Chapter IX

SUMMARY, MAIN FINDINGS AND POLICY RECOMMENDATIONS

An extensive review of agricultural development across the developing regions of the world pointed to the significance of RNF activities in providing gainful employment and income to the rural workforce. The increased interest in RNF sector is largely revolved around two main considerations. First is that there are severe limitations on the agricultural sector’s capacity (especially, the crop sector) to absorb the existing rural labour force and to satisfy even the bare minimum subsistence requirements of a large proportion of rural population of a developing economy. Second is based upon the premises that the labour absorption capacity of urban based modern industrial and services sectors is extremely low. And, many developing economies are unable to fully absorb a net addition to urban workforce arising from the natural increase, what to speak of employing surplus labour force of rural areas. These developments have renewed the interest of mainstream development economists and planners towards RNF sector as the potential source of productive employment to the growing rural labour force.

The theoretical and empirical research studies, reviewed in this study, put many forceful arguments in favour of RNF sector as it has a strong potential for (i) absorbing the growing rural labour force in remunerative occupations; (ii) promoting a more equitable distribution of rural incomes; (iii) contributing to the national income growth; (iv) raising the skill formation and entrepreneurial capacities of rural workforce to generate a seed-bed of entrepreneurship and innovations; (v) arresting the migration flow of rural unemployed to towns /cities as a source of employment; (vi) reducing the rural poverty and inequality; and (vii) correcting the regional balance in economic development.

Though the studies on structural transformation of agrarian economies tell very little about RNF employment, yet the experiences of all developing countries show that the RNF activities have rather increased at a significant rate over the years. In fact, many studies have shown that the RNF sector in India has become an important component of rural employment and development strategy. There are
indeed some research studies on the RNF sector in Punjab. The present study, not discounting the seriousness and efforts of earlier works, has made a serious attempt to comprehend the real factors behind the emergence and relevance of RNF sector in the state like: the extent of engagement of rural workers in non-farm activities; the nature and character of these activities; the determinants of these activities and their potential for improving the rural incomes and mitigating the adverse effect on rural income distribution caused by the unequal distribution of land; etc. The rationale behind studying the RNF sector in Punjab became especially important in view of the fact that the agriculture sector in the state has already started shedding labour and there are serious limitations of organized industrial and services sectors in absorbing young men and women from rural areas.

9.1 Main objectives
1) To study the rural employment scenario and sectoral composition of workforce in Punjab since 1961;
2) To study the impact of RNF sector on employment and income;
3) To examine the determinants of RNF employment in Punjab;
4) To examine the various linkages of RNF sector with other sectors;
5) To study the impact of RNF sector on poverty and income inequalities in rural Punjab;
6) To review the existing policy measures available in the state those influence the rural development and non-farm sector; and
7) To suggest policy measures for the development of a vibrant RNF sector in the state.

9.2 Hypotheses tested
1. The process of economic development has led to occupational diversification in Punjab;
2. Agriculture sector in the state has failed to absorb the backlog and increments to labour force in rural Punjab;
3. Development of RNF sector in the state has a favourable impact on employment and income levels; and
4. Growth of RNF activities reduces the poverty incidence and income inequalities in rural Punjab.

9.3 Research design and methodology
The study is primarily based on the primary data. Some secondary data both published/unpublished and of individual research studies have been used for building a support base. The primary data were collected through the census survey of 24 villages (8118 households) and sample survey of 400 households (300 RNF
households and 100 pure agricultural households) of these villages of the state. These villages were selected following a multi-stage random sampling technique. At the first place, all 72 tehsils in the state were arranged in a descending order, i.e., from the maximum percentage of RNF employment to the least. These 72 tehsils were regrouped in three sets, first 1 to 24, then 25 to 48 and lastly 49 to 72. After that, all 138 development blocks, as per the ranks assigned by the ESO, Punjab, were superimposed on the tehsil ranking. To give fair representation to all districts, ultimately, 12 development blocks, namely, Khera (3), Rupnagar (16), Jagraon (19), Patti (24), Adampur (30), Lambi (52), Talwara (62), Batala (77), Nathana (77), Nabha (93), Andana (104) and Gurharsahai (118), were selected. Further, these blocks were divided into three categories: Zone I comprised of the highly developed blocks of Khera, Ropar, Jagraon and Patti. Zone II contained the moderately developed blocks of Adampur, Lambi, Talwara and Batala. Lastly, Zone III consisted of the least developed blocks of Nathana, Nabha, Andana and Gurharsahai.

At the second stage, 24 villages (two from each block) were chosen by taking into account all important characteristics of socio-economic and physical infrastructure like agricultural development, population density, closeness to tehsil/district/urban centres or national/state highway, etc. Household data, through census enquiry, from all 8118 households of 24 villages was collected. These households were further divided into RNF households (4781 households) – a household in which one or more of its family workers were employed in non-farm employment on a more or less regular basis or if the worker(s) spend greater part of his time in non-farm employment – and agricultural households (3337 households) purely dependent upon agriculture and/ or allied activities.

In the next stage, 300 RNF households and 100 pure agriculture households were on the basis of proportional probability random sampling technique. For instance, all these 300 RNF households were allocated to three different zones as per their respective shares in total RNF households in 24 villages; 120 RNF households were selected from the most developed region, i.e., Zone I, 91 RNF households from Zone II of moderately developed blocks, and finally, 89 RNF households from Zone III of least developed blocks of the state. Further, the RNF households in all villages were divided into two broad categories: (i) landless RNF households and land holding
RNF households; and (ii) as per the parameter of educational attainment of RNF household heads - illiterate, up to primary, beyond primary but up to matriculation and beyond matriculation. The rule of proportionate probability sampling was applied at each level for making random selection of households. Similarly, 100 pure agriculture households were selected.

9.4 Main findings of study

The study highlighted that the rural employment scenario in the state is not very encouraging. The labour absorption of Punjab agriculture is an outcome of two contrasting processes: on one hand, increasing net sown area and/or crop intensity and changing cropping pattern from low labour absorbing crops to higher labour absorbing crops has raised demand for more labour, and on the other hand, high mechanization process led to the displacement of labour. Till the mid-1980s, combined impact of these processes resulted in a sustained rise in labour-use per hectare. After that, these positive factors were not sufficiently enough to compensate for the negative impacts of mechanization resulting in the contraction in man-days employed per hectare in almost all crops in the state. To add on, the number of migrant labourers in the state increased over time. Another noteworthy fact is that over the years, number of operational land holdings in the state has shown a declining trend, with total holdings having reduced from with slightly more than 1375 thousands in 1970-71 to 997 thousand in 2000-01. It signifies that a number of cultivators are leaving the profession due mainly to non profitability in the profession. Nearly two lakh farmers in Punjab left farming during the decade of 1990s. The land operated per agricultural worker has declined from 1.93 hectares of net area sown in 1960-61 to 1.25 hectares in 1990-91 and further to 1.13 hectares in 2000-01. It has clear implications that the available land area is just not sufficient for agricultural workers in the state.

The state of Punjab has also witnessed a structural transformation in its economy. The contribution of primary sector towards NSDP decreased from 59.33 per cent in 1960-61 to 40.32 in 2000-01. The secondary sector has improved its share from 14.85 per cent to 24.03 per cent over the same period. Similarly, the tertiary sector has also increased in significance with 35.65 per cent of NSDP being generated by these activities in 2000-01. The structure of workforce has also exhibited the
similar change, although in a subdue manner, over the last 40 years. In 1961, 57 per cent of main workers in the state were employed in agriculture & allied activities. Their share increased to 63.60 per cent in 1971. It reflects the increasing capacity of agriculture in absorbing the increments to rural labour force during the heydays of green revolution in the state. However, the share of workers in agriculture & allied activities decreased steadily thereafter. For instance, in 2001, only 45 per cent of main workers were engaged in agriculture & allied activities. The share of agricultural workers which remained pegged at 55 per cent during 1961-1991 decreased to 39 per cent in 2001.

In the light of these observations, it is erroneous to consider contemporary rural Punjab dependent exclusively upon agriculture & allied activities and agrarian production relations. In fact, agriculture sector is neither a sole nor a dominant source of employment for rural labour force. Already, the RNF employment in the state has gained importance. The study highlights that a majority of rural households belonging to the sampled villages in Punjab were having one or more of their family workers engaged in various non-form activities within the village or outside villages or urban towns. Out of all 8118 households in these study villages, 4781 households (58.89 per cent) were termed as the RNF households. Similarly, of all 14,768 main workers across these households, 7660 workers (51.87 per cent) were engaged in non-farm work on a more or less regular basis. The extent of RNF employment in these villages, however, was not the same. It was the highest in villages that belonged to the developed blocks (Zone I); low in villages belonged to moderately developed blocks (Zone II); and least in villages in the least developed blocks (Zone III) of the state.

RNF sector in the state, as everywhere, is highly heterogeneous in nature. The study noted down 81 different non-farm activities in which 452 workers belonging to 300 RNF households were found to be employed. Alongside the traditional occupations like carpentry, quilt-filling, hair-cutting, sepi, tailoring, etc., many modern activates like generator and auto repair, sound service, tent service, selling/repair of mobile phones, repair of agricultural machinery, labour contractor-ship, etc. also provided employment to rural workforce termed as RNF workers. However, it has been observed that the traditional activities are decreasing in
importance and are giving a big way to modern occupations. Of all RNF workers identified by the study, 31 per cent were found to be casually employed. Another 30 per cent were in self employment. Almost 17 per cent were in government/para-government employment. Slightly, more than 16 per cent were employed in private originsations and factories. A shade larger than 6 per cent of RNF workers were employed in foreign countries who send remittance fairly regularly.

Services are the most dominant source of employment of RNF workers. Of all 452 RNF workers, almost 43 per cent workers were in services-related activities, followed by manufacturing, processing, servicing and repairs (23 per cent); construction related activities (13 per cent); transport, storage and communications (13 per cent); and trade & commerce (8 per cent). Surprisingly, less than 0.25 per cent of workers were employed in mining and quarrying, reflecting lack of minerals and naturally found raw materials in the state. Interestingly, RNF employment space in Punjab is overwhelmingly occupied by the male workers as 87.87 per cent of RNF workers were males, while the females constituted only 12.33 per cent.

Caste-wise division of sampled households was on the expected lines. For instance, more than two-fifth of RNF households (42 per cent) belonged to the SCs and another one-fourth of RNF households (25 per cent) to the BCs. Jat Sikh households cornered another 25 per cent share in RNF employment. Of all the RNF workers, 22.36 per cent belonged to Jat Sikh caste. Further, the maximum share (slightly more than 42 per cent) came from SC workers. About 26 per cent belong to various backward castes. Of all 5377 rural workers belonging to Jat Sikh, nearly one-third (32 per cent) were working in non-farm operations.

As far as educational attainment of RNF households and workers is concerned, it was not very high; instead it was very low. A little more than two-fifth heads (40.64 per cent) of RNF households (1943 households out of 4781 RNF households) were illiterate. Similarly, almost 34 per cent of RNF workers in the state were illiterate. However, 41 per cent of RNF workers had studied beyond the primary but up to matriculation level of education.

On the question of land holdings, almost three-fourth households (75 per cent) of all sampled households who participated in RNF activities were landless. Further, a
more than 10 per cent were marginal farmers having land less than 2.5 acres. Another 6 per cent were from small land holding farmers. Thus, almost 91 per cent of all RNF households belonged to the resource poor households, i.e., landless, marginal and small land holders. A little more than 5 per cent of RNF households were having semi-medium holdings. Almost 4 per cent were operating 10 or more hectares of land.

The study revealed that the largest category of RNF workers is of those workers who are landless but educated between the primary and matriculation levels. Its share stood at 34.09 per cent. 20.59 per cent of RNF workers belong to the class of landless as well as illiterate workers. On the other hand, amongst the workers exclusively employed in agricultural and allied activities, the largest share is of uneducated land-less workers. Slightly more than 24 per cent of all the agricultural workers belonged to this class. Further, these land less and illiterate workers are, in fact, the most vulnerable and disadvantaged lot of rural workers. But, it is ironic situation in the state as more of such workers were engaged in agricultural activities than that in non-farm pursuits.

It was estimated that an average rural household which had one or more of its workers in non-farm employment earned a net income of Rs. 254,839 per year. Out of it, Rs 159,735 came from the RNF sources, Rs 83,669 from the farm activities (crop income, agricultural labour, agricultural allied activities, land rent, etc. together) and the rest of Rs 11,435 came from the pensions, remittances, etc. Thus, the proportionate share of RNF income to total yearly income came nearly to two-third (65.63 per cent). It was also found that this share tends to fall with the increase in the size of land holdings. For a landless household, RNF income share in total earned income was estimated to be 89.71 per cent; for the marginal land holding RNF households, 78 per cent; for the small land holding RNF household, 54 per cent; for the highest land holding (having land holdings more than land 25 acres), 41.10 per cent.

The study also proved that the rural households engaged both in the RNF employment and agriculture sector employment earned more income on per household basis than that the households who remain completely embedded in the agriculture sector. And, this was also true for the households of all land size classes.
Interestingly, the study found that engagement in non-farm pursuits improves the income level of land holding households. In the case of small, medium and semi-medium land holding households, their income from the crop husbandry was much more when they engage in non-farm pursuits than that when they exclusively relied upon the farming activities.

The study also elucidated that a worker from RNF engagement earned an annual net income of Rs. 106,019. Services activities give the maximum per worker income of Rs. 145,123. Surprisingly, manufacturing, processing, servicing and repairs yield only an annual income of Rs. 60,666. Clearly, services activities are the dominant source not only of employment, but also of net incomes. In the context of stagnating agricultural incomes and limited capability of absorbing additional labourers and increasing casualization of employment in organized manufacturing and service sectors, getting a monthly net income per worker of more than 12,000 from the RNF services activities is a significant development in the state.

About space distribution of RNF employment, it was found that 47 per cent of RNF workers got employment locally, i.e., within their own villages and the rest employed in other villages or in urban towns. Interestingly, slightly more than two-fifth workers (41 per cent) commute daily to their work place. Another, larger than 12 per cent of rural workers were employed at far away places and commuting by the buses was the most common mode adopted by them. This is a reflection of increased connectivity of rural area of Punjab with the market oriented employment centres. Significantly, there was sufficient work, measured in terms of number of employment days, for RNF workers. The study found that out of 334 RNF wage workers, a large majority of them was found working for more than 20 days in a month.

The RNF employment was found to have a mitigating influence on rural poverty and income inequality. Basing the analysis on a poverty line of Rs. 897.17 per person per month (Tendulkar Committee Methodology), the study revealed that 16.75 per cent of sampled households were below the poverty line in 2009-2010. Out of the RNF households, 14 per cent were below the poverty line, whereas of purely agricultural households, 25 per cent were below the poverty line. The poor RNF households had 30.43 per cent shortfall in income to cross the official poverty line.
On the other hand, the poor agricultural households have almost 35 per cent shortfall income to reach above the official poverty line. Thus, it is comparatively easy for the state poverty reduction programmes to alleviate poverty among the RNF households than amongst the agricultural households. Moreover, the RNF employment in the study villages not only improved the income levels of rural households which reduced the magnitude of rural poverty, it also dampened income inequality amongst rural households.

Of the factors responsible for the emergence and development of the RNF employment in the state, the study came to a conclusion that the education levels of household heads as well as of workers exert a significant and positive influence on the participation in non-farm activities. The size of land holding with the household, however, has a negative relationship with the extent of non-farm participation. It is found that more is the number of male workers in the household; more is the probability of its participation in non-farm activities. Similar trend was witnessed across the leased-out agricultural land households. On the other hand, leasing-in land, like the size of land holdings, exerts a negative pressure on the involvement of households in non-farm activities.

The study also tested statistical significance of influence of various village level factors on the RNF employment in the study villages. For example, connectively of the villages to the national/state highways, railway stations and presence of technical institutions exerted significant positive impacts on RNF employment pattern, while the impact of operational area in the village and population size was found to be negative. The influence of the closeness/distance of the villages to the nearest towns and cities showed a mixed result.

Regarding linkages of RNF sector with agriculture, an analysis of data revealed that almost 27 per cent of self employment activities in RNF sector had direct linkages with the agriculture. Of these, 69 per cent more found to have grown because of RNF sector's forward linkages with agriculture and the remaining 31 per cent having the backward linkages with the agriculture.

Further, the study also indicated that new agricultural technologies by increasing the agricultural productivities not only release the rural labour force into
non-farm labour markets, but the rising agricultural production also provides funds for investments and redeployment into non-farm pursuits. The study lent support to these trends as more than one-third (36.71 per cent) of start-up capital in self employment ventures came from surpluses generated in agriculture. In certain lines, e.g., mining and quarrying, manufacturing activities, other services, and trade & commerce, the share of agricultural savings as a component of total initial capital outlay was found to be more than 40 per cent. RNF sector in the study villages has, thus, become a vehicle to mop up unutilized idle savings and their redeployment in productive activities of all the kinds.

Similarly, the RNF sector in the state was found to have significant linkages with the urban areas. The study found that a slightly more than 16 per cent of rural workers engaged in various self employment activities for non-farm were working in urban areas. By adding the workers engaged in wage labour and self employment activities in urban areas, then urban based workers’ percentage share would certainly be increased. In no way, thus, rural areas in the state can be considered as completely bounded by its spheres. Rather, the RNF activities grow in a continuum of rural-urban space.

Further, Punjab government, from time to time, took a number of initiatives to promote RNF employment in the state. Some of the programmes targeted directly at the development of the RNF sector. Others were basically meant for to promote the other sectors of the economy, including agriculture, but nonetheless such measures had a contributory role for the growth and development of the RNF sector in the state.

9.5 Public policy implications

RNF sector has not only become a reality, but has also emerged as one of the dominant sources of employment and income for the rural households in the state. To ignore or underestimate it would simply be perilous for the state economy and her people. One of the safe generalizations which can be safely made about RNF sector is that it is highly heterogeneous in nature. It is, thus, difficult to suggest broad policy prescriptions for promoting this sector as a whole and, perhaps, nor it would be desirable.
Contrary to popular views that the rural industries or manufacturing, processing servicing and repairs are a major source of employment of RNF workers, rather it is the 'other services' and 'services activities' which have occupied the dominant position so far as the employment and incomes of workers are concerned. For productive and better rewarding services, investment in human capital is a prerequisite. Education has become one of the main determinants of household participation in non-farm endeavours. For example, with the attainment of primary education, participation of workers in the RNF activities shoots up by as much as 17 percentage points. But the finding that more than 40 per cent of RNF household heads and 34 per cent of RNF workers in the study villages had no education at all casts serious doubts on their participation in emerging higher rewarding and more productive services and trade related activities. This calls for all out efforts to improve rural education.

The data also revealed that the educational attainments resulted in widely different outcomes in the developed, moderately developed and the least developed regions. This calls into question the quality of education being provided in remote and backward villages of the state. Not only the infrastructural gaps at the level of primary to secondary education need to be plugged, but the quality of education needs to be improved significantly. Furthermore, special steps need to be taken to increase the enrollment of rural students in higher professional colleges and universities of the state. The recent tendency of the state government to increasingly withdrawal from the social services needs to be arrested and public investments in these sectors must be enhanced. Only then, the workers belonging to the most vulnerable and disadvantaged groups can enter the high rewarding non-family occupations.

There is a need to increase the participation level of women workers in RNF activities from the existing low level of 12 per cent to higher levels. For this, non-farm employment, which is closer to their homes and/or which does not adversely affect their duties of child-rearing and households’ chores, needs to be created and adequately promoted. Recently, the Department of Industries of the state, with the active cooperation of private spinning mills in Punjab, has started public awareness campaigns to enroll the maximum women workers in these mills. Experience of
certain mills in Samana block of Patiala district and Hoshiarpur block of Hoshiarpur district is really encouraging. In these private sector mills, mill owners arrange transport facilities for bringing the women to the mills and then back to their homes. One of the spinning mills in Hoshiarpur block-I (belonging to Vardhman Textiles Limited) has also constructed a hostel for the night stay of the female workers (observed during the filed study). Such initiatives need to be institutionalized and encouraged.

Rural infrastructure is a must for productive and rewarding employment in the RNF sector as nearly 47 per cent of all RNF workers were employed locally. Uninterrupted power supply to village level units - shops, flour mills, repair shops, furniture making units, agro-processing units, etc. - would go a long way in creating year-round employment within the villages. Further, as much as 41 per cent of RNF workers commute to the urban areas and other villages on a daily basis. Bus transport, being the main mode of travelling, and road infrastructure including public transport system must be jacked up. Though all villages in the state are connected through all-weather metalled roads, but many of these roads are not travel-worthy. Along with the constructing new rural link roads, the state agencies must be made to repair the already built-up roads once in five years. The study has earlier noted that more than 60 per cent of bus transport at present in the state is under the control of private companies. A common tendency for these private bus transporters is to ply their buses on remunerative urban-to-urban routes. This has left the rural commuters high and dry. The state government should either enforce its route management system more effectively or should not leave the space for private companies who only have the profit motive in mind.

More than 16 per cent of self-employed workers worked in units located in nearby urban areas. More rewarding services and trade related opportunities are emerging not in villages but in urban areas. Small and mandi towns have, thus, become important locales of RNF employment. For sustenance and further growth of employment here physical infrastructure including uninterrupted power supply, good roads, sewerage and water supply, communications, etc. must be strengthened. Land-use for various activities must be notified and strictly enforced to avoid unnecessary
congestion and pressure on scarce urban resources. Public spending in dynamic and vibrant rural towns would not only promote RNF employment, but also can be a key component of any strategy for urban poverty reduction.

Nationalized banking and other institutional mechanisms for formal credit delivery must be broadened and deepened. A substantial amount of capital requirement for setting up self employment ventures is still being met through informal resources like traders, ahritiyas, private companies, etc. at exorbitant rates of interest. At present, no public sector bank gives loans for second hand transport vehicles like the trucks. High interest rates make many self employment ventures financially unviable.

Agriculture sector in the state should continue to be given priority. Of late, state government has virtually stopped making funds available for research and development of new varieties of crops and for better management of crop husbandry. Punjab Agricultural University, Ludhiana, which used to be the leading university of the country and which has contributed significantly in revolutionizing the agricultural system of the state, is hardly getting any budgetary support above the levels of salaries to its staff. In view of the fact that the agriculture sector in the state not only provides gainful employment to nearly half of rural workers (48 per cent; based on study results), but has significant linkages with the rural non-farm economy also, the state must not withdraw itself from making investments in this sector.

RNF sector in the state seems to be no body's baby. Neither the Punjab government’s Department of Industries owns it nor the Department of Rural Development and Panchayats caters to its basic requirements. Thus, a separate and an exclusive Department of RNF Sector at the state level with adequate presence in each and every district is urgently needed for its systematic and planned development. To begin with, a state level advisory body analogous to Punjab State Farmers Commission, headed by an eminent academician and researcher of RNF economy in the state needs to be set up. Though the state government has taken a number of steps to promote RNF economy in the state, yet many more measures, particularly to promote rural education and rural health are to be initiated in Punjab at an extensive scale.