the largest in the backward region. However, it is clear from our analysis that both the regular and self-employment in the non-farm sector have inequality increasing effects on the total income distribution of the rural households.

Having identified the non-farm self-employment and regular employment sub-sectors as being responsible for increasing income inequality, we proceeded to examine the factors (socio-economic and spatial) that might explain such an inequality. We applied the regression-
based approach of income inequality. Our findings revealed that such an inequality arises due to the inequality in the distribution of land-holdings, differences in educational achievement, and ownership of non-farm assets. Besides, caste discrimination and spatial factors like proximity to urban areas also generate inequality among the households. Thus, while the richer household with greater asset-base and educational achievement enjoy greater access to high-return activities, the poor and socially backward households are compelled to participate in the low-return activities owing to substantial entry barrier to high-return activities due to their insufficient land-base, asset base and education.

Our overall observation from the field study is that a vast majority of the rural households in our study areas eke out their livelihoods from both the farm and the non-farm sectors simultaneously. A good proportion of the workers are also multi-active in nature. However, this does not depict the true significance of the non-farm activities and the livelihoods diversification process as the non-farm sector itself is highly heterogeneous in nature, ranging from the low-return to the high-return activities. It is evident from our study that the access to the high-return activities has been limited primarily due to lack of education/skills and assets, inferior caste status, poor land base and so on. The importance of education in accessing the high-return non-farm employment supports Lanjouw and Shariff (2000) who found strong evidence of education determining the households’ access to the non-farm employment. Moreover, economically affluent households are found to enjoy greater access to the high-return activities. So, the poor households are basically engaged in the low-return activities driven by their distress conditions. The differential access to different types of non-farm activities by the households causes income distribution inequality in our study regions.

Policy Implications

In the light of the above findings, we may put forward the following policy suggestions:

1. It appears from our analysis of secondary data that West Bengal has failed to establish strong linkage between the farm and the non-farm sectors to reap the benefit of agricultural dynamism. In order to strengthen the link between the agricultural and the non-agricultural sectors, special attention needs to be given to the development of the agrarian sector itself. We
found that agricultural growth rate in West Bengal has significantly declined since the second half of 1990s. Moreover, the percentage of the non-farm main workers has also declined, particularly during the last decade (2001-2011). Our field data showed that the non-farm sector fetched higher income and generated higher employment days in the agriculturally advanced region. Moreover, the percentage of households engaged in the high-return non-farm activities is higher in the advanced region. So, we cannot deny the crucial role of the agricultural sector to promote the expansion of the rural non-farm sector. The policy makers should view the farm and non-farm sectors as complementary to each other. A comprehensive and sectorally balanced growth strategy should be drawn for the development of rural West Bengal.

(2) In course of our study, we noted that a large number of factors like availability of irrigation facilities, villages electrified, commercialization of agriculture, use of chemical fertilizers, urbanization etc. play important role in the expansion of the non-farm activities. So, special emphasis should be given for infrastructural development as well as institutional reform. The development of the rural infrastructure with proper marketing and storage facilities is necessary for the development of agro-based industries, which may subsequently strengthen the farm-non-farm linkages. As we mentioned in our historical analysis in chapter IV, there is huge wastage of vegetables every year in our survey district due to insufficient cold-storage facilities. This often leads to huge loss for the farmers. Therefore, the issue of the development of agro-infrastructure should be addressed more seriously.

(3) Our observation from the micro-level study revealed that the economically affluent households with greater operational land holdings and asset base enjoy greater access to the high-return non-farm activities as compared to the poor households. Therefore, the policy makers should take initiative to ensure the availability of high-return non-farm works for the poor. By widening the ‘scale of finance’ and providing cheap loan to the poor households with negligible land/asset base, their accessibility to the high-return non-farm activities may be increased.

(4) Our analysis of the secondary data revealed that the expansion of the non-farm sector is higher in the districts where literacy rate is also higher. Besides this, our primary data also established that the households with lower educational status find it difficult to get access to the high-return non-farm activities. Moreover, households having higher level of education enjoy
better access to the regular employment and self-employment. Therefore, improvement of educational base and skills for the prospective workers is a necessity.

(5) It became clear from our study that inequality in the distribution of land-holdings, non-farm assets, education and caste-discrimination are widening the inequality of the rural non-farm income distribution which has ultimately aggravated the overall income inequality. While the poor are compelled to get involved in the low-return activities due to lack of sufficient land-base, asset-base and education, the rich are involved more in the high-return activities on the strengths of their better assets base and educational level. Some socio-economic transformation is, therefore, required to remove the entry barriers faced by the poor households for participating in the high-return non-farm activities on which policy makers should be seriously focused.

(6) It is revealed from our micro-study that the proximity to urban area increases the incidence of the non-farm activities in the rural area. It is also observed that the poverty status of the rural households improves for those residing nearer to an urban area. In fact, if a village is very close to a town, the villagers enjoy the option to commute freely to avail of urban jobs in the agricultural slack season. Apart from this, urban-led demand for rural subcontracting is likely to emerge. Thus, the availability of sufficient transport and communication networks between the villages and the nearby urban centers can increase accessibility of the rural workers to the ‘urban-located’ non-farm employments. Therefore, government has to take initiative to improve the connectivity of the rural areas to the urban centers.

(7) We found evidence of gender discrimination with regard to employment in rural West Bengal. Although the work-force participation rate is very high for the rural female workers, they are basically forced to be engaged in the low-return activities driven by their distress condition. So, to improve their access to the high-return activities, special emphasis has to be given to improve their educational status. Apart from this, intensive job-oriented training programs for the female workers should be undertaken to enhance the efficiency of the female workers.

(8) As the state of West Bengal as well as our study district, namely Murshidabad, has a strong background of traditional rural industries, innovative measures need to be taken to capitalize on such industries making them compatible to the present-day demand.
(9) Above all, a more egalitarian socio-economic structure in terms of land distribution, asset distribution and accessibility to effective educational facility along with rural infrastructural development is required to reap the benefit of the rural non-farm sector.