CHAPTER I

RURAL EMPLOYMENT AND LIVELIHOODS:
THEORETICAL DEBATE AND EMPIRICAL GAPS

I. THEORETICAL DEBATE AND EMPIRICAL EVIDENCES

The issue of rural employment has been extensively researched in the context of the developing world particularly after the well known 'dual sector' labour transfer model that was conceptualised by W. Arthur Lewis (1954) and later developed by Fei and Ranis (1964). The main contours of Lewis's model of expanding employment opportunities, which explicitly made a dual division of the economy into the modern capitalist industry and pre-capitalist agriculture, are widely known and, unlike most other models, took into account the institutional and economic milieu of Third World nations. The capitalist industry sector, which was also presumed to be governed by the competitive rule of the game, was the leading sector where capitalists reinvested their profits. The pre-capitalist agriculture sector was considered to be a passive reservoir of surplus labour which could be available to industry at a constant wage (i.e. an infinitely elastic supply of labour to the industrial sector was presumed initially). So long as labour was available at the constant wage, industry would reap profits, which would be reinvested to expand the capitalist sector. The limit to this process was set by the exhaustion of the surplus labour in agriculture when the wage in agriculture would attain a competitive level (equal to marginal product). This mechanism is shown to work for the benefit of both the sectors. On the one hand, as the surplus labour from agriculture gradually moves out, the productivity and earnings of those left behind increases leading to a flow of remittances from non-agricultural employment to rural households. On the other hand, the availability of surplus labour from agriculture, at a fairly low level of wage rates, helps the expansion of the non-agricultural sector.

The Lewisian perception, which took for granted an ever expanding demand for labour in the urban industrial sector, seems to be rudely shattered by empirical realities (Randhawa, 1989; Bhardwaj, 1994). The 'institutionalist'
characterisation of the industrial sector as 'competitive' and of agriculture as the 'pre-capitalist' reservoir of surplus labour not only oversimplifies the existing scenario but lends to analytically misleading conclusions (Bhardwaj, 1994). For example, agrarian studies in India have amply demonstrated that the peasantry cannot be treated as a homogenous mass of producers, either as a passive reservoir of surplus labour or as independent producers facing the competitive markets.¹ On the other hand, industrial growth-led development strategy could not generate enough employment opportunities and there persisted the backlog of unemployment and underemployment. The evidence of increasing poverty and income inequalities triggered off the critical view of the industry-led growth philosophy. Moreover, the growth in the additions to the labour force are increasingly being employed in the agricultural sector itself and in the informal sector, with low levels of productivity; and thus, the price mechanism of resource transfers is not seen to work as effectively as in Lewisian or neo-classical framework. The explanation of migration of labour on the basis of rural-urban wage differentials is also questioned by empirical findings (see Bhardwaj, 1989).

The severe limitations of the Lewesian model attracted a spate of empirical work on rural employment in effect. This explained the shift in the rural labour force from farm to non-farm sector apart from attempts to perceive rural employment on somewhat new lines, i.e., processes of diversification vis-a-vis changing structure of rural employment. This is viewed in the development literature from two perspectives. The first is the rural growth linkage model originating in the mid-1970s in the work of certain influential writers on rural development (Johnston and Kilby, 1975; Mellor, 1976) and applied to the study of rural growth, employment and incomes in Asia and Africa. The second, in sharp contrast to the first perspective, is 'distress induced' diversification of employment (McGee, 1971; Vaidynathan, 1986), which occurs when the agriculture sector is unable to fully absorb the rural labour and the non-agricultural sector acts as a sponge for the excess labour.

1. Growth Linkage Model

The growth linkage model views rising farm productivity and incomes induced by technical change as the source of diversification of employment and earning opportunities in rural areas. It is premised that technology-driven agricultural growth leads to several linkages—both production (forward and backward) and consumption—between agriculture and non-agriculture, which in turn results in the expansion of employment in the non-agricultural/non-farm sector. This alters the pattern of demand for goods and services and opens up opportunities for the further growth of employment in the non-farm sector (Chadha, 1994; Unni, 1998). Additionally, agricultural prosperity (in terms of increased crop output per capita of agricultural population) will enhance this demand for labour in agriculture, leading to better absorption of labour within the agricultural sector, reducing the spill-over of excess labour into non-agricultural employment (Vaidyanathan, 1986). A number of Indian studies support this development trajectory—growth of agriculture would stimulate growth and development of the rural non-farm sector (RNFS) (see particularly Hazell and Haggblade, 1993; Bhalla, 1993; Papola, 1987, 1994; Unni, 1991, Chadha, 1994).

'Prime Movers' outside Agriculture

In response to attempts at the empirical validation of growth linkage model, alternative hypotheses were developed, and need to look for additional prime movers outside the agricultural sector was emphasised (Bhalla, 1993). Whilst the importance of agriculture-led growth was acknowledged, the role of additional factors such as rural infrastructure, education/skill development of rural workers, urbanisation and government rural development schemes were also recognised.

Bhalla (1993, 1997) emphasises the importance of proximity to urban centers for rural livelihood diversification. In an assessment of district-level Census data she concludes that a switch in preference for urban-produced inputs has had a significant impact on the growth of non-farm sector in districts of high agricultural productivity. Papola (1992) stresses the role of rural towns in the employment of rural workers as diversification of rural non-farm enterprises was higher in regions where rural towns were more evenly spread than where there
were only a few concentrated settlement. He attributes this to the action of forward and backward linkage. More recently, based on the NSS region level data, Srivastav and Dubey (2002) also find that urbanisation had a strong impact on the growth of RNFE. Shukla (1991, 1992) in Gujarat, Jayaraj (1994) in Tamil Nadu, and Eapen (1995) in Kerala have also found significant positive influence of urbanisation on rural non-farm growth, aside from its effects on rural-urban migration. Literature also refers to the significant contribution of urban centers in generating the process of rural-urban migration in search of non-farm employment.

In their analysis of growth linkages, Hazell and Haggblade (1993) highlight the importance of rural infrastructure in increasing the income multipliers of agricultural growth to the non-farm sector. Jayaraj (1994) and Narayanamoorthy et al. (2002) underscore the importance of the development of transport infrastructure for rural non-farm employment (RNFE) opportunities, while Singh (1994) points to its significance in rural electrification. Harris (1991) also highlights the need for a sound rural infrastructure to maximize rural growth linkages, as does Shukla (1992), who notes the beneficial impact of good roads, in particular on trading and non-household manufacturing, whilst household manufacturers were adversely affected.

According to Eapen (1995) the level of education played a significant role in generating non-farm employment in Kerala, allowing shifts in employment from the agricultural to non-agricultural sectors. Jayaraj (1994) and Basant (1993) observe a positive relationship between literacy and rural non-farm employment, while, Narayanamoorthy et al. (2002) refer to the 'education infrastructure induced effect' on the growth of RNFE. On the other hand, Mecharla (2002) finds a negative relation between literacy and traditional RNFE—which is a predominant feature of the RNFE activities in Andhra Pradesh.

The role of government development programmes and public expenditure in rural areas has also been viewed as an influencing factor in the growth of the rural non-farm sector (Sen, 1997). Notably, during the 1980s, slow agricultural growth coincided with both falling levels of poverty and rising wages.
Sen (1997) and Ghosh (1995) attribute this decline in poverty and rising wages to a rapid growth in the RNFS, itself a consequence of large government expenditure. While Sen (1997) stresses the importance of government spending for rural non-agricultural employment, Unni (1998) emphasises the diversity of the nature of government spending and questions the specific causality. Ghosh (1995) argues that increases in rural poverty following the Structural Adjustment Programme (SAP) in 1991-92 is also explained in terms of a reduction in government spending in rural areas such as rural employment schemes and rural development and fertilizers subsidy.

A number of studies have identified a combination of factors that influence the growth of RNFE. For example, Eapen (1995) in his extensive research in Kerala suggests that a high degree of commercialisation of agriculture, strong rural-urban linkages, increase in the proportion of marginal landholdings, the flow of remittances to rural areas and the growing level of literacy have contributed to the growth of RNFS in the state. Other identified determinants include the change in taste of rural consumers and levels of rural and extra-local demand (Hariss, 1987, 1991; Vaidyanathan, 1994), competition from factory sector (Visaria and Basant, 1994) and landlessness (Basant, 1993).

The growth linkage approach has been criticised on the ground that it is based on the assumption about the responsiveness of rural non-farm employment to the growth in agricultural output. A vexatious fact is that over time, the labour absorptive capacity of agriculture has been shrinking. The consistently declining employment elasticity with respect to aggregate agricultural output from 0.54 during 1972-73/77-78 to 0.49 during 1977-78/1983 and further to 0.36 during 1983/87-88 readily testifies to the limitations of linking agricultural growth to the diversification of rural employment (Bhalla, 1993).

2. 'Residual Sector' Hypothesis or Distress-induced Growth
Vaidyanathan’s study (1986) is considered seminal work which has sparked of a lively debate in the literature on whether growth in rural non-farm employment is a consequence of distress diversification, or is it a response to growing demand
resulting from the process of rural developments. He finds a positive correlation between non-farm employment and unemployment rate, and postulates that non-agricultural employment absorbed surplus labour when the potential of agricultural employment was limited, suggesting a distress-induced growth of the non-farm sector. Non-farm activities, generally geared to supplement local needs—as is the case in such situations—are characterised by seasonal fluctuations, low productivity and incomes, primitive technology and are basically subsidiary to local agricultural activities. In terms of sheer mandays of work, non-farm employment may appear to absorb labour; yet in terms of total or per day earnings, the distress is apparent for entire population, particularly for the rural poor (Chadha, 1994). However as a survival strategy, the poor households are engaged in low paying jobs because they have no other alternative often involving the whole family including women and children.

Various studies following that by Vaidyanathan (1986) have examined the ‘growth-distress’ argument, and the factors explaining regional variation of growth in the RNF sector. Unemployment, poverty and population pressure have been the principal factors that operate to push workers out of the agricultural sector.

Bhalla (1990) identifies two kinds of distress situations in which RNFS activities become residual labour force absorbers: supplementary workers who have no main occupation, but are engaged in subsidiary work to supplement household income; and those who are mainly engaged in a secondary activity. Bhaumik (2002) finds that RNFE grew more significantly in periods that witnessed sharp decline in farm employment. Saith (1992) argues that rural poor engage in non-farm activities in the labour and product market as a part of their household survival strategies. On account of very low levels of labour productivity (for technological and labour market reasons), poor peasant households work for exceptionally long hours on a regular basis in their multiple economic non-farm activities. Yet they remain ‘income unemployed’ since they are unable to earn even a subsistence level of income. Srivastav and Dubey (2002) find that there is an inverse but insignificant correlation between poverty
reduction and RNFE, which also implies a distress diversification in regions where poverty reduction has been insignificant and yet the RNFE has increased.

Conversely, Unni (1991), based on NSS data, finds no correlation between either the incidence of rural poverty, or percentage of landless households and non-farm growth and argues that lack of demand in distress regions in rural areas inhibits non-agricultural growth. Other state level studies have also demonstrated that growth in rural non-farm employment has not been due to distress (see Basant, 1993).

Likewise, Fisher et al. (1997) and Unni (1998) emphasize heterogeneity within the RNF sector, where different activities require different entry qualifications, and argue that recognition of such diversity is often lacking in earlier literature. The analysis of changes in the structure of occupations and labour earnings within the RNFS by Srivastav and Dubey (2002) shows a rising demand for RNFE goods and services that require higher skill levels with the rising rural income. Fisher et al. (1997) suggest that services such as retail trading, household manufacturing and personal services, which offer wages only slightly higher than that of agriculture, may also be performing a similar function. However, other activities such as manufacturing outside the household, transport, and a number of services are much more remunerative and belong to the “more productive and dynamic part of rural non-farm sector”, responding to demand factors (p. 40). Likewise, while in agriculturally backward regions RNFS may act as a safety net for lean season employment, in agriculturally prosperous regions agricultural growth may support the RNFS by supplying raw materials for processing industries, generating demand for agricultural inputs, and by increasing rural incomes and thereby increasing demand for RNFS services and inputs. Papola (1992) further argues that the shift from self-cultivation in agriculture to casual work at a higher wage in the RNF sector renders the fear of casualisation of rural labour redundant.

Case studies also reflect a wide variation in the causes of occupational diversification as well as growth of RNFS. A micro study of marginal, small, medium and large farmers in Allahabad district of Uttar Pradesh by Singh and
Tripathi (1995) assessed the factors affecting the occupational shift from agriculture to non-agriculture. They conclude that for upper caste and large farmers increases in education, enhancement of per capita income and decreases in per capita availability of cultivated land are the main causes of occupational diversification. Small farmers were encouraged to take up non-farm employment as a consequence of uncertainty of returns to agricultural cultivation. For the marginal and landless groups, mechanisation, industrialisation and urbanisation are found to be most influential factors, in addition to poor conditions (low pay, seasonality, etc.) of wage employment in the agricultural sector for their diversification into non-farm employment. Furthermore, small and tiny industries provide alternative sources of productive employment in rural areas. The educated unemployed youth irrespective of their caste background, do not wish to participate in agricultural and related activities.

Based on micro study of semi-arid village in Gujarat, Shylendra and Thomas (1995) find that growth in different RNFS activities are due to both developmental pull factors, and distress-induced push factors, which sometimes work in mutually reinforcing ways. They have also observed a significant occupational diversification.

**Wage Rates**

Another line of argument to counter the residual sector hypothesis is based on the empirical trends in real wage rates. Many studies have shown that from the mid-seventies to the mid-eighties, the real wage rates in agriculture tended to rise slowly and steadily (Unni, 1988; Jose, 1988; Bhalla, 1993; Vaidyanathan, 1994). The prime mover of this rise in agricultural wage rates has been found to be the diversification of the workforce into the non-agriculture sector, rather than the growing labour productivity in agriculture (Bhalla, 1993). This also reflects the downward rigidity of wages in relation to prevailing underemployment in agriculture, and thus does not fit into either classical or neo-classical framework. Sen (1997) finds the growth in non-farm employment as a reason for falling poverty and rising wages—mainly associated with the government
interventions—in rural areas, thus discrediting the residual sector hypothesis. However, it merits mention here that as there is a large section of self-employed workers in the non-agricultural sector, the argument of declining wages due to distress induced increase in supply of wage labour to the labour market will not hold, since the level of wage rates does not influence employment of workers in this segment. Therefore, the residual sector hypothesis cannot be written off purely on the basis of empirical observation of real wages and wage ratios alone.

II. UNDERSTANDING DIVERSIFICATION IN THE FRAMEWORK OF RURAL LIVELIHOODS

The review of literature on diversification of rural workforce shows that the majority of the studies have concentrated on analysing causes of the growth of rural employment, both farm and non-farm at macro level (state, district). The causal factors identified are therefore factors emanating from either the agriculture sector or outside it within the rural areas. However, for understanding the determinants of diversification in employment and income in rural areas, it must be remembered that an economy functions in an integrated way wherein agriculture and non-agriculture sector are inter-linked and rural and urban areas are closely interdependent (Bhardwaj, 1989; Unni, 1994).

The available evidence on employment diversification shows that rural households undertake, often simultaneously, a variety of agricultural and non-agricultural activities aimed at improving their overall well-being. In addition, individuals within each household may participate in multiple economic activities. Most of the studies on employment diversification in rural areas, however, say little on this whole issue of livelihood strategies that rural households adopt with varying objectives, i.e., survival, stabilisation and growth (Unni, 2000). This only emphasises that studies trying to explain the phenomenon of diversification must incorporate perspectives which go beyond the narrow differentiation process of 'growth linked' or 'distressed induced growth' in rural employment (Koppel and Hawkins, 1994; Unni, 1994). Understanding rural diversification, therefore, becomes more meaningful in a livelihood framework.
Livelihood is defined as comprising the capabilities, assets and activities required for a means of living (Chambers and Conway, 1992). Eliss (1998) defines livelihoods in terms of a whole range of activities that households undertake for maximising their well-being. And the ability to peruse different livelihood strategies is in fact determined by capabilities and assets of people. Capabilities include human capital, i.e., the skills, knowledge, ability to labour and good health, while assets include both material and social resources. Natural capital like land and economic capital (cash, credit/debt, savings, and other assets including basic infrastructure and production equipment and technology) provide the base for livelihoods. Social resources include networks, social relations and social claims and affiliations upon which people draw when pursuing different livelihood strategies requiring co-ordinated actions.

Within the livelihood framework, three broad clusters of livelihood strategies are identified. These are agricultural intensification/extensification, livelihood diversification and migration. These broadly cover the range of options open to rural people. Within a livelihood framework, the rural households may be categorised by their circumstances and economic goals into three phases: survival, stabilisation and growth. Survival is the goal of the poorest. They try to acquire multiple use commodities and engage in income generating and saving activities. Stabilisation is a later phase and the goal of the slightly better off households to attain livelihood security. They try to acquire additional assets, diversify livelihood mix to spread risks and increase flexibility. Growth is the final phase after achieving basic security. The household opting for this goal can afford to invest in riskier commercial enterprises with higher returns (Grown and Sebstad, 1989). Livelihood diversification, thus, is "the process by which rural families construct a diverse portfolio of activities and social support capabilities in their struggle for survival and in order to improve their standard of living" (Ellis, 1998, p. 4).

The literature identifies a range of different motives and pressures that to an extent helps to explain why diversification occurs and the patterns of diversity

---

that are observed. Some main determinants of diversification are seasonality, differentiated labour markets, risk strategies, coping behaviour, credit, market imperfections and intertemporal savings and investment strategies (Ellis, 1998).

Seasonality is identified as an important determinant of diversification that all rural households confront (Chambers, Longhurst and Pacey, 1981; Chambers, 1982; Agarwal, 1991). On its own it explains many of the patterns of diversity in rural household incomes, especially those involving on farm diversity and off-farm agricultural wage earnings. For coping with the seasonality factor the existing literature throws light on the mechanism adopted by the households to a range and variety of methods. These broadly fall upto five categories (Agarwal, 1991) : (a) diversifying sources of income including seasonal migrations; (b) drawing upon common resources---village common lands and forests; (c) drawing upon social relationships--- patronage, kinship, friendship – and informal credit networks; (d) drawing upon household stores of food, fuel, and so on and adjusting current consumption patterns; and (e) drawing upon assets. These are not mutually exclusive and are typically adopted in combination.3

Income diversification as a risk strategy is usually taken to imply a trade-off probability of income failure, and a lower total income involving smaller probability of income failure (Roumasset et al., 1979). In other words, households at this stage are risk averse, and are prepared to accept lower income in the interest of greater security. Research into on-farm diversity has sometimes demonstrated that this is not strictly true; that diverse on-farm cropping systems such as mixed cropping and field fragmentation of benefit from complementaries between crops, variations in soil type and differences in micro-climates that ensure risk spreading with little loss in total income (Walker and Ryan, 1990).

3 For detailed analysis of coping with seasonality, see Agarwal, 1991, pp 176-206.
III. LIVELIHOODS AND MIGRATION

This section focuses on the issue of migration as a part of the strategies of labour use adopted by rural households in their pursuit of a better livelihood. Considerable literature is now available on migration, which provides some interesting insights into the strategies adopted by individuals, households or communities to upgrade their livelihoods.\(^4\) Migration decisions have been viewed variously as a 'coping mechanism' for poor households and as an 'accumulation strategy' for the better-off households. The theoretical literature and empirical evidence relating to migration decisions are grouped into two approaches: (i) individual utility maximisation behaviour (Todaro, 1969; Hariss and Todaro, 1970) and (ii) inter-temporal family contracts (Stark, 1991; Stark and Bloom, 1985; Stark and Lucas, 1988).

In the case of the former, the decision to migrate to cities would be determined by wage differentials, plus expected probability of employment at the destination. Rural wages in these models are equal to the marginal productivity of labour (Lewis, 1954; Harris and Todaro, 1970). High rural-urban migration can continue even when high urban unemployment rates exist, which are known to the potential migrants. If the migrant anticipates a relatively low probability of finding regular wage employment in the initial period but expects this probability to increase over time, it would be rationale for him to migrate. The neo-classical model of migration views migratory process as a means of effecting an efficient geographical reallocation of labour based on the private choices of individuals for maximizing returns. It thus ignores the fact that migration is not always based on a strategy of an income maximization, rather it is a survival strategy which is also greatly influenced by many non-economic factors such as pressure of population, inequalities in distribution of land ownership, institutional mechanisms which discriminate in favour of owners of wealth and technological change biased against labour (Oberai and Bilsborrow, 1984).

\(^4\) For detailed review of migration studies see Srivastava and Sasikumar (2003) and de Haan (2000).
Inter-temporal family contract models of migration (Stark, 1980; Stark and Bloom 1985; Stark and Lucas, 1988) view migration as a strategy of spreading risk (Stark and Levari, 1982) by households and imperfections in rural capital markets (Stark, 1982; Collier and Lal, 1986). The basic premise of these alternative models, which are based on household utility maximisation, is that the decision to migrate is not taken by an individual, but the household members also have a role to play in doing so. Remittance received from migrants is viewed as an inter-temporal contractual arrangement between the migrant and the family (Strak, 1991). Stark and Lucas (1988) suggest that labour migration by one or more family members can be an effective mechanism to self-finance local production activities and acts as a self insurance against local income risks. Stark and Levari (1982) also argue that migration has a risk reducing and insurance enhancing effect on production and investment decisions, while Hoddinott (1994) models migration as an outcome of a joint utility maximisation strategy by the prospective migrant and the other family members.

In India, apart from testing the validity of the individual utility maximisation behaviour and family contracts models, much of the discussion on rural-urban migration tends to concentrate on the attributes, personal motivations, individual characteristics of migrants, and try to seek explanations for the migratory process in terms of such individual expectations and perceptions. Migration studies have focussed on determining the relative importance of migration in the framework of push-pull models (of migration) as developed by Lee (1966), which is a logical extension of Todaro-type analysis. Income differentials are seen as the major pull factors, while seasonality, risk, market failures, erosion of assets and landlessness are seen as push factors. Most of the micro studies on migration in India suggest that 'push' factors like inequality in land ownership, poverty and agricultural backwardness (Oberai and Singh, 1983; Dasgupta and Laishlay, 1975; Breman, 1985; Bora, 1996; Lipton, 1980) are mainly responsible for out-migration.

It is not our intention to review the vast available literature on the theme of migration but only to indicate how this process, as a part of livelihood strategy,
could be integrated, in our framework. Who migrates, what pattern and type of
migration is generated, what are its consequences—short and/or long term—for
the livelihoods of the households essentially depend upon the 'capabilities' and
'asset base' of rural households, overall demand for labour in the village, work
situation and conditions of labour at the place of destination and access to job
opportunities through information. Given this framework, migration is at best a
'coping mechanism' for poor households by spreading risk spatially and
occupationally, whereas for other (better off) households it serves as an
appropriate accumulation strategy. This is best analysed by taking the household
as a unit.

Research on the effects of migration on areas of origin is relatively scarce,
but it is clear that out-migration usually does not radically transform poor areas
(Srivastava, 1998). Rather, it may retard the overall development process and
impair the whole social fabric as the able bodied male out-migrate in large
numbers in search of their livelihoods. This has also been observed in the hill
region of Uttaranchal where the net benefits from outmigration turn to be
negative (Bora, 1996). Since in most of the cases migration is considered as a
distress induced strategy for survival, rather than for effecting a qualitative
change in livelihoods. Remittances are viewed as helping to stabilize the petty
household at a survival level and hence play the ameliorative role rather than
provide a boost to the economies of most households. Similarly, out-migration
does not lead to a tightening of the labour market at the source areas (Lieten and
Srivastava, 1999). On the other hand, there is also evidence of the replacement
of out-migrant male labour by female and even child labour (Srivastava, 1998).

IV. LIVELIHOOD ISSUES IN THE CONTEXT OF MOUNTAIN AREAS OF
UTTARANCHAL
The state of Uttaranchal is predominantly a mountainous region. Among the 13
districts, 10 are mountainous and account for 84 per cent of the geographical
area and 51 per cent of the population of the state. More than 85 per cent of the
population in these hilly districts resides in rural areas. Rural households in
mountain areas of Uttaranchal are predominantly dependent on subsistence
agriculture for their livelihoods with features of 'pre-capitalistic' economy, which has been vividly described in the writings of Adam Smith.\(^5\) Features such as a poor productive base, limited absorptive capacity, limited linkages to use local produce to strengthen the local economy in a value-added chain and unfavourable institutional and market mechanisms leading to accentuation of the phenomenon of unequal exchange with other areas are, more or less, common to most poor areas. However, what makes the situation in mountain areas qualitatively different than other areas are their unique physical 'specificities', viz., inaccessibility, fragility and marginality.\(^6\) Their inaccessibility in terms of lack of access to infrastructure, markets, technologies, and information is not only a cause of their underdevelopment, but is itself a facet of poverty in terms of isolation and non-participation in wider social, political and communication processes (Papola, 2002). It is often said that mountains are rich in resources. The fact, however, is that usable resources are extremely limited. Only 14 per cent of geographical area is available for cultivation. Population density on cultivated land is very high at 1132 persons per square km. Thus, the availability of arable land per person is extremely low even with a very low density of population, and that too on slopes and thus is not suitable for the modern farming methods applied elsewhere. Most of such land is marginal\(^7\), fragmented, scattered and rainfed, owning to which fertility is generally poor. Food insecurity, because of both limited availability and poor fertility of land and difficulty in delivering food from lowland areas, is a common feature in many parts of mountain districts in the state (IDFC, 2002).

Resources in which mountains are described as 'rich', such as forests, minerals and water, are not always accessible to mountain people. Besides the difficulties in physically accessing them, they are mostly restricted by legal and institutional arrangements by local communities for various reasons, including

\(^5\) See Bhalla (1990) for a more description about Adam Smith's writings on the features of pre-capitalist economy of England.

\(^6\) These specificities constrain the development. Other 'specificities', namely, niche and human adaptation offer opportunities for development. For a detailed impact of these 'specificities', see Jodha (1990 and 2000).

\(^7\) More than 80 per cent land holdings are marginal (less than one hectare—alone 50 per cent
commercial and environmental ones. And most incomes flow out of the mountains (Papola, 2002). Besides this, the access to natural resources, though limited, is constrained by lack of access to markets and traditional techniques.

A limited resource base, further limited by the constraints on its use due to fragility, is another dominant characteristic of mountain areas. Use of non-crop, non-forest, marginal lands, even where permitted, is not very productive because such land is usually degraded and cultivation is often hazardous due to its fragile nature. Infrastructure such as roads, that constitute 'lifelines' for most mountain people, is often not dependable because of natural hazards and blockades. Fragility and high incidence of natural hazards make the lives of people insecure and vulnerable and often pose a threat to the very means of survival and livelihood such as agricultural lands, crops, and shelters, besides transport and communication channels. In other words, maintenance of livelihoods, even at the current level, is precarious and danger of relapse into the trap of poverty is ever imminent (Papola, 2002). Thus, Mellor's (1976) description of environments where output is so unresponsive to initial applications of labour to land that the average product never rises above a subsistence level is true for mountain region of Uttaranchal. Also, the demand for labour in agriculture may be the outcome of a social taboo on households belonging to higher castes, like some Brahmin households in Uttaranchal, ploughing their own fields.

Like agriculture, livestock production is carried out mainly to meet the household requirements of milk, ghee, etc., and supply of manure to agriculture. This is again adversely affected by depleting common property resources.

Since the mountain agriculture sector predominantly remains virgin to technical changes, the 'growth linkage theory' could not be applied therein. The growing population pressure on the cultivated land in the mountain areas also forced many rural households to intensify and diversify their activities in Boserup's (1965) framework of analysis. The ability to diversify is again seriously jeopardized by the institutional bottlenecks, which impeded the process of development and consequently the creation of employment opportunities.

being sub-marginal land holdings (less than 0.25 hectare) (GoUA, 2003).
There are evidences to show that in mountain regions a higher degree of diversification among rural households may purely be a 'distress syndrome' with little impact on the improvement of household income. A study by Sharma et al. (2001) on the extent of diversification under different scenarios of agricultural development in Himachal Pradesh finds that there is no pronounced and systematic relationship between the different categories of households and the degree of their livelihood diversification—the low income households have larger number but low yielding sources of livelihoods. The study broadly shows that higher level of diversification does not necessarily lead to higher level of income.

Mountain districts in Uttaranchal are virtually devoid of any major industry. As a result, the share of workforce employed in manufacturing is abysmally low at 2.5 per cent in the mountain districts of the state. The situation in rural areas is worst. Thus, most of the non-farm employment in the mountain districts is limited to services and trade and business. Though, there has been a growth in the number of own-account small units, these have been mainly in petty trade and business, which in turn have a very low potential for additional employment generation in majority of the cases.

The high work participation rate of females in rural areas of Uttaranchal as compared to the national average is a manifestation of poverty vis-à-vis their centrality in a household economy. Females are overburdened with long hours of back breaking work and year round drudgery in household as well as productive activities. They normally work for about 12-14 hours a day. Male-specific out-migration has further added to their drudgery (Pande, 1996). On the other hand, there is a lot of idle labour, particularly among males. Studies show that about 45 per cent of persondays remain unused, the proportion being higher for men (63 per cent) than for women at (34 per cent) (Bora, 1996; Khanka, 1988). Women's efforts and energies are mostly spent without commensurate returns and could be available for more productive and socially useful purposes if technological, economic and institutional solutions were found to reduce the time taken for and drudgery of their work to satisfy basic household needs. Men have little productive work beyond what is 'assigned' to them in the context of so-called
gender-based division of labour. Thus, most labour is not productively used and this is reflected in the high incidence of underemployment and 'disguised' unemployment (Papola, 2002).

Lack of productive employment opportunities in mountain areas in Uttarakhand has forced rural households to seek their livelihoods through out-migration, mostly of adult males.\(^8\) However, the incidence of out-migration has been uneven across the various population groups as it is mainly confined to those belonging to upper castes and the educated ones, whereas the poor households, mostly belonging to Scheduled Castes, are generally unable to bear the cost of migration. At the same time, the slow growth in employment opportunities in urban areas during the past and more so in the 1990s has limited the opportunities for out-migrants from rural areas and, thus, much of the rural to urban migration is a supply-driven phenomenon.

Given the constraints which land posed on the development of the mountain region, education has been regarded, historically as crucial by the village society for securing better livelihoods outside the region, which in turn is envisaged to ameliorate the hardships of mountain life. The households' strategy has been to educate their male members for jobs outside agriculture, and to pay less attention to their females' education as their role is confined to agricultural works within the households.\(^9\) This discriminatory 'human capital development approach' has also been thwarted by the tightening labour markets outside the villages and unequal rewards for those with similar education and training. The ability to diversify livelihoods through migration is again constrained since the majority of the potential out-migrants possess hardly any vocational/technical skills despite their higher educational levels. This in turn reflects on their earnings—except for a small proportion of out-migrant workers in government jobs (such as army and para military forces), most of them are employed in low paid occupations in the urban informal sector with hardly any social security. This

---


\(^9\) This kind of discrimination in the education of females is common among all regions in India, and is more so in backward regions.
also restricts the overall flow of remittances back to their rural households. Though remittances contributed nearly 40 per cent of household income (Khanka, 1988), a larger share of these is being used for meeting the daily consumption needs of the households. And most of these consumption items are not produced locally. Thus, remittances could hardly bring any significant benefits to the rural areas of the mountain region of Uttaranchal in terms of promoting private investment in developing local resource base. In fact, the net benefit from migration has been lower than its social costs (Bora, 1996).

The development prescriptions emanating from labour market theories and empirical studies do not focus much on the 'mountain specificities', which affect the whole range of livelihood options. For example, the conventional theory of development postulates providing infrastructure for development, which brings a shift in economic structure from one oriented towards subsistence and self-sufficiency to one of commercialisation, specialisation, and trade. Providing infrastructure, however, does not in itself induce the development of income-generating activities in mountain areas. The linkages that develop on their own with the development of infrastructure in the plains do not easily materialise in the hills (Papola, 1996). On the contrary, development of infrastructure sometimes leads to more 'backwash' than 'spread' effects, through extraction and drainage of mountain resources for profit-making elsewhere. Thus, roads, for example, which have led to changes in cropping patterns through introduction of more remunerative crops, faster development of local resource and skill-based products, and better financial returns as a result of access to markets in the villages in the plains, have only succeeded in bringing about a change in consumption patterns in favour of urban products paid from remittances from the increasing number of migrants, with little or no impact on the production economy of hill villages (Papola, 1996).

How long can agriculture continue to provide livelihoods to the larger additions in the labour force in future? This issue is a subject for debate and discussion as land size in itself is the biggest constraint to providing livelihoods. Also, the slow growth in employment opportunities in urban areas will be unable
to absorb the migrant workforce from rural areas. At the same time, much of the
expansion in rural non-farm employment is attributed to the 'distress conditions'
in agriculture, which yield very low earnings. It is also argued that rural areas do
not offer any major advantages for the pursuit of non-farm activities due to
technology constraints and scale of operation. This is the dilemma of providing
livelihoods in rural areas.

There is strong evidence to suggest that diversification of cereal-based
agriculture into fruits and vegetable production has potential to provide
remunerative employment to mountain cultivators and preponderance of
marginal holdings poses no constraint for such diversification (Chand, 1996;
Maikhury et al., 2001). Significantly, such diversification, though limited in very
few pockets, has considerably reduced the out-migration of able bodied youths
(Badhani, 1998). Above all, problems of food insecurity and inherent institutional
weaknesses are found to be responsible for not harnessing this potential in the
mountain region in Uttarakhand.

The higher incidence of out-migration does not mean that the rural areas
in mountain districts do not face labour scarcity. In fact, there is a seasonal
shortage of labour in unskilled and semi-skilled occupations, which is
increasingly being met by the outside labourers—mostly inmigrants. For
example, the growing construction activity in the mountain districts in Uttarakhand
in recent years, both in public and private sector (mostly in housing and bridge
construction), has led to a growing demand for skilled labour. Since most of the
local labour does not possess the skills required for such activities, the in-migrant
labourers even from remote states like Bihar are successfully meeting the
demand. Similarly, Nepalese labourers mostly meet the demand for seasonal
unskilled labourers both for agricultural and non-agricultural works. Thus, the
argument of 'under-formed labour markets in hill areas' by Bhatta (1990) is rather
weak in the context of the rural household economy of Uttarakhand. Also, there is
an increasing number of rural households in mountain districts in Uttarakhand
who not only 'hire in' but also 'hire out' labour, and thus, may not be explained in
the classical, Marxian, neo-classical or institutional framework separately.
Thus, livelihood resources in rural (mountain) areas in Uttarakhand are more vulnerable to income insecurity than in other parts of the country. Risk element is high in local land-based income generating activities owing to larger frequency of floods, natural calamities and non-availability of protective measures. Maintenance costs of livelihood resources, particularly land is exceptionally high. Access to markets is again affected by high incidence of natural risks (Papola, 2002). Also, the risk of cut back in remittances from out-migrants can further add to the vulnerability of livelihoods of rural households in Uttarakhand.

V. NEED FOR THE STUDY

Most of the studies on the erstwhile Hill region of Uttar Pradesh have been preoccupied with the study of out-migration and its contribution to household income. While some termed hill economy as ‘money order economy’ (Dobhal, 1987), other termed migration as not being beneficial as the costs of migration exceeded the benefits from it (Bora, 1996). There have been few micro studies on rural employment in the erstwhile hill region of Uttar Pradesh and these have been also preoccupied with the study of farm employment and out-migration. Most studies focused on ‘rural employment’ rather than ‘total employment’ for the households, which also includes daily commuting and out-migration. Some studies have focused on the backwardness of the district and as a backdrop includes the study of agriculture, cropping pattern, labour use, its low productivity, income, etc. These studies found most of the crops uneconomical in terms of net returns (Tripathi, 1987; Swarup, 1991a, 1999b). Few studies deal with the improvement in productivity through use of modern inputs in agriculture and diversification in farm production (Chauhan, 2001; Badhani, 1998). Surprisingly there is no study based on the secondary data on the structural shifts in employment and earnings within the state in general and rural areas in

---

10 See for example (Rawat, 1983; Whittakar, 1984; Juyal and Bisht, 1985; Dobhal, 1987; Khanka, 1988; Dhyani, 1994; Bora, 1996)

11 See for example Khanka (1988). These studies were confined to a particular division (Garhwal or Kumaon) and necessarily did not cover the entire hill region (erstwhile belonging to Uttar Pradesh).
particular during the past three decades or so on. More importantly, hardly any study has been initiated in the context of a mountain economy of Uttaranchal that could exclusively focus on the core issue of livelihood strategy that rural households adopt through resorting to multiple activities, diversifying within farm sector as well as from farm to non-farm sector; and through out-migration. It is being increasingly realised that apart from studying the structural shifts in employment in general and rural employment in particular at the macro level, a comprehensive fieldwork is required to examine the issues of employment and livelihoods diversification among the rural households in the mountain areas of Uttaranchal—the issues which are hardly covered by the secondary data. The present study would be a modest attempt to fill this gap. As we are aware, the main issue behind the struggle for separate state of Uttarakhand\textsuperscript{12} was the aspiration of mountain people from the new state for creating gainful employment opportunities through people centered development programmes. With the formation of the new state of Uttaranchal, undertaking such study also becomes useful as it could provide a valuable feedback for the suitable policy interventions by identifying the emerging areas with employment potential.

VI. OBJECTIVES
Keeping in view the above theoretical and empirical overview, the general objective of the study is to have a better understanding of the dynamics of livelihood strategies that are being adopted by the rural households in the mountain region of Uttaranchal. In order to meet this broad objective, the study will attempt to:

(i)  Analyse the pattern and structure of employment;
(ii) Assess the nature and extent of multiple employment and its determinants;
(iii) Examine the nature and structure of unemployment and underemployment among various socio-economic groups;

\textsuperscript{12} The name was popularly coined during the struggle for separate statehood, which was later renamed as Uttaranchal at the time of formation of the state.
(iv) Assess the nature and causes of migration (out-migration and return migration), and its impact on household employment and income;
(v) Examine the diversification in livelihoods, its determinants and impact on household income;
(vi) Examine the impact of agricultural diversification on employment, wages, earnings and propensity to migrate;
(vii) Examine the impact of public employment generation programmes on employment and income; and
(viii) Suggest a suitable development strategy with a focus on developing sustainable livelihoods.

VII. METHODOLOGY

To achieve the above objectives, detailed data would be required on various parameters of employment, household assets, migration and income. Accordingly, both the secondary and primary data have been used for the study. Primary data have been collected to supplement the secondary data. Secondary data has been collected from Population Census, National Sample Surveys, Economic Census and State Plan documents. Besides these, information has been collected from research studies both by institutions and individuals and through reports of different government departments.

However, a larger analysis of this study is based on the primary data, collected through a specially designed questionnaire, since the available secondary data sources do not provide the required information on the livelihood strategies that various types of households adopt in rural areas. Information has been collected on various socio-economic and demographic aspects of the households. The emphasis has been on collecting information on the type of employment for the various categories of households, its quality in terms of availability and income, occupational diversification, role of women in augmenting the households' labour requirement, availability of livelihood assets, migration, agricultural diversification, un-underemployment and benefits under government programmes. Apart from this, information has also been collected at the village
level on aspects of infrastructure such as irrigation, education, health, transport and other facilities, cropping pattern, wages, etc.

Sample Selection
There are 13 districts in Uttaranchal—10 with hill topography and the remaining three have plain areas. Since the present study is confined to the rural areas of hilly districts of Uttaranchal, it does not cover Dehradun, Hardwar and Udham Singh Nagar, as these are mainly located in plain areas (see map). The hilly districts fall under two administrative zones, viz. Garhwal and Kumaon. Chamoli, Garhwal, Rudraprayag, Tehri Garhwal and Uttarkashi belong to Garhwal division and Almora, Bageshwar, Champawat, Nainital and Pithoragarh to Kumaon division. Using the economic development index as calculated by Singh (1997) for the districts of Uttar Pradesh, we ranked all the hilly districts separately for Garhwal and Kumaon region. From each region we have selected two districts, one with highest value of economic development index and the other with the lowest value. This has been done to ensure representation of broad characteristics of mountain economy of Uttaranchal. The four selected districts included Chamoli and Garhwal from Garhwal region and Almora and Nainital from Kumaon region (see map).

In each of the sample district, we clustered all the Census villages into three broad clusters on the basis of distance from district headquarter; villages situated within the distance of 10 km and connected by motor road are termed as ‘peri-urban’. The second stratum comprised of villages 10 km to 150 km away from the district headquarter and having road connection. These are termed as ‘semi-interior’ villages. The last stratum comprised of villages at the same distance of 10 km to 150 km away from the district headquarters but not connected with the road. From each cluster one village was selected randomly.

13 The districts of Bageshwar, Champawat, Rudraprayag and Udham Singh Nagar have been carved out of Almora, Pithoragarh, Chamoli and Nainital, respectively. Due to non-availability of data on various socio-economic parameters for these new districts, the parent districts were considered for the selection of sample.

14 Only villages with population of more than 200 persons were considered.
within the district. Thus, three villages were selected from each sample district. In all, twelve sample villages were selected for the study.

In each sample village, all the households were listed along with their land size.¹⁵ Thereafter, all the households in the sample village were stratified into six land class categories:¹⁶ landless, upto 0.5 acre, 0.5 to 1.5 acre, 1.5 to 2.5 acre, 2.5 to 5.0 acre and more than 5 acre. A sample of 35 households has been finally selected through the proportionate circular random sampling in each village. In the ultimate analysis we have to discard some sample households as

¹⁵ This information was collected from the revenue records of the village Patwari.
¹⁶ This has been done purposively to capture the marginality of land holdings as more than 80 per cent households own marginal holdings (size less than 2.5 acre) and more than half own even less than one acre land.
the desired information was not satisfactory, and we confined our sample size to 399 households. The information relating to sample households have been collected through a pre-tested structured questionnaire.

The village schedule sought information on cropping pattern and changes therein over the past ten years, wage rates, mode of wage payment, infrastructure facilities, daily commuting, permanently migrated households, number of in-migrant labour, and use of contact labour in the village. The household questionnaire collected detailed information about the household and its members, i.e., assets—both productive and consumer durable, age, education, employment, time disposition of labour in various types of employment, income and its sources, migration including return migrants, and indebtedness. Efforts were made to capture the incidence of seasonal employment/unemployment among the household members. The basic idea behind this exercise is to capture the livelihood strategies that are being followed
by the sample households in the rural areas of the mountain districts in Uttaranchal.

VIII. CHAPTER PLAN
The study begins with a brief overview of the theoretical and empirical evidence on employment and livelihoods for rural households in Chapter I. A macro picture of the economy of Uttaranchal is presented in Chapters II and III based on the secondary data. The former analyses the composition and trends in the growth of state domestic product, land use, cropping pattern and industrial development and the latter (Chapter III) examines the growth in population, labour force and workforce in detail along with educational development in the state. It has been argued that despite the scarcity of productive assets like land in the mountain region in Uttaranchal women's participation in the workforce is very high—a common feature which they do so to support the livelihoods of their households. Returns from such higher work participation, however, are abysmally low as reflected in low productivity levels. Chapter IV delineates the socio-economic characteristics of the sample households with a focus on access to livelihood assets. It is seen that most of the households are poor in terms of livelihood assets. The issue of the availability of employment, its characteristics and determinants are discussed in Chapter V. It shows how different features of households shape the quality of their workforce and determine ultimate performance in the labour market and how the rural households struggle to maintain and improve their employment and income. The issues of multiple employments and occupational mobility also form the core of the Chapter. It is also argued that unlike the classical as well as neo-classical framework of labour use and employee-employer relations, many households sell out their labour as well as use the hired labour.

The themes, migration and remittances, are discussed in Chapter VI. It shows how out-migration is increasingly becoming an important channel for livelihood diversification among the rural households given the lack of remunerative employment opportunities within their villages and how it is
augmenting households' income. However, the propensity to migrate is determined by many factors, which are also analysed in the Chapter. Similarly, the Chapter analyses the determinants of propensity to remit. Chapter VII focuses on the issue of diversification in livelihoods, its determinants and the outcome of a livelihood strategy in terms of per capita income of household. The Chapter also discusses how switching over to more remunerative non-farm livelihoods leads to a reduction in the incidence of multiple employment. Chapter VIII argues that diversification of livelihoods based on traditional cereal-based agricultural into horticulture and vegetable production offers tremendous scope for enhancing employment and income of the households. Finally, the concluding Chapter apart from presenting summary of major conclusions delineates the policy implications for improving the livelihoods of rural households in Uttarakhand.