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Development of Micro-enterprises

Ilam and Bhojpur Districts

Udaya Sharma

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Preface

Development experiences in most of the mountain areas of the Hindu Kush-Himalayan Region, over the past decades, have shown that the prevailing predominant mode of their economies – subsistence agriculture – is becoming increasingly unsustainable both economically and ecologically. Diversification of economic activities into products and services, for which these areas offer a comparative advantage, through enterprise-based production for the market is considered necessary for sustaining livelihoods and alleviating the poverty of the rapidly increasing population. It is in this context that ICIMOD established a programme on Development of Micro-enterprises in Mountain Areas with the objectives of identifying constraints and opportunities and developing policy, programme, and training guidelines for enterprise development in hill and mountain areas of the HKH region. As part of this programme, the Centre has commissioned a number of studies in different countries and areas of the HKH region with a view to documenting experiences of development and functioning of enterprises covering different aspects such as comparative advantage of products, processes, and factors in enterprise development, technology, credit, marketing, and development of entrepreneurial skills as well policies and programmes by government and non-government agencies for promotion of enterprises.

The present paper 'Development of Micro-enterprises in Ilam and Bhojpur Districts' of Nepal, by Udaya Sharma, is one in this series of studies. It is being published with the hope that it will be found useful by those engaged in research and development, policy-making, programme formulation, and implementation for the promotion of enterprises, as well as by the present and potential entrepreneurs in their respective activities.

T. S. Papola
Head
Mountain Enterprises and Infrastructure Div.

ABSTRACT

The present study, based on field-level data from the Ilam and Bhojpur districts of Eastern Nepal, attempts to assess the growth, potential, and constraints of micro-enterprises in different product lines with a view to drawing implications for development strategies, policies, and programmes to promote the development of micro-enterprises. The findings of the study suggest that the level of development in agriculture and infrastructure are two key factors in the growth of micro-enterprises in primarily agricultural and relatively inaccessible mountain areas. At the same time, non-availability of credit and marketing arrangements poses important constraints for the expansion of individual micro-enterprises operating in the region. The existing situation, support mechanisms, and institutional arrangements are found to be deficient in this respect. The study, therefore, also makes some suggestions for policy, programmes, and interventions for the promotion of micro-enterprises.

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My sincere thanks to the officials of the Cottage and Small Industries' Development Committee in Ilam and Bhojpur. Finally, I would like to thank the entrepreneurs of Ilam and Bhojpur for their cooperation during the field study.

Udaya Sharma
Development Management Specialist

ACRONYMS

ADB/N	-	Agricultural Development Bank/Nepal
BCP	-	Bhaktapur Craft Printers
HMG/N	-	His Majesty's Government of Nepal
UNICEF	-	United Nations Childrens Fund
DDC	-	District Development Committee
DFO	-	District Forest Office
CSIDC	-	Cottage and Small Industries' Development Committee
IBP	-	Intensive Banking Programme
NGO	-	Non-Government Organization
INGO	-	International Non-Government Organization
ME	-	Micro-enterprises
NRB	-	Nepal Rastra Bank
USAID	-	United States Agency for International Development
VDC	-	Village Development Committee

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1 Introduction

1.1 The Context

Mountain economies are mostly based on agriculture. Diversification of farm activities into high-value commercial crops and processing of agricultural produce and other natural resource-based materials are, therefore, the most logical steps towards improving the economic levels of mountain people. Mountain areas are endowed with certain specific resources not found in the plains. Certain agro-forest species are found at high altitudes under specific climatic conditions. The diverse agro-ecological conditions prevailing in the mountains form niches for horticulture, floriculture, spice cultivation, and medicinal plants (Partap 1995). These crops can be grown in the mountains with a comparative advantage and without competition from products produced in the plains. A variety of commodities is produced and resources found in mountain areas. They are based on either opportunities provided by nature or based on the availability of traditional skills among local people. Some skills are traditional, carried over from generation to generation, while others have emerged in response to new demands or knowledge about resource use and technologies.

It is now being realised that, in order to increase the income from use of the limited resource base in mountain areas, any activity, be it agricultural or non-agricultural, should be enterprise oriented. Production, distribution, or service should be for the market. A shift from subsistence to commercial production requires infrastructural facilities, market access, and institutional support. Marketing is an essential link to the growth and development of micro-enterprises. As marketing linkages are strengthened, local and national demands can induce the development of micro-enterprises. Some mountain areas are undergoing this transformation through enterprise-based development of commodities and services, whereas others have stagnated. The improvement or decline in local economies can be ascribed to many factors, but their resource base, specificity of location, and accessibility are seen to be the most important reasons.

Studies of micro-enterprises operating in specific mountain areas are, therefore, of special interest for a better understanding of the factors and processes in their growth, stagnation, or decline. Such an understanding should be found useful in formulating programmes and policies for the development of micro-enterprises in mountain regions.

It is in this context that this study was undertaken in two districts of Nepal, namely, Ilam and Bhojpur. Both districts have some common and distinct characteristics and are at different levels of development. Ilam is located in the eastern-most part of Nepal, in proximity to the Indian border town of Darjeeling while Bhojpur is located further in and away from any main market centre. Ilam has a good network of roads. Most of the villages in Ilam are linked by motorable road. In contrast, Bhojpur has little physical infrastructure. Ilam has come into prominence because of successful experiences in high-value commercial crops, whereas Bhojpur has a long tradition of metal crafts, an activity based on traditional skills. Accordingly, Ilam exemplifies a successful case in commercial crop production and Bhojpur has a predominantly subsist-

ence agriculture and is facing stagnation in one of its main traditional activities, namely, metal crafts.

1.1.1 Objectives of the Study

The present study aims to portray the structure and growth patterns of micro-enterprises in an area-specific context of the two districts, with a view to identifying the processes in and factors of their growth. It attempts to analyse the present position, growth, and prospects of enterprises in a comparative framework, in terms of both products and location.

Categories of enterprises covered in the study include:

- land-based enterprises,
- skill-based enterprises,
- enterprises created in response to local demand,
- enterprises based on local resources,
- enterprises using external resources and local skills,
- enterprises run by households,
- enterprises run by non-households,
- enterprises inherited from one generation to another, and
- newly-introduced enterprises.

On the basis of a historical comparative analysis, the study attempts to identify the strengths, problems, and constraints of micro-enterprises.

1.1.2 Methodology

Selection of the Study Area

Ilam and Bhojpur districts were purposively selected with a view to providing a comparative framework for the study. Ilam is one of the most transformed hill districts of Nepal (Koirala 1992) and is recognised as a successful example of economic transformation through the development of commercial crops. Bhojpur, on the other hand, has a long tradition of metal crafts, and this is currently losing ground. Ilam and Bhojpur are at different stages of development. Ilam is linked by road while Bhojpur is inaccessible by road. Ilam is located in proximity to the Indian market, whereas Bhojpur is located in the interior/hinterland.

Sample Frame

A significant number of micro-enterprises operates in the study area. A majority of micro-enterprises are registered with the district office of the Cottage and Small Industries' Development Committee (CSIDC). Enterprises prefer registration in order to receive the facilities and incentives provided by the government, but some enterprises operate without being registered. A list of micro-enterprises (MEs) obtained from the district offices of CSIDC constituted the formal segment i.e., registered, and those enterprises operating without being registered with CSIDC, i.e., constituted the informal segment. A sample of 88 MEs from the formal and 12 MEs from the informal segment was selected for the survey. The MEs were drawn from 13 product categories. Some products are common in both districts while a few are unique and

produced in one district only. Fifty-eight ME units were selected from Ilam and 42 units from Bhojpur. The details are presented in Table 1.

Table 1: Sample Survey of Enterprises

Types of Micro-enterprises	Districts				Total
	Ilam		Bhojpur		
	Rural	Urban	Rural	Urban	
Rice Mills	10	-	5	2	17
Nepali Paper (*Lokta*)	1	3	6	-	10
Hosiery	2	1	3	2	8
Garments	11	-	-	3	14
Wooden Furniture	4	-	-	2	6
Bamboo Furniture	-	-	3	-	3
Handloom products	6	-	-	7	13
Brooms	2	3	-	-	5
Tea Processing and Packaging	-	3	-	-	3
Dairy	2	3	-	-	5
Metal Crafts	-	-	-	10	10
Sericulture	3	-	-	-	3
Rabbit Farming	3	-	-	-	3
Total	44	13	17	26	100

Source; Field survey 1986

Data Collection

In order to address the study objectives, a combination of primary and secondary information was used. Secondary information was obtained from the Cottage and Small Industries' Development Committee, the District Development Committee, Village Development Committee, and Municipalities, including the studies carried out by the Asian Development Bank, Frederick Naumann Foundation, the World Bank, and the USAID and reference materials related to the Micro-enterprises in Nepal, South Asia, East Asia, and the Latin American countries.

Enterprise-level interviews were carried out in order to learn from the MEs first hand how they operate in practice, what are the constraints for enterprise operation, their expansion plans, and other issues relevant to enterprise development. All interviews used semi-structured questionnaires. Interviews were held on a broad spectrum of activities that were being conducted on a micro-enterprise level. The survey focussed on a variety of products, including those with a possible comparative advantage, for which entry was possible on a small-scale and which had the potential for expansion. This approach facilitated the acquisition of a reasonably in-depth understanding of the context in which the MEs operate.

Semi-structured Questionnaires

Primary data was generated through semi-structured questionnaires. The perceptions of the entrepreneurs involved in a broad spectrum of activities and producing a variety of products and services were helpful in identifying specific issues and problems related to the management and performance of micro-enterprises.

Discussions

Group discussions were carried out with DDC Chairmen, VDC Chairmen, Municipality Mayors, academicians, and community leaders to elicit information relating to the operation of micro-enterprises, their potential and prospects for expansion, and the obstacles to their development.

Case Study

Case studies on the success and failure of activities were helpful in order to understand the factors that contributed to the success of a specific product in a specific location as well as to explore the possibility of replicating the success model in other areas or reasons for failure.

Organization of the Report

The report has eight chapters. Chapter One gives the background of the study and describes the methodology adopted to generate the data. Chapter Two describes the study area, resource endowments, and the categories of micro-enterprises operating in the area. It also deals with the socioeconomic picture of the study area. Chapter Three gives the various products of the micro-enterprises and presents the cases of success and failure. Profiles of entrepreneurs, structures of enterprises, and functioning of enterprises are presented in Chapters Four, Five and Six. Growth, expansion plans, and problems are presented in Chapter Seven. A summary of the study conclusions arrived at are given in Chapter Eight.

2
Profile of the Study Areas

2.1 Ilam District

2.1.1 *Location*

Ilam is located in the eastern-most part of Nepal bordering the Darjeeling district of West Bengal, India. To the south is Jhapa district in the *Terai* and, in the north, Panchthar district. The population of Ilam is 229,214 of which 50.3 per cent are male and 49.7 per cent female. The population density is 134/km^2. Ilam has three geographical divisions in terms of altitude: a tropical region bordering the *Terai* in the south below 1,000 metres, a subtropical region in the middle of the district with altitudes ranging from 1,000 to 1,800 metres, and a temperate region with altitudes of 1,800 metres and above. With a geographical area of 1,703sq.km. the district is divided into 47 Village Development Committees (VDCs) and one municipality. Ilam *Bazaar* is the district headquarters and the only municipal town. Located at an altitude of 1,200 m, Ilam *Bazaar* attracts visitors from different parts of the district, as well as from the neighbouring districts and Indian border towns, for commercial and official purposes.

2.1.2 *Economic Structure*

Agriculture is the main activity in Ilam. Eighty-nine per cent of the working population is engaged in agriculture, while 11 per cent are involved in industrial, services, government, and private sector employment (HMG 1996). A majority of the enterprises in the industrial and services sectors are located in urban areas. Migration for employment to the *Terai* and elsewhere, in or outside Nepal, is very low because of the economic opportunities available within the district.

2.1.3 *Social Characteristics*

Ilam, as is true of the rest of the country, has many ethnic communities: *Brahmin*(s), *Chettri*(s), *Rai*(s), *Limbu*(s), *Newar*(s), *Gurung*(s), *Magar*(s), *Tamang*(s), *Sherpa*(s) and *Damai*(s). The *Rai*(s) are the main ethnic group, followed by *Brahmin*(s), *Limbu*(s), *Chettri*(s), *Tamang*(s) and *Gurung*(s) (HMG 1996).

2.1.4 *Education*

Ilam has a long tradition of literacy and has developed institutional infrastructure. A two hundred and seventy-nine primary schools, 60 lower secondary and higher secondary schools (HMG 1996), and one multiple college offering Humanities, Commerce, and Science Courses under the aegis of Tribhuvan University are established.

The overall literacy rate, for male and female together, is 53 per cent, which is higher than the national literacy rate. Sixty-five per cent of men and 39 per cent of women are literate (HMG 1996).

2.1.5 *Settlement Patterns*

View of Ilam *Bazaar* from a tea garden

The majority of the people live in rural areas. Ninety-two per cent of the population are rural while eight per cent are urban. Ilam *Bazaar* is the only municipality in the district with a population of 13,197 (HMG 1996). The other VDCs with urban characteristics with populations over 5,000 each are Fikkal, Pashupatinagar, Gorkhe, and Mangal *Bazaar*. Thirty-six VDCs have populations of less than 5,000 but more than 1,000 each.

2.1.6 *Infrastructural Facilities*

Ilam has a good network of roads. Forty of the 47 VDCs are approachable by road and roads linking another seven VDCs are being constructed. Ilam *Bazaar* is linked to Jhapa and the urban centres in India, in particular the commercial cities (e.g., Siliguri and Calcutta) by black-topped all-weather roads.

Daily bus services link Ilam *Bazaar* to Kathmandu. Small vehicles and buses provide seasonal services to the adjoining districts.

Ilam *Bazaar* receives electricity supplies from a diesel plant for five hours every evening. Gorkhe, Fikkal, Pashupatinagar, and Mangal *Bazaar* receive their power supplies from small diesel generators. In more than 60 villages, small peltric sets are operated by private owners to fulfill local domestic power needs. Telephone services are also available in Ilam *Bazaar*. There are 250 lines. In addition, 20 VDCs have access to a total of 37 lines.

2.1.7 *Land Resources and Land Use*

The total area of Ilam district is 1,703sq.km., or 171,730ha, of which agriculture accounts for the use of 71,032ha (41.36%) and forests 80,686ha (46.98%). Grazing land accounts for 3,994ha or 1.98 per cent and 27,660ha (9.68%) falls into other categories in Table 2.

Table 2: Land-use Patterns in Ilam District

Land-use Category	Area (ha)	Per cent
Agriculture	71,032	41.36
Forests	80,686	46.98
Grazing lands	3,394	1.98
Others	16,618	9.68
Total	171,730	100.00

Source: District Agricultural Development Office, Ilam 1996

2.1.8 *Crops, Cropping Patterns and Crop Yields*

The main cereal crops grown in Ilam are paddy, wheat, maize, and millet. The important commercial crops are potatoes, cardamom, vegetables, and ginger. Information on the land areas allocated to cereal crops and cash crops is presented in Table 3. As shown, cereal crops account for 81 per cent of the land use, while cash crops account for 19 per cent.

Table 3: Area under Crops and the Yield Rates in Ilam

Crops	Area (Hectare)	Per cent	Yield in MT per Hectare
Amliso	300	0.4	6.00
Paddy	17,252	24.0	1.95
Wheat	4,730	07.0	2.36
Maize	31,450	44.0	2.19
Millet	4,025	06.0	1.08
Tea	1,452	02.0	0.78
Potatoes	5,585	08.0	9.85
Ginger	950	01.0	14.68
Cardamom	2,980	04.0	1.00
Sericulture	150	0.2	0.53
Vegetable	2,158	03.4	03.3

Source: District Agricultural Development Office, Ilam 1996

In terms of area coverage, maize is the most dominant cereal crop, accounting for 44 per cent of the agricultural land use. Other important crops are paddy (24.0%), wheat (7.0%), and millet (6.0%). Commercial crops are grown extensively in Ilam. Potatoes are the most popular cash crop, occupying eight per cent of the land area, followed by large cardamoms (4.0%), vegetables (3.4%), tea (2.0%), and ginger (1.0%). Of 71,032 hectares of cultivated land, 13 per cent is irrigated land and 87 per cent is rainfed (HMG 1996). The monsoon season extends for a longer period in Ilam than the usual monsoon season from June to September.

2.1.9 *Industry and Enterprises*

There are a very few large-scale industries, mostly tea estates, in Ilam. Soktim Tea Estate, Ilam Tea Estate, and Kanyam Tea Estate are the prominent tea estates in Ilam. Kanyam Tea Estate is the largest in terms of area coverage, production, and employment, covering an area of 460 acres, producing 67,251kg tea annually, and providing direct employment to 471 persons.

2.1.10 *Land-based Enterprises*

Ilam is popular for a variety of commercial crops. The important ones are given in the following passages.

1. **Tea** - Tea plantation in Ilam was introduced more than a century ago but was adopted as an enterprise at the household level only recently. Individual farmers – with small, medium, and large farms — are allocating more land for tea cultivation. The establishment of tea processing and packaging centres in the private sector has encouraged tea plantation.
2. **Cardamom** - The cardamom is one of the oldest commercial crops in this district and has been undertaken as an enterprise for more than three decades. Cardamom cultivation is very popular among individual farmers. Cardamom cultivation is stimulated by the growing demand for cardamoms in India and overseas.

Rice mills constitute the biggest micro-enterprise sector. Rice mills provide grinding services to households for domestic consumption. They operate with traditional methods using the huller system. None of the rice mills uses modern technology. They are also not engaged in commercial production.

2.1.14 *Categories of Micro-enterprises*

Many micro-enterprises operate in the district. Table 5 gives the various categories of micro-enterprises registered with the CSIDC. Practically all of the micro-enterprises is linked to the local market. The development of roads and *haat bazaar*(s) in the rural areas provides outlets for a variety of products and services. Most of the micro-enterprises are created in response to local demand. The availability of local resources means that inputs are available for micro-enterprises. The district is endowed with the land resources essential for micro-enterprises. Forests and agricultural land are the important resources. The ease of entry and the availability of raw materials have stimulated growth in the number of enterprises in rural areas.

Table 5: Categories of Micro-enterprises in Ilam

Particulars of Enterprises	Units
Land based	173
Skill related	25
Local demand based	272
Export oriented	14
Local resources based	191
Using local skills and external resources	85

Note : The total in different categories exceeds the actual number of enterprises as some of them fall into more than one category.

Source : Compiled from the records of the Cottage and Small Industries' Development Committee 1996

A very small number of enterprises uses external raw materials. There are very few outward-oriented enterprises.

2.2 Bhojpur District

2.2.1 *Location*

Bhojpur district is renowned for its indigenous products such as metal crafts. It is a hilly region located in the Koshi Zone of the Eastern Development region of Nepal. Bhojpur *Bazaar* is the district headquarters located at an altitude of 1,524m. Bhojpur *Bazaar* is also the main trading centre in the region. Separated by the Arun River, the neighbouring districts are Dhankuta to the east, Solukhumbu and Khotang to the west, Sankhuwasabha to the north, and Udayapur to the south. The district covers an area of 1,376sq.km. Altitudes range from 152.4 to 3,048m. The district is divided into 63 village development committees (VDC). The population of Bhojpur is 198,784, of which 48 per cent are male and 52 per cent are female. The population density is 144/km^2.

2.2.2 *Economic Structure*

Agriculture is the main occupation, employing 97 per cent of the working population. The industrial and services sectors are relatively small and employ only three per cent of the working population (HMG 1996). Migration to other parts of Nepal and outside and remittances from outmigration are important features of the district – similar to other mountain economies (HMG 1996).

2.2.3 *Social Characteristics*

The main ethnic community is that of the *Rai*, followed by the *Brahmin*, *Chettri*, *Newar*, *Tamang*, *Magar*, *Gurung*, *Damai*, and *Kami* communities (HMG 1996).

2.2.4 *Education*

There are 254 primary schools, 45 lower primary schools, 26 secondary schools and a multiple campus under the aegis of Tribhuvan University offering courses in the Humanities and Commerce.

The literacy rate is 38 per cent, which is slightly higher than the national literacy rate. Sixty per cent of the men and 25 per cent of women are literate.

Bhojpur Town

2.2.5 *Settlement Pattern*

Ninety-four per cent of the population live in rural areas and six per cent in urban areas. Bhojpur *Bazaar* and Takshar are the only urban areas. The population of Bhojpur is 4,978 and Takshar is 6,522. There are eight VDCs with populations of 5,000 and 55 VDCs with populations of less than 5,000 but more than 1,000 each.

2.2.6 *Infrastructural Facilities*

Bhojpur is less developed than Ilam in terms of physical infrastructural facilities. There are no motorable roads that link the district with the plains and elsewhere in the country. None of the VDCs are accessible by motorable roads. The district is linked by trekking pathways.

The only modern transport link with the outside is by air. There is a regular flight from Biratnagar and Kathmandu. Royal Nepal Airlines operates five flights a week from Biratnagar and two flights a week from Kathmandu. There is an airport in Takshar VDC, but it is only suitable for small aircrafts.

Electricity is available only in Bhojpur *Bazaar* and Takshar through a 250KW hydroplant facility operated by a private company. Apart from these two areas, none of the VDCs in the district have access to electricity. Regarding telecommunications, Bhojpur *Bazaar* and Takshar together have 150 telephone lines, while nine VDCs have nine VHF telephone lines.

2.2.7 *Land Resources and Land Use*

The total area of Bhojpur district is 133,255ha, of which 62,299ha, or nearly 47 per cent, is used for agriculture which includes areas covered by field crops and vegetable and fruit crops. Land along river banks, river valleys, and areas with access to water are devoted to staple crops such as rice, maize, and wheat. The sloping terraces and other marginal areas (slopes, shallow soils) mainly used for rainfed agriculture are planted with maize, millet, mustard oil seeds, and vegatable crops.

In general, fodder and fuelwood trees are grown on sloping terraces, slopes, and marginal lands. The settlements are located mainly in the upland areas.

Forestry is the next dominant land use in the district, accounting for 64,600ha or 48.4 per cent of the total land area in the district. The condition of forest resources is not very good due to the high rate of deforestation and encroachment. Grazing is the most problematic land-use type. It accounts for 5,439ha or four per cent of the total land. Other land-use types account for 917ha or 0.6 per cent of the total land area. The principal land uses are given in Table 6.

Table 6: Land Use Patterns

Land Use Category	Area ha.	Percentage
Agriculture	62,299	47.0
Forest	64,600	48.4
Grazing	5,439	4.0
Others	917	0.6
Total	133,255	100.0

Source : District Agricultural Development Office, Bhojpur 1996

2.2.8 *Crops, Cropping Patterns and Crop Yield*

The main crops grown in Bhojpur are paddy, maize, wheat, millet, and potatoes. The other crops include mustard, legumes, sugarcane, tobacco, and minor cereals. In addition, fruit, vegetables, and other high-value cash crops, such as tea, cardamom, and ginger, are cultivated on small areas of land (APROSC 1991a).

The principal cropping patterns of the district are paddy based in the lowlands and maize based in the uplands. Triple cropping of early paddy, main paddy, and wheat in the river valleys, where sufficient water for perennial irrigation is available, is practised. But the dominant patterns are paddy in summer followed by wheat in winter or fallow and maize in the spring in the irrigated/rainfed lowlands. Maize, relay millet, or after millet in summer – followed by mustard in the winter — are predominant cropping patterns on rainfed upland areas. In addition to these, maize and potato relay cropping are common at high altitudes.

Table 7 presents the different crops grown in Bhojpur district. Cereal crops account for 96 per cent of the land use while only four per cent of the area is allocated to cash crops. The main cereal crops are paddy, wheat, maize, and millet. Potatoes are the only popular cash crops in the area. Other cash crops such as *amliso*, cardamom, and ginger are grown in very small pockets. Maize is the dominant crop accounting for 60 per cent of the land use, followed by paddy (26%), millet (7%), wheat (3%), and potatoes (4%). Out of an area of 62,299 hectares of cultivated land, 11 per cent is irrigated while 89 per cent is rainfed (District Agricultural Development Office 1996).

2.2.9 *Industry and Enterprises*

Bhojpur has many micro- and small-scale industries and service enterprises engaged in diverse activities. There are no medium- or large-scale industries in the district.

Table 7: Area under Crops and the Yield Rates in Bhojpur

Crops	Area (hectare)	Per cent	Yield M. T./ha
Paddy	19,191	26.0	3.27
Wheat	2,540	3.0	2.78
Maize	43,178	60.0	1.75
Millet	5,000	7.0	1.00
Potatoes	2,459	4.0	6.30

Source: District Agricultural Development Office, Bhojpur.1996

2.2.10 *Land-based Enterprises*

The soil and climatic conditions of Bhojpur are suitable for a variety of commercial crops.

1. **Tea** - Tea plantation was introduced in 1906 and tea is cultivated in some areas. Individual farmers grow tea and process it using traditional methods. It is used mostly for household consumption and the surplus for the local market. Tea cultivation has not expanded to large areas.
2. **Cardamom** - Cardamom is cultivated in small pockets and is grown for the local market only. It has very limited geographical coverage.
3. **Amliso** - *Amliso* traditionally serves two purposes: as fodder for cattle and for making brooms. It is grown on limited areas of land.
4. **Ginger** - Ginger is an important and popular cash crop. Farmers are expanding the cultivation of ginger in some areas.
5. **Potatoes** - In terms of area coverage, potatoes are the dominant cash crop. Potatoes are consumed in local market centres as farmers respond to the local demand.
6. **Fruit farming** - A variety of fruits is grown in the district. Oranges, apples, and bananas are popular fruits for household consumption and to sell in the market.
7. **Dairy** - Dairy farming is carried out on a small scale. Individual farmers supply milk and milk products for the local market only.

2.2.11 *Credit*

The Agricultural Development Bank, Nepal Bank Limited, and *Rastriya Banijya* Bank are the formal banking institutions that provide credit facilities to the agricultural and non-agricultural sectors. The non-institutional sources that play dominant roles include local moneylenders, relatives, and friends.

2.2.12 *Markets and Marketing - Haat Bazaar(s)*

Weekly and bi-weekly *haat bazaar*(s) are held in four locations – including Bhojpur *Bazaar*. Another 17 locations in different VDCs offer temporary markets throughout the year. The main products for sale are metal crafts (*khukuri*), vegetables, and fruits. Bhojpur *Bazaar* is the principal market in the district.

Bhojpur is quite far (about 40km) from both the Indian border towns and the *Terai*. Chatra is the nearest *Terai* centre from where commodities are transferred to and from Bhojpur. This route

is used to transport commodities to and from Itahari, Biratnagar. The other route is Bhojpur-Hile, located in Dhankuta District. It takes two days to reach both Chatra and Hile. The lack of a motorable road is a barrier to the growth of enterprises in the region.

2.2.13 *Structure of Micro-Enterprises*

Table 8 presents the different micro-enterprises registered with the District Cottage and Small Industries' Development Committee. It shows that micro-enterprises are non-homogeneous and involved in diverse products. Some enterprises are exclusively urban while others are exclusively rural. Metal crafts and handlooms are exclusively urban, whereas rice mills, Nepali paper (*Lokta*), and furniture are exclusively rural.

Moreover, micro-enterprises are almost equally divided between urban and rural locations: 51 per cent of the micro-enterprises are located in urban areas and 49 per cent are located in rural areas.

Table 8: Types of Cottage and Small Industries in Bhojpur District

	Urban	Rural	Total
Metal crafts	94	-	94
Bakeries	8	-	8
Rice Mills	5	48	53
Handlooms	20	-	20
Hosiery	4	8	12
Metal Fabrication	2	-	2
Leather Products	3	-	3
Furniture	3	7	10
Printing Presses	2	-	2
Stationery	4	-	4
Paper (*Lokta*)	-	14	14
Khukuri(s)	-	1	1
Soap	1	-	1
Quilts	1	-	1
Construction	30	104	134
Training Centres	1	-	1
Electronics(watches, radios)	6	-	6
Cinema Halls	1	-	1
Jewellery	2	-	2
Garments	4	-	4
TOTAL	191	182	373
	51%	49%	100%

Source: Cottage and Small Industries' Development Committee, Bhojpur 1996

2.2.14 *Categories of Micro-Enterprises*

Table 9 provides information on the categories of enterprise registered with the Cottage and Small Industries' Development Committee in Bhojpur. A significant number of enterprises is involved in skill-related activities using local skills and imported raw materials. Metal work is the most important activity in this category, and Bhojpur has a long tradition in this.

Table 9: Categories of Micro-Enterprises in Bhojpur

Particulars of Enterprises	Units
Land-based	90
Skill-related	128
Local demand-based	294
Outward-oriented	109
Local resource-based	77
Using local skills and external resources	170

Note: The total in different categories exceeds the actual number of enterprises as some of them fall into more than one category.

Source : Compiled from Cottage and Small Industries Development Committee 1996

2.3 A Comparison of the Socioeconomic Positions of Ilam and Bhojpur

Ilam and Bhojpur have a number of similarities. Both districts are located

in the eastern development region of Nepal and have similar agroclimatic and soil conditions that are suitable for growing a variety of commercial crops. Agriculture is the principal activity and cereal crops are the dominant crops.

Micro-enterprises in both districts are non-homogeneous and produce a variety of products for local and external markets. Micro-enterprises use traditional methods and are linked to the local market. Micro-enterprises in both districts have access to and make use of institutional and non-institutional credit. NGO programmes linked to the promotion of micro-enterprises are found in both the districts. There are weekly, bi-weekly, and daily *haat-bazaar*(s) that provide outlets for agricultural and non-agricultural products. Both districts have natural resources suitable for the promotion of micro-enterprises. Some of the principal resources are forests, non-timber forest products, cereals, and commercial crops. The land base in both districts provides materials for various activities (Table 10). Among the common products are rice, handloom products, garments, Nepali paper (*Lokta*), and wooden and bamboo furniture.

There are differences as well. Both districts are at different levels of development. Ilam is far ahead of Bhojpur in micro-enterprise development. Ilam is an example of dispersed and decentralised development of micro-enterprises, while Bhojpur is characterised by centralised development of micro-enterprises. Seventy-two per cent of the micro-enterprises in Ilam are located in rural areas while micro-enterprises in Bhojpur are mostly urban based. Ilam has good infrastructural facilities. Most VDCs in Ilam are linked by motorable roads, whereas Bhojpur lacks roads.

A minimum level of agricultural development is a necessary condition for the development of micro-enterprises. Ilam is going through a rapid transformation process from subsistence agriculture to highly remunerative commercial crops. Ilam is recognised as successful case of this transformation process in Nepal and devotes more land to cash crops. In contrast, Bhojpur faces several impediments to the development of commercial crops, e.g., lack of roads and access to markets. Ilam is located near the Indian border and is linked by a motorable road to the *Terai* (plains) and Indian border towns such as Darjeeling and Silguri. They provide outlets for commercial crops. There are more *haat bazaar*(s) in Ilam than in Bhojpur: there are 30 *haat-bazaar(s)* in Ilam and 21 in Bhojpur.

Ilam specialises in agro-based activities and most of the activities are land based. Bhojpur on the other hand specialises in skill-related activities. There are 132 rice mills in Ilam; Bhojpur has 94 metal crafts. The agro-based activities in Ilam have growth potential, whereas metal crafts in Bhojpur are not thriving at all. A tabular depiction of the comparison is given in Table 10.

2.4 Programmes to Promote Micro-enterprises

The Government of Nepal acknowledges the significance of diversifying agriculture to include remunerative enterprises and the need to promote micro-enterprises in the mountain areas. In recognition of the importance of the role of micro-enterprises, the government, through its relevant agencies, has supported micro-enterprises. In addition, INGOs and NGOs have also introduced specific programmes to promote income-generating activities.

Table 10: A Comparison of the Socioeconomic Positions of Ilam and Bhojpur

Particular	Ilam	Bhojpur
Total population	229214	198784
Rural (%)	92	94
Total households	41,450	37225
Total land area (sq.km.)	1703	1376
Population Density	134	144
Literacy Rate	53	38
Male	65	60
Female	39	25
Primary Schools/VDC	279/47	254/63
Road connected VDCs	40 (7 in progress)	None
Electricity	Ilam *Bazaar* and 4 locations also 6 VDC diesel sets	2 in Bhojpur *Bazaar* and one in one VDC
Telephones	Ilam *Bazaar* 250 connections in 20 VDCs 37 connections	Two Locations 150 connections, 9 VDCs 5 connections
Land Use (Area Under Agriculture)	42%	47%
Workers in Agriculture (%)	89	97
Cultivated Land (Ha/household)		
Uplands	0.34	0.41
Lowlands	1.03	0.32
Total	1.37	0.73
Grasslands (ha/household)	0.20	0.04
Private Forests (ha/household)	0.50	0.04
Homesteads	0.06	0.03
Total Holdings (ha/household)	2.13	0.84
Operating Holdings (ha/household)	1.43	0.81
Crops (% area)		
Cereals	81%	96%
Commercial Crops	9%	4%
Cropping Intensity	115	149
Average Cash Income (household)	18,147	12,089
Enterprises		
Rural	72%	49%
Urban	28%	51%

Source : Compiled from APROSC 1991a
District Profile, Bhojpur 1996 and Field Survey 1997

Some institutions involved in the promotion of micro-enterprises in Ilam/Bhojpur are described in the following pasages.

2.4.1 Cottage and Small Industries' Development Committee (CSIDC)

CSIDC was established to provide support to the development of cottage and small enterprises. Its activities relate to skill development training, product and market information, technical assistance in preparing feasibility studies, and provision of access to credit from the institutional

financial sector. The CSIDC district offices are located in the district headquarters in Ilam and Bhojpur.

The CSIDC is composed of representatives from various sectors (including the private sector and government line agencies) and coordinates the promotion of various activities in an organized manner.

CSIDC seeks to promote local resource-based enterprises such as Nepali paper from Daphne (*lokta*), dairy products, *allo,* (cloth made from an indigenous nettle) *radi pakhi* (blankets), and other indigenous enterprises.

2.4.2 *Lutheran World Service (LWS)*

The Lutheran World Service, an INGO with its country office in Kathmandu, has been engaged in promoting sericulture in Ilam since 1984 in collaboration with a local women's NGO, the Women's Development Association. Lutheran World Service provides technical assistance and promotes other income-generating activities for women. The project is mature, self-supporting, and sustainable.

2.4.3 *National Tea and Coffee Development Board (NTCDB)*

Established in 1993, NTCDB has been entrusted with developing and promoting tea production in Ilam district. Extension services and the provision of credit at concessional rates are recognised as essential inputs for the promotion of tea cultivation. Acknowledging the significance of both these inputs, NTCDB lobbied for a reduction in the interest rate of institutional credit and played an instrumental role in reducing the interest rate from 18 to 14 per cent per annum. The reduction of interest rates attracted large numbers of small tea growers. Small tea farmers in Ilam use 13 per cent of the total tea area (NTCDB 1994). NTCDB also provides extension services to the tea sector through extension service centres.

2.4.4 *Plan International (PI)*

Plan International, an INGO with its country office in Kathmandu, has contributed to infrastructural development and income-generating activities. Plan International has implemented Drinking Water Projects in 23 VDCs in the Bhojpur district and is seeking to implement income-generating activities in the near future.

2.4.5 *Banking Agencies*

Institutional financial support to micro-enterprises is made available through Agricultural Development Bank, Nepal Bank Limited, and *Rastriya Banijya* Bank. These agencies have extended short-, medium-, and long-term credit to micro-enterprises. The Intensive Banking Programme (IBP) in the priority sector has focussed on lending for commercial crops such as tea and cardamom and micro-enterprises based on local and imported raw materials such as rice mills, Nepali paper, and garments. Introduced by Nepal Rastra Bank in 1981, Ilam was among the first districts where the IBP was implemented. The IBP covers both Ilam and Bhojpur districts.

2.4.6 *Registration, Benefits and Incentives*

Registration with the CSIDC within six months of establishment of the unit is essential for access to the benefits and incentives provided by the government. These benefits include tax incentives and access to raw materials, power, and credit. Micro-enterprises prefer to register with CSIDC to take advantage of these benefits.

Government policies and interventions by INGOs have contributed to the development of micro-enterprises in Ilam and, to a lesser extent, in Bhojpur. Many factors have contributed to the development of micro-enterprises engaged in commercial crop production in Ilam. The government policy on tea enterprises, the establishment of the Nepal Tea and Coffee Board, the introduction of the Intensive Banking Programme, the provision of roads, and the entrepreneurship of the local people are the principal factors that have influenced the development of micro-enterprises in Ilam. Technical support from the LWS in the sericulture sector has benefitted an estimated 1,500 families in the district. The CSIDC introduced a training programme which has contributed to the employment of some of the trainees in the micro-enterprise sector in both Ilam and Bhojpur districts.

3
Products of Enterprises Studied: Principal Characteristics

3.1 Products

The 100 units covered in the survey belong to 13 product categories in Ilam and Bhojpur districts. The largest number of units belongs to agro-based activities. Rice mills dominate the product and service sector – followed by metal crafts. The other important product groups are garments, handloom products, furniture, hosiery, Nepali paper (*Lokta*), and broom.

Some of the products are common to both districts, whereas others are linked to a particular location because of their uniqueness. Rice mills, Nepali paper, hosiery, garments, handloom products, and furniture are common to both districts and broom, tea, sericulture, and rabbit farming units are found in Ilam only. Skill-related products, such as metal crafts, are found exclusively in Bhojpur.

3.1.1 Rice Mills

Rice mills dominate the agro-processing sector. Rice mills in both districts provide grinding services and none of them is engaged in commercial trading. Rice mills serve local households. Households bring sacks of paddy to grind for domestic consumption. Farmers generally keep stocks of paddy after harvest and take it for grinding in small quantities throughout the year. The establishment of rice mills has relieved the local women from the cumbersome task of grinding by hand at home.

Rice mills use the traditional technology - the huller system. It is easy to install and is appropriate for grinding for domestic consumption. Diesel engines, water turbines, or electric motors provide the power.

All rice mills are located within household premises and are operated as a family enterprise. Family members supervise the operations while outside labour is hired to pour paddy into the huller for grinding. The mills operate throughout the year. The peak period is after harvesting season, usually February and March. On average the mill operates two to three hours daily but during the peak period this extends to six hours.

All rice mills are small units and none of them uses modern technology or the sheller (de-husking) system; they are linked only to the local market.

3.1.2 Nepali Paper (Lokta)

Nepali paper or *lokta* is produced from the bark of *Daphne* spp. The bark is boiled with ash or caustic soda solution. The boiling or digestion is carried out in two stages, cleaning the bark in

between. Each digestion lasts about three to four hours. The mass is finally washed with water and then pounded with wooden hammers to produce the pulp.

An adequate portion of the pulp is spread on to a frame mould with a cloth backing, and the pulp is distributed evenly on the frame by swinging it in water. The paper is left to dry on the frame and then peeled off.

Registration with CSIDC is essential and permission from the Department of Forestry is necessary before establishment. The unit has to be located in an isolated place away from the market area. The source of raw materials is the forests. Permission to collect bark has to be obtained from the District Forest Office. The District Forest Office considers the requests of the enterprises and issues permits to collect the bark from designated forest areas. A royalty of three rupees per kg is charged. The DFO gives the enterprises from 15-30 days to collect the bark. Bark collectors charge for the bark collected and for transporting it to the site of the enterprise. Two species of *Lokta,* namely, *Daphne bholua* and *Daphne paperace* are found in the eastern hills. The altitudes at which these species are found range from 1,540m to 3,080m. The altitude in certain places extends up to 4,000m (BCP 1992). About 20kg of bark are required to produce one kg of Nepali paper. Fuelwood is the principal source of energy for paper products. Fuelwood is obtained from the forest on the recommendation of the Department of Forests. Approximately 800kg of fuelwood are required to make 200 sheets of paper.

Traditionally operated as a family enterprise, the production of Nepali paper used to be confined to *Tamang* communities only. However, entrepreneurs from other communities are also entering the Nepali paper industry.

Nepali paper is durable, strong, and insect resistant and is preferred therefore for financial records and horoscopes. Using a locally-developed technology, Nepali paper-making has been a cottage industry in Nepal since the Chinese brought the technique here in the 11th Century (BCP 1992).

Because of its unique features, Nepali paper is becoming popular overseas. Apart from a few businessmen, Bhaktapur Craft Printers (BCP), a joint venture of HMG/N and UNICEF, is involved in the export of greeting cards. It is estimated that greeting cards and Nepali paper worth Rs 100 million are exported annually to other countries (BCP 1992).

3.1.3 Hosiery

The climatic conditions in mountain areas create a growing local demand for woollen sweaters, mufflers, gloves, and socks. This has created economic opportunities for hosiery products. Traditionally, hand-woven sweaters and mufflers were used by the local people. The introduction of machines has facilitated production on a large scale and has reduced the time taken for production. The products are targetted at the low and middle-income groups. Registration of hosiery products is voluntary. Hosiery products are produced either at home or in a shop in the market area. Training in knitting is provided by the CSIDC. Usually the trainees open up hosiery enterprises after completing the training.

Wool is imported from Biratnagar, Dharan, and Kathmandu, in Nepal, and Jogbeni and Siliguri in India. Nepali and Indian wool is used.

Wool is readily available. Most of the enterprises have made arrangements, either through their relatives, acquaintances, or shopkeepers in different locations, to receive a regular supply of wool for uninterrupted production. The peak season is from October to March when the demand for hosiery products is very high. Hosiery units are operated manually.

3.1.4 *Garments*

Hosiery/Crafts - Bhojpur

Traditionally, tailoring has been an activity of the *damai*(s). But this is changing gradually. Tailoring is emerging as an important and popular income-generating activity in rural areas. Other castes and communities are also entering this profession, because it is lucrative.

Garments are produced on order, either from customers or from shopkeepers. Specifications of the orders are given by the buyers.

Registration for garment units is voluntary. These units are operated mostly by women. Women find them convenient and simple to operate. They operate within the household premises or in a separate location without disturbing their domestic schedule. The energy consumption is very low because machines are operated manually. The only appliance that requires energy is the iron for giving the garments a finishing touch. Charcoal-burning irons are used for ironing.

3.1.5 *Bamboo Furniture*

Bamboo Products - Bhojpur

Mountain areas are endowed with forest resources, and this creates tremendous scope for forest-based activities such as non-timber forest products —bamboo and *nigalo*. The furniture made of bamboo is used widely for domestic purposes and is supplied to both ur-

ban and rural markets. Bamboo products, such as stools and racks, are displayed in *haat bazaar*(s) and shops. Registration for bamboo furniture is voluntary.

3.1.6 Wooden Furniture

Wooden furniture includes a variety of products for domestic as well as official use. Among the products are chairs, sofa sets, tables, and cots. Raw materials are obtained through the District Forest Office. Registration is essential in order to get a permit to obtain the necessary raw materials from the DFO. Energy use varies according to the type of energy available. Some of the furniture units located in Bhojpur used electricity, while furniture units in Ilam use petroleum fuels.

3.1.7 Handloom

Handloom products are made from imported raw materials – mostly from India – and use traditional manufacturing methods. The looms are made locally and use local labour. Production takes place mostly at household level or in separate locations in proximity to the market. The principal handloom products are low-priced sarees, shawls, caps, and bed sheets, and they are sold in both urban and rural markets. The products are low in price because they are made for low and middle income groups.

Handloom products are produced on order from shopkeepers and institutions, and stocks of raw materials are maintained for uninterrupted production. In order to receive tax concessions and other facilities, handloom units register with the CSIDC.

3.1.8 Brooms

Brooms are essential household items. Brooms are made from *amliso* (broom grass) which is cultivated intensively in Ilam. For decades, *amliso* has also been cultivated in small areas to provide fodder for cattle. With construction of motorable roads and improved market access, *amliso* is finding a growing market in India. Farmers prefer to sell *amliso* to Indian middle men who come to Ilam to collect raw materials. Broom-making in Ilam has recently been started by some entrepreneurs. Broom units prefer to register with the CSIDC. Because of a growing market and the small amount of capital needed, this industry has a high growth potential.

3.1.9 Tea Processing and Packaging

Until recently tea processing and packaging were confined to large tea estates. Tea plantation was the domain of large tea estates only. The emergence of small tea growers has created ample opportunities for the promotion of small and medium tea processing and packaging units. The establishment of Nepal Tea and Coffee Development Board and availability of tea leaves from small tea growers have promoted the small tea processing and packaging units. This is reinforced by price incentives, the growing demand for tea, and high profit margins. Tea processing units prefer to register with the CSIDC.

3.1.10 Metal Crafts

Bhojpur metal crafts are very popular, especially *khukuri*(s). For centuries the metal craft industry has been concentrated in Bhojpur. Metal crafts were introduced into Bhojpur in 1767 by a migrant family of goldsmiths, *banda*(s). Metal work is a highly skilled activity and involves

traditional methods. The products are unique and reflect Nepali culture. The skill is confined to goldsmiths (*banda*(s)), and is passed from one generation to another, remaining within the family. Both men and women work as a team and contribute to the production of a variety of brass and bronze crafts. Production is in various stages. Brass and bronze articles are cast by the lost wax method. First of all, a wax model in one piece or several pieces, depending on the complexity of the article to be produced, is prepared. This wax model is dipped in a slurry of clay until the proper thickness is achieved all round, and it is then sun dried. This model is then coated with layers of clay and rice husk so that the successive layers have more and more clay (Suwal 1988). A hole which can be closed is made in the top of the model. This model is again dried in the sun. The dried moulds are heated in a charcoal fire and the wax is allowed to drain out. The brass or bronze pieces are melted in the furnace and poured into the preheated moulds. When the moulds are cold enough to handle, they are dipped in water and the clay layers crack open. The product is given a final touch by joining the pieces together and engraving intricate designs. Ordinary household metal ware is mostly finished by polishing with an electric motor. Metal crafts are produced both on the basis of demand projections and on orders received from individual customers as well as commercial outlets.

Metal Crafts - Bhojpur

Production of the *khukuri* (traditional knife, short sword), an important metal product, is linked to a particular ethnic class, the *Kami*(s) (blacksmiths). Originally, the *khukuri* served as a combat weapon, now it is also used in the kitchen and by butchers. The *khukuri* is also popular as a souvenir. It is a symbol of Nepali culture and used in ceremonies by the army and the police.

Khukuri(s) are produced either for orders placed by individual customers or from outlets, usually from local shopkeepers trading in other products as well. The workshop uses powerful hand-operated bellows made of hides and operated by hand with proper counterweights and valves. It consists of a hearth in which charcoal is burned. The usual implements are thongs, hammers, and an anvil. The iron is heated in the hearth until it is red hot and then hammered into shape. The requisite temperature is achieved by repeated quenching in water and sometimes in oils.

The blacksmiths work on piece rates. Contractors place orders for a specified quantity of *khukuri*(s) to be supplied to the Army and the Police. The contractors provide the raw materials. The blacksmith households work as a team; both men and women contribute to the production.

3.1.11 *Dairy Farming*

Ilam has a large cattle population. The availability of fodder, access to markets, establishment of chilling plants, and milk collection centres along the Charali-Ilam highway have stimulated the growth of dairy farming.

The Dairy Development Corporation (DDC) has established chilling plants in Fikkal and other locations and milk collection centres along the Ilam-Charali road. Small farmers sell milk to the DDC collection centres and other private dairy units. Milk is collected from farmers, and a variety of products, such as cheese, butter, *churpi* (casein), is made. The products are sold locally and also exported to Kathmandu and the Indian border town, Darjeeling. Dairy farming is traditional in method. The only modern equipment used is the cream separator. Fuelwood is used to heat milk. The fuelwood requirement varies according to the size of the enterprise. It is estimated that a medium-sized dairy unit needs 40 metric tonnes of fuelwood. Fuelwood is available from the Forest User Groups on recommendation from the District Forest Office.

3.1.12 *Sericulture*

Mulberry plantation for Sericulture - Ilam

Sericulture is a relatively new, agro-based rural enterprise. It involves the pre-cocoon activities of mulberry cultivation and silkworm rearing and the post-cocoon activities of processing and making silk fabrics. Mulberries are cultivated on slopes and unproductive marginal lands. The agroclimatic and socioeconomic conditions in Ilam are favourable for the development of sericulture. A programme for sericulture cultivation was introduced as a joint initiative of the Women's Development Association and the Lutheran World Service in Ilam in 1984. It covers four VDCs in lowland areas. Its principal objective is to raise the status of women through sericulture. The rearing of silkworms and cocoon production use very simple technology-bamboo silkworm rearing trays and montage on which silkworms can spin their cocoons are easily made by local farmers using traditional skills. Eight hundred and sixty women are involved in mulberry cultivation and silk production. There is a good demand for raw silk in the international market. Ilam has a great potential for sericulture development. Sericulture cultivation is not undertaken by farmers outside the programme area.

3.1.13 *Rabbit Farming*

Rabbit farming as an enterprise to supplement the incomes of women farmers was introduced by a local NGO, *Mahila Jagaran Samuha*, in 1994. Angora rabbits, suitable for wool, were

brought from Pakhribas Agricultural Centre in Dhankuta and distributed to 12 local women farmers. The attractive price paid for the wool induced many women farmers to take up rabbit farming. In the initial phase, women farmers benefitted from the enterprise; no problems appeared. But, after a year, lack of veterinary services to treat a neck disease that had developed among the rabbits and difficulties in marketing the wool discouraged women farmers from undertaking rabbit farming. The number of women farmers rearing rabbits is now reduced to two.

Another attempt was made by a local entrepreneur to promote rabbit farming. An enterprise was introduced in 1994 but problems related to marketing and the high mortality rate of the *Angora* due to a specific neck disease resulted in closure of the enterprise.

Box 1: A Successful Case : Tea

Tea is a very lucrative crop and tea plantation is considered to be very successful in Ilam. The agroclimatic and soil conditions are favourable for tea cultivation. There is a growing interest among farmers in cultivating tea. Plantation on a commercial scale was introduced into Ilam by Gaj Raj Singh Thapa, the District Governor of Ilam, in 1860. On an informal visit to Darjeeling, he was inspired by the tea plantation there and wanted to replicate it in Ilam. He brought some tea seeds and planted them in the hills of Ilam. Gradually, these developed into a healthy plantation and plantation was expanded to other areas. The establishment of the Nepal Tea Development Corporation in 1966 facilitated gradual growth of the tea industry in an organized manner.

Tea plantation in the private sector, and particularly by small farmers, began in 1978. Initially, the area covered was 79 hectares, and this has grown to 534.76 hectares. Production is increasing. There is a growing inclination among small farmers to take up tea plantation. About 653 small farmers are actively involved in tea cultivation and some are also establishing tea packaging and processing units.

One of the pioneers in the private sector is Chatra Rai. He began with 30 ropanies of land (1.5 acres) in 1979. Inspired by high returns, Rai extended the area and devoted more land to tea cultivation. Rai owns sufficient land to expand. The growing demand for tea and the higher profit margin prompted Rai to establish a tea packaging unit. The tea packaging unit has yielded good profits for Rai, the production and packaging units have growth rates of more than 20 per cent.

There are many factors that contribute to the success of tea plantation in Ilam. Sri Antu, where Mr. Rai owns a tea garden, is located at an altitude of 2,000m – most appropriate for growing the orthodox leaf tea that is renowned for its quality and which is comparable to the world-renowned Darjeeling tea.

Sri Antu is located near the Indian Border town of Darjeeling and the Indian tea gardens. Because of its proximity to Indian tea gardens, Sri Antu tea has a ready market and is highly remunerative, as a result of the competition among Indian buyers. Indian middlemen visit Sri Antu frequently and offer more attractive prices than the prevailing market rates; this motivates local tea growers.

Technical and financial assistance is also readily available as and when needed. Tea consultants from Darjeeling visit Sri Antu regularly and provide technical advice on the protection of tea leaves and on the production of high quality tea. Institutional support has also contributed to the success of tea. The Tea and Coffee Board provides technical assistance and other support for tea promotion.

Tea Garden - Ilam

Box 2: A Case of Failure: Rabbit Farming

Rabbit farming is very remunerative because it provides high profit margins with very low investment. Notwithstanding there are technical and marketing problems associated with rabbit farming. Because of these problems, this enterprise could not succeed in Ilam. Rabbit farming is considered to be a failure. Attempts by individuals as well as groups did not succeed.

An attempt at rabbit farming was made by local businessman, Thakur Prasad Baidya, in 1994. Baidya started the enterprise on a small scale. He hoped to benefit from his long experience and management skills. But he was not familiar with how to raise the Angora rabbit, the disease of the neck, proper management, and the market for angora wool. The venture did not continue for long. A combination of nurturing and marketing problems resulted in the closure of the enterprise. Thakur Baidya has completely disassociated himself from the rabbit farming activity and is now engaged in his traditional family business.

A group effort was made by a women's group, *Mahila Jagran Samuha*. Angora rabbits were introduced in 1994 from Pakhribas Agricultural Centre, Dhankuta, and distributed to 12 women farmers in the Ilam municipal area. Initially, the attractive price of Angora wool created a lot of enthusiasm and motivated the women farmers, but, as the neck disease appeared and resulted in high mortality of the rabbits, they became reluctant to continue and this led to the virtual closure of the enterprise after two years.

Ilam veterinary hospital is not adequately equipped to treat the diseases of Angora rabbits. A combination of problems related to nurturing and marketing led to the closure of the enterprise both at the individual and group levels.

4
The Entrepreneurs : Background, Motivation and Training

4.1 Profile of Micro-entrepreneurs by Sex

Analysis of the ownership structure of micro-enterprises showed that 62 per cent of the enterprises are operated by males and 38 per cent by females. All bamboo furniture, broom, metal crafts, and paper enterprises are run by male entrepreneurs, whereas all rabbit farming and sericulture enterprises are run by female entrepreneurs. In addition, 77 per cent of the handloom, 75 per cent of the hosiery, and 57 per cent of the garment enterprises are run by female entrepreneurs (Table 11).

Table 11: Sex-wise Classification of Entrepreneurs

No.	Type of Enterprises	Male	Female	Total	Male as% of Total
1	Rice Mills	12	5	17	70.6
2	Garments	6	8	14	42.9
3	Handloom Products	3	10	13	23.1
4	Nepali Paper	10		10	100.0
5	Hosiery	2	6	8	25.0
6	Wooden Furniture	5	1	6	83.3
7	Bamboo Furniture	3		3	100.0
8	Dairy	4	1	5	80.0
9	Rabbit Farming		3	3	0.0
10	Tea Packaging	2	1	3	66.7
11	Sericulture		3	3	0.0
12	Brooms	5		5	100.0
13	Metal Crafts	10		10	100.0
	Total	62	38	100	62.0

Source: Field Survey 1996

The ownership structure indicates that activities that require hard manual work, involved a lot of capital, need raw materials from outside, and for which a lot of management skill are needed are run by men, while those that need very little management skill and a little capital are owned and operated by women. Women are involved in activities that are not heavy and which can be operated within the household premises, or not very far from the household, and that do not disturb their daily household activities and or have become a part of their daily course of life. In all enterprises, women are either involved as entrepreneurs or as unpaid family labour.

Rabbit farming and sericulture involve women exclusively and supplement their family incomes. Women have many needs for cash. In households where men do not earn a sufficient income, or in the case of widows with no source of income, such activities provide regular sources of income.

4.2 Age Groups of the Entrepreneurs

Most (31%) micro-enterprises are owned and operated by entrepreneurs in the age group of from 31-40 years and a small number (12%) of enterprises is run by persons in the age group of from 50 years and above (Table 12). A goodly number is also in the age group of from 40-50 years, as well as in the relatively younger age group of from 20-30 years. Fifteen per cent of them have started young before reaching the age of 20 years. Of the few in the age group above 50 years, most are retired and operating the enterprise just to keep themselves occupied. Some of them, of course, have no option but continue to subsist.

4.3 Educational Levels of Entrepreneurs

Table 12: Age Structure of Entrepreneurs

Age Group (Years)	Number
Less Than 20	15
20 -30	19
31 - 40	31
41 - 50	23
More Than 50	12
Total	100

Source: Field Survey 1996

An enquiry into the education level of micro-level entrepreneurs revealed that eighty-eight per cent of the entrepreneurs are literate and the rest illiterate. However, most of the literate enterpreneurs were simply literate, only seven per cent had passed the high school examination, and 13 per cent had a college-level degree and above. District-wise classification of the entrepreneurs according to education level shows that only three per cent of the entrepreneurs are illiterate in Ilam district compared to 24 per cent in Bhojpur district. Among the literate in Ilam, 19 per cent have college-level education, nine per cent have high school education, and the rest (69%) are simply literate. Among the literate in Bhojpur, five per cent each are high school and college graduates and the rest (86%) are simply literate. This shows that most micro-level entrepreneurs in Bhojpur have a lower level of education than those in Ilam district (Table 13).

Table 13: Levels of Education of Entrepreneurs

Education Level	Ilam	Bhojpur	Total
Illiterate	2	10	12
Literate	40	28	68
High School	5	2	7
College and Above	11	2	13
Total	58	42	100

Source : Field Survey 1996

Ilam has a longer tradition of providing a literate environment. There are more schools in Ilam than in Bhojpur. People in Ilam also have access to the educational facilities in Darjeeling, which is close to Ilam. This is reflected in the educational status of the entrepreneurs in Ilam in relation to Bhojpur.

4.4 Ethnicity of Entrepreneurs

The classification of entrepreneurs according to ethnic groups shows that *Newar* and *Brahmin* communities are predominant. These two communities together own 46 per cent of the micro-enterprises surveyed. They are followed by the *Chhetri*, *Rai*, and *Damai* who together own 37 per cent of the enterprises. The rest of the enterprises are owned by the *Sherpa*, *Tamang*, *Magar*, *Gurung*, *Shah*, *Limbu*, and *Giri* communities (Table 14 and Fig. 1). All metal craft entrepreneurs are *Newar*(s), whereas 50 per cent of the garment enterprises are run by the *Damai*, the community specialising in sewing by tradition. The *Sherpa* and *Rai* communities are involved mainly in dairy and paper businesses. The *Brahmin* and *Chhetri* communities are involved in most of the enterprises with no special concentration in any particular kind.

Table 14: Classification of Entrepreneurs by Ethnicity

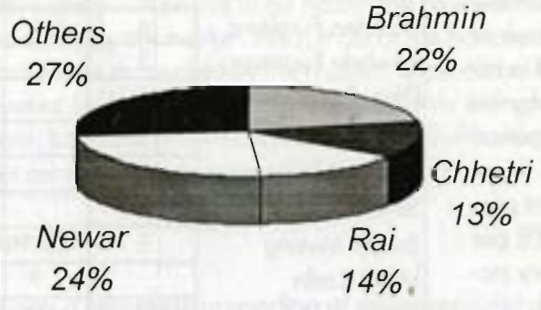
No.	Ethnicity	Number
1	*Brahmin*	22
2	*Chhetri*	13
3	*Rai*	14
4	*Sherpa*	6
5	*Damai*	10
6	*Newar*	24
7	*Magar*	1
8	*Tamang*	4
9	*Gurung*	1
10	*Shah*	1
11	*Limbu*	2
12	*Giri*	2
	Total	100

Source: Field Survey 1996

4.5 Occupational Shift

Some of the occupations are linked to a particular caste or community. They are passed on from generation to generation. The skill is acquired by young members by working as apprentices under the elders, and they continue the traditional occupation. This has been going on for centuries. Tailoring is linked to the *Damai*, shoe-making exclusively to the *Sarki* (shoemakers), *Khukuri* manufacturing is carried out only by *Kami*(s), *Tamang*(s) are engaged in bamboo weaving, *Banda* (goldsmiths) are involved in metal crafts, and Nepali paper production is exclusively the occupation of *Tamang*(s).

Figure 1: Classification of Entrepreneurs by Ethnicity



There is a shift in occupations from traditional caste affiliations. It is not surprising to find tailoring work being carried out by non-*Damai*(s) and the involvement of non-*Tamang*(s) in the Nepali paper sector. There is also a shift from one occupation to another. This is partly due to the effect of market forces and the changing attitudes brought about by education and an increase in the level of awareness.

Women from non-*Damai* castes learn tailoring by working either as apprentices or as trainees. *Kami*(s) take up bamboo-weaving as it is considered remunerative. Metal crafts, *Khukuri* manufacturing, and shoe-making, however, remain affiliated to the occupational castes. Although these occupations do not require much investment and entry is easy, entrepreneurs from other castes are not engaged in them because of the traditional stigma attached to these activities. They are still thought of as low-caste occupations.

In the case of metal crafts, skills are confined to the family and are not taught to others. It is purely an artisan's job, and the art of production remains within the family. It is also not highly remunerative as the demand for the product is declining due to the shift in demand to other urban products.

4.6 Primary Family Occupations of Entrepreneurs

The survey has revealed that, as most of the micro-entrepreneurs come from farming backgrounds, farming is the primary source of income. Micro-enterprises serve as supplementary sources of income. The survey indicated that farming is the principal family occupation for 80 per cent of the entrepreneurs, followed by metal crafts for nine per cent, tailoring for five per cent, and other trades for six per cent. For those who engage in Nepali paper making, hosiery production, dairy farming, sericulture, tea packaging, and broom-making, farming is the main source of income. Most metal craft entrepreneurs have left farming and have taken up metal craft as their primary family occupation on a traditional basis. Although tailoring is a traditional occupation of a special caste (the *Damai*), this business seems to have become a secondary occupation of other castes as well in recent years. This is why it is the secondary occupation for 65 per cent of those engaged in garment production, while for 28 per cent it is the primary occupation (Table 15).

Table 15: Primary Family Occupations of Entrepreneurs

Type of Enterprises	Farming	Metal Craft	Tailoring	Other Trade	Total
Rice Mills	13			4	17
Garments	9		4	1	14
Handloom Products	12		1		13
Nepali Paper	10				10
Hosiery	8				8
Wooden Furniture	6				6
Bamboo Furniture	3				3
Dairy Farming	5				5
Rabbit Farming	3				3
Tea Packaging	3				3
Sericulture	3				3
Broom Making	5				5
Metal Crafts		9		1	10
Total	80	9	5	6	100

Source: Field Survey 1996

4.7 Inspiring Agents for Entrepreneurs

Most entrepreneurs were inspired and encouraged to start their enterprises by parents, friends, and relatives, but quite a few, (22%) were encouraged by a government agency - the CSIDC. Thirty-six per cent of the entrepreneurs established their businesses because of encouragement of friends, 20 per cent the encouragement of parents, and 14 per cent because of the encouragement of from relatives. The rest (44%) were inspired by agencies such as NGOs and banks. The influence for all the metal craft enterprises was parental, whereas 80 per cent of those engaged in the broom business were encouraged by the CSIDC. For bamboo and wooden furniture, friends or relatives played an influencing role. In a majority of the handloom enterprises, friends played a major role (Table 16).

Table 16: Inspiring Agents for Entrepreneurs

Type of Enterprises	Friends	Relatives	Parents	CSIDC	Others
Rice Mills	6	3	3	3	2
Garments	6	1	3	4	
Handloom Products	7	2	1	3	
Nepali Paper	3	1	1	5	
Hosiery Products	5	2		1	
Wooden Furniture	3	1		1	1
Bamboo Furniture	2	1			
Dairy Farming	2	1	1	1	
Rabbit Farming		1			2
Tea Packaging	1	1			1
Sericulture					3
Broom making	1			4	
Metal Crafts			10		
Total	36	14	19	22	9

Source: Field Survey 1996

4.8 Motivating Factors for Enterprises

Market prospects are the main motivating factor behind 62 per cent of the enterprises. In 17 per cent of cases, the fact that the enterprise is the family business is the main factor, while 21 per cent perceive that there are good profits to be had in the new venture. Sericulture and tea packaging are motivated solely by the market. Also, most of the handloom, Nepali paper, and wooden furniture enterprises are motivated by the market. Most of the metal craft enterprises are, however, not motivated by the market or profit but by its being the traditional family occupation. On the whole, business prospects (market and profit) are the motivating factors behind more than 80 per cent of the enterprises (Table 17).

4.9 Training Entrepreneurs

The survey revealed that only a very small proportion of entrepreneurs has received training for running the enterprises. Of the total of 100 entrepreneurs, only 14 per cent have training of

one kind or another. Those who have obtained training are engaged in garment, handloom, rabbit farming, sericulture, Nepali paper, and metal craft enterprises. None of the entrepreneurs in rice mills, tea packaging, and wooden furniture has been trained. It was also found that, altogether, 57 per cent of the entrepreneurs have worked as apprentices before starting their own enterprise. Apprenticeships have been undertaken mostly in garments, handloom, metal craft, hosiery, broom, and bamboo furniture enterprises. Interestingly, rice mills, tea packaging, and wooden furniture enterprises have been established and run by entrepreneurs with neither training nor apprenticeships (Table 18).

Training and apprenticeships are provided by both government or non-government institutions; and within the family and from friends. In the case of garments, all the training is provided by friends, while, in the case of handloom products, most of the entrepreneurs have taken CSIDC training. Nepali paper manufacturers also receive training from the CSIDC. All rabbit farmers and sericulture owners have received training from NGOs, whereas those engaged in metal crafts have inherited the skills from their parents.

Table 17: Motivating Factors for Enterprises

Type of Industries	Market	Occupation	Profit
Rice Mills	9		8
Garments	5	4	5
Handloom	11	1	1
Nepali Paper			2
Hosiery	6	1	1
Wooden Furniture	5	1	
Bamboo Furniture	3		
Dairy	3	1	1
Rabbit Farming	2		1
Tea Packaging	3		
Sericulture	3		
Brooms	3		2
Metal Crafts	1	9	
Total	62	17	21

Source: Field Survey 1996

Table 18: Training and Apprenticeship among Entrepreneurs

Type of Micro-enterprises	Trained	Worked as an Apprentice	Did Not Work as an Apprentice
Rice Mills			17
Garments	3	11	
Handloom Products	3	10	
Nepali Paper	1	8	1
Hosiery		6	2
Wooden Furniture			6
Bamboo Furniture		3	
Dairy Farming		5	
Rabbit Farming	3	0	0
Tea Packaging			3
Sericulture	3		
Broom Making		5	0
Metal Crafts	1	9	0
Total	14	57	29

Source: Field Survey1996

5
Structure of Enterprises

5.1 Nature and Location of Enterprises

All micro-enterprises in the sample had been established on a sole ownership basis, i.e., the enterprise was family-owned and family run. Some entrepreneurs use family labour for the entire production and distribution process, but the greater proportion use family members only for managerial inputs, and outside labour is contracted for manual work.

Seventy-two of the 100 enterprises function within the residential premises of the family. The remaining 28 enterprises operate on separate rented premises (Table 19). Products run in independent premises include Nepali paper, bamboo furniture, dairy farming, and wooden furniture. Of these, paper and dairy enterprises are relatively larger than other enterprises, employing on an average more than 10 workers each. The production of paper in any case requires more space, and this is not generally available on the household premises and has, therefore, to be located outside the residential area.

Table 19: Location of Micro-enterprises

Type of Enterprise	In House	Separate Location		Total
		Rented	*Owned*	
Rice Mills	17			17
Garments	10	4		14
Handloom Products	10	3		13
Nepali Paper		10		10
Hosiery	8			8
Wooden Furniture	3	3		6
Bamboo Furniture		3		3
Dairy Farming	2	3		5
Rabbit Farming	3			3
Tea Packaging	3			3
Sericulture	3			3
Broom Making	4	1		5
Metal Crafts	9	1		10
Total	72	28		100

Source: Field Survey1996

For dairy enterprises, milk has to be collected from many farmers. Therefore, the location has to be convenient for collection and has to be close to the farmers; access to transportation facilities is an added advantage. Normally, bigger dairy units have greater processing capacities and require larger quantities of milk, therefore, more space is needed. Bamboo furniture units are small in size and yet are located outside the residential premises. This is because handling the raw material is cumbersome, therefore, proximity to the source is important

5.2 Capital Structure of Micro-enterprises

The micro-enterprises surveyed have average investments of Rs 96,002, of which Rs 49,009 (51.9%) is invested as fixed capital and the rest, Rs 46,003 (48.1%), as working capital.

Working capital is not needed for rabbit farming as the grass needed to feed rabbits is grown around the homesteads, and sericulture also does not need working capital. The remaining enterprises use both fixed and working capital. The survey results reveal that sericulture, bamboo furniture, rice mills, dairy farming, Nepali paper, garments, hosiery, and handlooms need a greater proportion of fixed capital investment, whereas wooden furniture, broom-making, tea packaging, and wooden furniture require a greater proportion of working capital (Table 20). All units in the sample use traditional technology. No mechanical devices are used and most activities are undertaken manually. Bamboo furniture is manufactured exclusively with traditional non-mechanical methods. Only a few units use mechanical devices. Rice mills, tea packaging, wooden furniture, garments, and hosiery are the principal users of mechanical devices.

Table 20: Capital Structure of Micro-enterprises

(Rs '000)

Type of Enterprises	Average Total Capital	Average Fixed Capital	Average Working Capital	Fixed as % of Total Capital
Rice Mills	110.6	75.8	34.8	68.5
Garments	31.5	17.4	14.1	55.1
Handloom Products	28.8	15.4	13.5	53.3
Nepali Paper	162.1	89.5	72.6	55.2
Hosiery	58.1	31.4	26.8	54.0
Wooden Furniture	105.8	39.0	66.7	36.9
Bamboo Furniture	20.0	14.0	6.0	70.0
Dairy Farming	360.2	217.2	142.8	60.3
Rabbit Farming	1.7	1.7	0.0	100.0
Tea Packaging	233.3	55.0	178.3	23.6
Sericulture	3.0	3.0	0.0	100.0
Broom Making	121.8	25.4	96.4	20.9
Metal Crafts	101.6	44.5	57.0	43.8
Total	96.2	49.9	46.3	51.9

Source: Field Survey 1996

It was found that a significant proportion of the investment was for start-up capital, which is reflected in the larger proportion of fixed than of working capital in most cases. Some enterprises, however, need very small initial investments. The size of the initial investment depends on the nature of the product or service and equipment required. Some enterprises prefer to initially start manually and install equipment later when capital is available. Some enterprises do not need heavy equipment at all —such as rabbit farming, sericulture, and bamboo furniture. Some enterprises, such as tea packaging and dairy farming, require big investments in machinery initially; in these cases businesses were first established with little capital and, as the activity expanded and capital became available, heavy equipment was installed.

In the case of rabbit farming, small initial investments only are needed to buy rabbits and operating the enterprise needs no working capital. Broom products involve very little equipment as production is carried out manually; but the greatest proportion of working capital is used to purchase broom grass.

5.3 Size of Enterprises by Capital Investment

Enterprises vary in capital investment depending upon the type of enterprise, machinery, and equipment required; the technology used; and raw material required and source of raw material. The average amount needed is Rs 96, 002 (Table 21).

Table 21: Size of Enterprises by Capital Investment

(Rs '000)

Type of Enterprise	Less than 10	10 to 25	25 to 50	50 to 100	100 to 200	200 to 400	More than Rs 400
Rice Mills			7	5	2	3	
Garments		12	2				
Handloom Products		9	4				
Nepali Paper			1	3	4	2	
Hosiery		4	4				
Wooden Furniture			3	2		1	
Bamboo Furniture		3					
Dairy Farming			1			1	3
Rabbit Farming	3						
Tea Packaging					1	2	
Sericulture		3					
Broom Making				4	1		
Metal Crafts			4	3	1	2	
Total	3	31	26	17	9	11	3

Source: Field Survey1996

Rabbit farming, garments, hosiery, handlooms, and bamboo furniture units are generally run with small capital investments, while dairy farming, paper making, tea packaging, and rice mills need relatively larger investments. Enterprises of most other products can be set up with either large or small capital investments. The survey showed that nearly two-thirds (60%) of the enterprises had been established with a capital of less than Rs 50,000 and, of this, about one-third (31%) of the enterprises had been established with a capital of less than Rs 25,000 and three per cent of the enterprises with less than 10,000. Twenty per cent of the enterprises had been established with capital investments of more than Rs 100,000, and three per cent with capital investments of more than Rs 400,000.

5.4 Employment Generating Enterprises

The micro-enterprises sampled provide employment opportunities to a total of 523 persons. Thus, the average employment per micro-enterprise is 5.23 persons. Nepali paper enterprises provide the highest level of employment (13.1 persons per enterprise), followed by dairy (farming 11.4 persons). Tea packaging, broom-making, metal crafts, and wooden furniture units on average employ five to seven workers per unit (Table 22). Rice mills, handloom products, bamboo furniture, and garment units employ about three persons each. Each rabbit farming unit employs only one person, mostly a woman and only on a part-time basis.

Table 22: Size of Micro-enterprises by Number of Employees

Number of Employees	1	2	3	4	5	6-10	11-16	16 +	Average Employment
Rice Mills			14	1	2				3.3
Garments	2	3	4	2	1	2			3.3
Handloom Products	6	2		2	2	1			2.9
Nepali Paper					3	2	2	3	13.1
Hosiery			1	3	3	1			4.5
Wooden Furniture		1	1	1	1	2			6.0
Bamboo Furniture		1	1	1					3.0
Dairy Farming			1			1	3		11.4
Rabbit Farming	3								1.0
Tea Packaging					2		1		6.7
Sericulture	3								1.0
Broom Making		1	1		1	1	1		6.6
Metal Crafts			3	2	3	2			5.3
Total	14	8	26	12	18	12	7	3	5.2

Source: Field Survey 1996

Sixty per cent of the enterprises provide employment to up to four workers each, while three per cent provide employment to 16 workers and more. Nepali paper generates the most employment per unit, while rabbit farming, handloom products, and garment units provide self employment.

Micro-enterprises surveyed, though family-run and mostly located within residential premises, use a high proportion of hired labour. Outside labour constitutes 73 per cent of the total labour force. The majority of the enterprises use hired labour along with family labour. Metal craft units use the highest proportion of family members, while those manufacturing Nepali paper employ the largest proportion of hired labour (Table 22).

About seventy-four per cent of the workers are male and the remaining 26 per cent female. Among the paid workers, however, women account for only 22 per cent and for 39 per cent of unpaid workers. A majority of the employees in rice mills, Nepali paper, tea packaging, wooden furniture, dairy farming, broom-making, and bamboo furniture are male. On the other hand, 83 per cent of the workers in garments, 89 per cent in handloom products, 78 per cent in hosiery, and 21 per cent in the metal craft enterprises are female (Table 23).

5.5 Age of Enterprises

Micro-enterprises in the survey represent both young and old enterprises; but a majority (58%) have been established only in the last five years (Table 24). All enterprises making brooms, rabbit farming, and tea packaging are new, less than five years' old, while all metal craft units have been established for longer than five years. Rice mills and wooden furniture units are both new and old, whereas handloom and garment units and most of the hosiery, bamboo furniture, and dairy units are relatively new.

Table 23: Employment Structure of Micro-enterprises

No.	Category	Paid			Unpaid			Total
		Male	Female	Total	Male	Female	Total	
1	Rice Mills	40		40	12	5	17	57
2	Garments	2	31	33	6	8	14	47
3	Handloom Products	1	24	25	3	10	13	38
4	Nepali Paper	110	11	121	10		10	131
5	Hosiery	4	20	24	4	8	12	36
6	Wooden Furniture	30		30	5	1	6	36
7	Bamboo Furniture	6		6	3		3	9
8	Dairy Farming	52		52	4	1	5	57
9	Rabbit Farming					3	3	3
10	Tea Packaging	17		17	2	1	3	20
11	Sericulture					3	3	3
12	Broom Making	27		27	3	3	6	33
13	Metal Crafts	9		9	33	11	44	53
	Total	298	86	384	85	54	139	523
	Per centage	*77.6*	*22.4*	*100.0*	*61.2*	*38.8*	*100.0*	

Source: Field Survey1996

District-wise classification of the micro-enterprises shows that 74 per cent of those in Ilam are from one to five years' old, 17 per cent from six to ten years' old, and only nine per cent are more than eleven years' old. In contrast, only 36 per cent of the enterprises in Bhojpur are from one to five years' old. Nearly one-third of the enterprises are more than ten years' old (Table 24). This indicates that more new micro-enterprises are coming up in Ilam than in Bhojpur district. The development of transportation facilities in Ilam, rapid expansion in banking facilities, and increase in NGO activities, along with an expanding market across the border, have created an environment for establishment of micro-enterprises in this district in comparison to Bhojpur where the topography is more rugged and where there are no roads.

Both old and new enterprises face competition from local and imported products. In particular, metal crafts have to compete with the market in imported urban products that are manufactured with the latest technology. There is a growing interest in establishing activities that are simple to operate and have a ready market. There is also a proliferation of small units producing similar products. Bamboo, paper, and wooden furniture units have to be registered with the District Forest Office, and there are numerous procedures to be completed. In contrast, production of garments and handloom products is easy. Very little capital is needed, and there is no formality to be completed. So, such units can be set up quickly.

5.6 Employment Intensity of Capital Investment

The survey found that the average capital investment for micro-enterprises was Rs 96,000 with average employment per enterprise at 5.23 persons. This implies an average capital require-

Table 24: Age Structure of Micro-enterprises: by Product and District

	Ilam			Bhojpur			Total			Grand
	1-5	6-10	11+	1-5	6-10	11+	1-5	6-10	11+	Total
Rice Mills	5	4	1		4	3	5	8	4	17
Garments	11			2		1	13		1	14
Handloom Products	6			6	1		12	1		13
Nepali Paper	3	1		2	4		5	5		10
Hosiery	2		2	3		1	5		3	8
Wooden Furniture	2	1	1		1	1	2	2	2	6
Bamboo Furniture				2	1		2	1		3
Dairy Farming	3	1	1				3	1	1	5
Rabbit Farming	3						3			3
Tea Packaging	3						3			3
Sericulture		3						3		3
Broom Making	5						5			5
Metal Crafts					3	7		3	7	10
Total	43	10	5	15	14	13	58	24	18	100

Source: Field Survey 1996

ment of Rs 18,004 for generating one job. Rabbit farming, sericulture, and bamboo furniture are the least capital-intensive enterprises and need only Rs 1,000-6,000 capital investment per unit of employment. Tea packaging, rice mills, and dairy farming are the most capital-intensive enterprises and need more than Rs 30,000 of capital investment per unit of employment (Table 25). Garments and handloom units require less than Rs10,000 of capital investment per unit of employment, whereas Nepali paper, hosiery, wooden furniture, broom, and metal craft enterprises require more than Rs 10,000 of capital investment per unit of employment. The average employment generated is depicted in Figure 2.

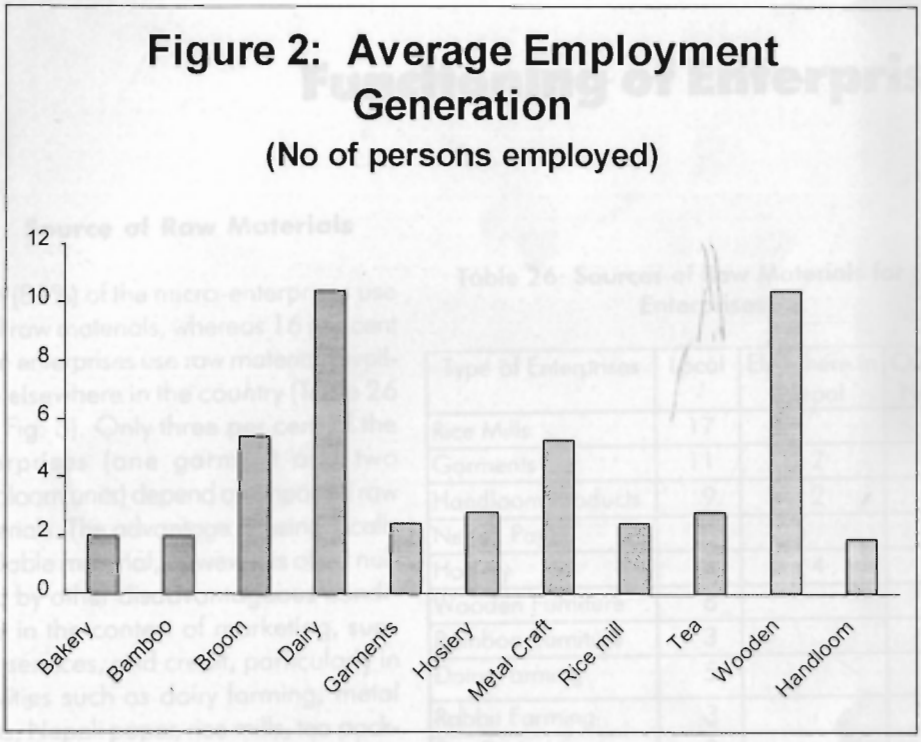


Table 25: Total Investment and Employment Generation in the Micro-enterprises

Type of Enterprise	No. of Enterprises	Total Capital (CAP)	Average Capital	Total Employment (EMP)	Average Employment	CAP/EMP (Per 000 Rs)
Rice Mills	17	1,880	110.6	57	3.3	33.0
Garments	14	441	31.5	47	3.3	9.4
Handlooms	13	375	28.8	38	2.9	9.9
Nepali Paper	10	1,621	162.1	131	13.1	12.4
Hosiery	8	465	58.1	36	4.5	12.9
Wooden Furniture	6	635	105.8	36	6.0	17.6
Bamboo Furniture	3	60	20.0	9	3.0	6.7
Dairy Farming	5	1,801	360.2	57	11.4	31.6
Rabbit Farming	3	5	1.7	3	1.0	1.7
Tea Packaging	3	700	233.3	20	6.7	35.0
Sericulture	3	9	3.0	3	1.0	3.0
Broom Making	5	609	121.8	33	6.6	18.5
Metal Crafts	10	1,016	101.6	53	5.3	19.2
Total	100	9,617	96.2	523	5.2	18.4

Source: Field Survey 1996

6
Functioning of Enterprises

6.1 Source of Raw Materials

Most (81%) of the micro-enterprises use local raw materials, whereas 16 per cent of the enterprises use raw materials available elsewhere in the country (Table 26 and Fig. 3). Only three per cent of the enterprises (one garment and two handloom units) depend on imported raw materials. The advantage of using locally available material, however, is often nullified by other disadvantageous conditions in the context of marketing, support services, and credit, particularly in activities such as dairy farming, metal crafts, Nepali paper, rice mills, tea packaging, and wooden furniture.

Table 26: Sources of Raw Materials for the Enterprises

Type of Enterprises	Local	Elsewhere in Nepal	Outside Nepal
Rice Mills	17		
Garments	11	2	1
Handloom Products	9	2	2
Nepali Paper	10		
Hosiery	4	4	
Wooden Furniture	6		
Bamboo Furniture	3		
Dairy Farming	5		
Rabbit Farming	3		
Tea Packaging	3		
Sericulture	3		
Broom Making	5		
Metal Crafts	2	8	
Total	81	16	3

Source: Field Survey 1996

6.2 Sources of Financing for Micro-enterprises

Entrepreneurs' own savings were the main source of capital for most of the enterprises. More than seventy-five per cent of the capital for micro-enterprises came from individual savings, 7.12 per cent from bank loans, 3.92 per cent from from moneylenders, 12.68 per cent from relatives, and 0.14 per cent from NGOs. Bamboo, brooms, dairy, rabbit farming and tea packaging had been established without bank loans. Rabbit farming however, had been financed by NGOs. Rice mills, wooden furniture, and tea packaging units had obtained capital moneylenders as well. Some enterprises had been established with financing from relatives, along with other sources of finance (Table 27).

Although 45 per cent of the enterprises financed their investment through loans, the share in total capital investment was only 24 per cent. This implies that loans are taken for smaller units - either from banks or from informal sources. Of the total loans taken by enterprises, bank loans accounted for seven per cent, and this is substantially lower than cited in the rural credit survey, i.e., bank financing at 20 per cent of rural borrowings (Fig. 4).

Entrepreneurs prefer to use their own savings and, in case of shortfall, borrow from relatives; they are reluctant to approach institutional sources because of procedural delays and transaction costs. One very common complaint against institutional credit is that too much emphasis is placed on collateral as a pre-condition for loan eligibility and, on the contrary, very little

Figure 3: Sources of Raw Materials for the Enterprises

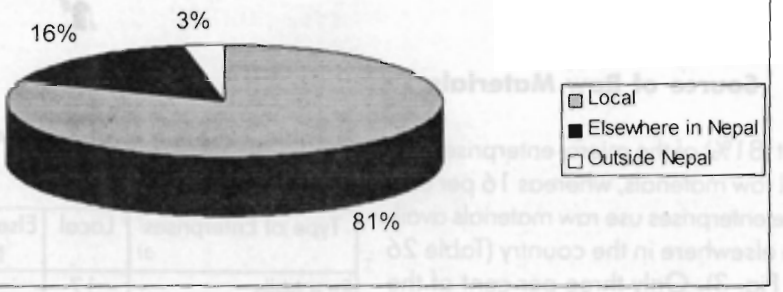


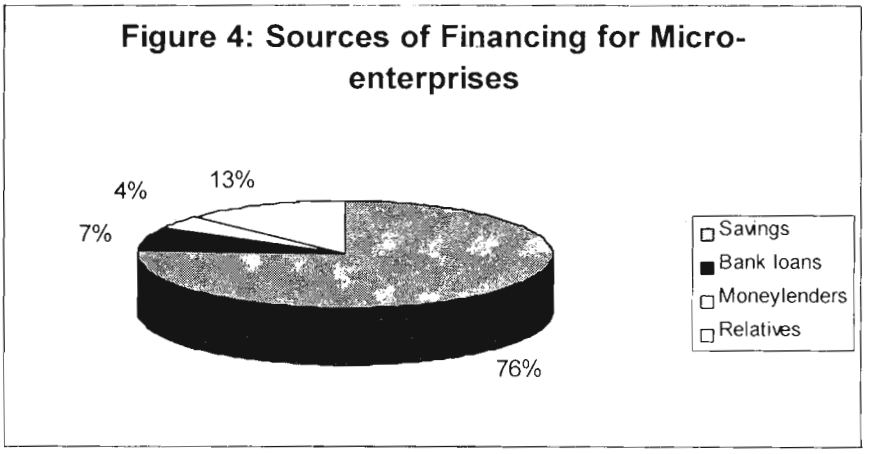
Table 27: Sources of Capital for Micro-enterprises

(Rs '000)

Type of Enterprises	Savings	Bank loans	Money-lenders	Relatives	NGOs	Total
Rice Mills	1,319	180	100	281		1880
Garments	381	10		50		441
Handloom Products	365	10				375
Nepali Paper	1,271	230		120		1621
Hosiery	326	80		59		465
Wooden Furniture	393	25	217			635
Bamboo Furniture	50		10			60
Dairy Farming	1,122			679		1801
Rabbit Farming					5	5
Tea Packaging	650		50			700
Sericulture					9	9
Broom Making	609					609
Metal Crafts	836	150		30		1016
Total	7,322	685	377	1219	14	9617
Percentage share	*76.1*	*7.12*	*3.92*	*12.6*	*0.1*	*100.0*

Source: Field Survey 1996

consideration is given to the feasibility of the enterprise. The transaction costs are also very high. The Rural Credit Survey (NRB 1992) had indicated that transaction costs were up to seven per cent of the amount borrowed. The potential borrower has to spend time and money as travel costs, forego some days' income, and still remain uncertain about the availability of the loan. Added to this are the lengthy and cumbersome procedures for obtaining loans that discourage entrepreneurs from applying for loans from institutional sources.



Although institutional credit is provided at a lower interest rate than that charged by moneylenders and other non-institutional sources, borrowers seem to prefer individual or non-institutional sources because of the easy availability and simple procedures with no transaction costs incurred.

6.3 Interest Rates on Borrowing

The average interest rates on loans from banks, relatives, and moneylenders are 15.81 per cent, 24.0 per cent, and 27.0 per cent respectively (Table 28). The Rural Credit Survey carried out by Nepal Rastra Bank (NRB 1988) cited the interest rate charged by moneylenders in the informal market to be as high as 60 per cent (the average rate being 37 per cent). The findings of our survey suggest relatively lower rates in Ilam and Bhojpur.

Table 28: Average Interest Rate Structure

Lending Agencies	Average Interest Rate (%)
Banks	15.81
Relatives	24.00
Moneylenders	27.00

Source : Field Survey 1996

6.4 Repayment Period for Loans

Most of the enterprises apply for short-term credit. The repayment period ranges from one to three years for most of the enterprises. Of the enterprises taking loans, 44.4 per cent had managed to repay in less than one year, 35.6 per cent in one to two years, 15.6 enterprises in two to three years, and only four per cent in more than three years (Table 29).

6.5 Marketing Micro-enterprise Products

Micro-enterprises sell their products through different channels. As noted earlier, most of the enterprises sell their products directly to the market. Of the total micro-enterprises surveyed, 66 per cent were selling their products directly to customers, whereas 11 per cent were selling to wholesalers, and 18 per cent to retailers. A few (5%) entrepreneurs (rabbit farming and sericulture) were selling through NGOs. Broom, dairy, metal craft, Nepali paper, wool, and wooden

furniture units were relying mostly on wholesalers and retailers. Bamboo furniture, garments, handloom, hosiery, and rice mills were selling directly to or servicing their products for customers (Table 30).

Table 29: Average Repayment Period for Loans

Repayment Period	No. of Enterprises	Percentage
less than 1 year	20	44.44
1 to 2 years	16	35.56
2 to 3 years	7	15.56
3 year and above	2	4.44
Total	45	100.00

Source : Field Survey1996

6.6 Production on Order by Micro-enterprises

A majority of the enterprises produce for open sales rather than on the basis of prior orders. Only 14 per cent of the entrepreneurs produce on prior order, 12 per cent on advanced credit, and 16 per cent on advance delivery of raw materials. A significant proportion (25 to 40%) of the products of garment, Nepali paper, and hosiery units is ordered by customers, whereas the wooden furniture and brooms are produced on an advance credit basis (Table 31).

Table 30: Marketing the Products of Micro-enterprises

Type of Products	WH	RE	DC	NGO	Total
Rice Mills			17		17
Garments			14		14
Handloom Products			13		13
Nepali Paper	4	6	0		10
Hosiery			8		8
Wooden Furniture	2	2	2		6
Bamboo Furniture			3		3
Dairy Farming	1	3	1		5
Rabbit Farming		1		2	3
Tea Packaging	1		2		3
Sericulture				3	3
Broom Making	2	3	0		5
Metal Crafts	1	3	6		10
Total	11	18	66	5	100

Source: Field Survey 1996

Note : WH = Wholesale DC = Direct customer RE = Retailer

Production based on prior order, or raw material advance, is generally considered safer than production based on the owner's projections. The former provides an assured market whereas, in the latter case, there is an element of uncertainty. A large proportion of MEs cannot arrange prior orders and, hence, produce or service based on their own projections. This is due to the nature of the enterprise and linkages with buyers. Garments, Nepali paper, and hosiery products are also sold through retailers or wholesalers. Retailers or wholesalers place orders based on their product patronage. The MEs receive advances or simply an order to produce specified quantities based on their linkages. Enterprises with such linkages reduce risks by producing

Table 31: Production on Order by Micro-enterprises

Type of Products	Production on Order	Credit/Advance	Raw Material
Rice Mills	0	1	8
Garments	4	1	1
Handloom Products	1	2	3
Nepali Paper	4	3	0
Hosiery	2	0	2
Wooden Furniture	1	2	0
Bamboo Furniture	0	0	0
Dairy Farming	0	0	1
Rabbit Farming	0	0	0
Tea Packaging	1	1	0
Sericulture	0	0	0
Broom Making	1	2	0
Metal Crafts	0	0	1
Total	14	12	16

Source: Field Survey1996

some goods on the basis of prior orders and the remainder on the basis of their own projections.

6.7 Cost Structure

The cost structure shows that a major portion was spent on raw materials (81.22%), followed by labour (8.53%), fuel (3.31%), interest on loans (3.12%), and the rest on office expenses, rent, salary, and transportation (Table 32). Thus, raw material and labour constitute nearly 90 per cent of the cost of production of micro-enterprises. There are, of course, industry-wise variations in the cost structure. Metal craft, tea processing, dairy, and broom units incur over 80 per cent of their costs on raw materials. Only rice mills pay a significant amount (40.5%) on labour; and others spending more than 10 per cent of total costs on labour are bamboo furniture, Nepali paper, garments, handloom products, hosiery, and tea packaging units. Interest payments are as high as 17 per cent for rice mills, 12 per cent for hosiery, and three per cent for garments and bamboo furniture units and dairy. In other cases the item is very small, mostly less than one per cent. Fuel costs account for relatively high proportions for rice mills (33.54%), as the mechanical devices operate either from petroleum fuel or electricity. Bamboo furniture pays a significant amount (10.87%) of rent as all of the units are located in rented premises. Sericulture and rabbit farming have zero costs as these units incur no paid-out costs (Fig. 5).

6.8 Expenses on Energy

Energy was not a necessary input for more than half of the enterprises under survey. Garments, hosiery, handloom, bamboo furniture, rabbit farming, tea packaging, and broom units do not

Table 32: Cost of Production by Types of Input

(in Percentages)

Type of enterprise	Raw material	Labour*	Interest	Fuel	Transport	Rent	Salary	other
Rice Mills	0.00**	40.50	17.93	33.54	0.00	0.00	3.20	4.83
Garments	69.80	14.12	3.53	0.00	0.00	1.18	2.35	9.02
Handloom Products	77.86	13.84	0.40	0.00	0.00	1.58	2.37	3.95
Nepali Paper	75.55	14.00	1.52	2.60	2.00	3.00	1.00	0.33
Hosiery	70.46	11.13	12.85	0.00	0.00	0.00	0.00	5.56
Wooden Furniture	80.00	7.65	0.78	1.30	1.22	1.57	0.35	7.13
Bamboo Furniture	65.12	20.35	3.66	0.00	0.00	10.87	0.00	0.00
Dairy Farming	87.50	4.24	3.00	3.88	0.72	0.30	0.22	0.14
Rabbit Farming**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tea Packaging	88.30	10.25	0.93	0.00	0.00	0.00	0.00	0.52
Sericulture**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Broom Making	86.91	9.44	0.00	0.00	0.00	1.57	0.17	1.91
Metal Crafts	93.88	1.28	0.51	2.47	0.00	0.86	0.00	1.00
Total	81.22	8.53	3.12	3.31	0.35	1.07	0.52	1.88

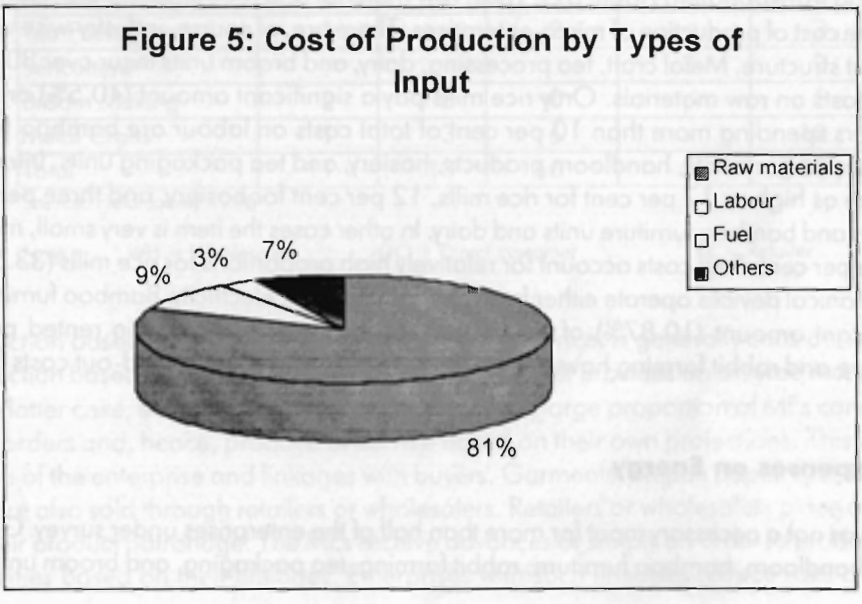
Source : Field Survey1996

Note : * = includes only wages paid to hired labour

** = Zero cost - no paid out cost

use fuel for production for the most part. The remaining micro-enterprises also report energy costs of less than five per cent of the total production cost. As fuel only accounts for a 3.31 per cent share of the total cost of production, on an average, the micro-enterprises under study can be categorised as not being very fuel intensive.

Figure 5: Cost of Production by Types of Input



Energy consumption varies for different product lines. The type of product and method of production influence the type of energy used (Rijal 1996). Every enterprise uses some form of energy. Some enterprises operate on traditional fuels, some on human energy, and others with either petroleum fuel or through electricity. Forty-nine per cent of the enterprises use some type of energy other than human energy. These enterprises use either fuelwood, petroleum fuel, or electricity. Rice mills use both petroleum fuel and electricity while wooden furniture units operate either on electricity or on human energy. Nepali paper, dairy farm, and metal craft units rely on fuelwood as the major source of energy.

The survey revealed that 54 per cent of the micro-enterprises under survey are not using any type of energy except for sunlight. Bamboo furniture, broom, garment, handloom, rabbit farming, and sericulture units consume no energy except human energy. Brooms, garments, and handloom enterprises use equipment that requires manual operation and other forms of energy are not needed. Other energy forms are also beyond their budgets because most enterprises are established on a low investment basis. It is noted that overdependency on traditional fuels can lead to environmental degradation. Therefore, the shift to alternative sources of energy (solar and electric power) is imperative to improve productivity and efficiency and to preserve the environment, especially in the case of Nepali paper, metal crafts, and dairy farming. However, grid electricity is not accessible to Nepali paper and dairy units because of their location. Most metal craft enterprises are going out of business and the provision of power alone would not revitalise their performance. Energy consumption to total expenditure ratio is the highest for rice mills (33.54%) and then dairy (3.88%) and Nepali paper (2.60%) (Table 33, Fig. 6). Thus, from the energy conservation point of view, the enterprises that need to be encouraged are mainly bamboo, brooms, garments, and handloom.

6.9 Types of Energy Consumed

Firewood (FW) is the principal source of energy among the fuel-consuming enterprises (54%). Dairy, metal crafts, and Nepali paper units are the main users of firewood. Fifteen rice mills and two wooden furniture units use petroleum fuel (PF) as the principal source of energy, while two rice mills and two wooden furniture units use electricity (Table 34).

Twenty-five per cent of the enterprises use traditional fuel, 17 per cent of the enterprises use petroleum fuel, and four per cent use electricity. Electricity is the major source of energy for two wooden furniture and two rice mills. Some metal crafts also use electricity for polishing, but none of the Nepali paper units uses other sources of energy apart from fuelwood.

Table 33: Expenses on Energy

(Rupees)

Type of Products	Exp. on Energy	Total Expenses	Percentage
Dairy Farming	206.88	5,332	3.88
Nepali Paper	31.43	1,209	2.60
Metal Crafts	15.80	64	2.47
Rice Mills	186.81	557	33.54
Wooden Furniture	14.90	1,149	1.30
Total	455.82	8,311	5.48

Source : Field Survey 1996

Figure 6: Expenses on Energy

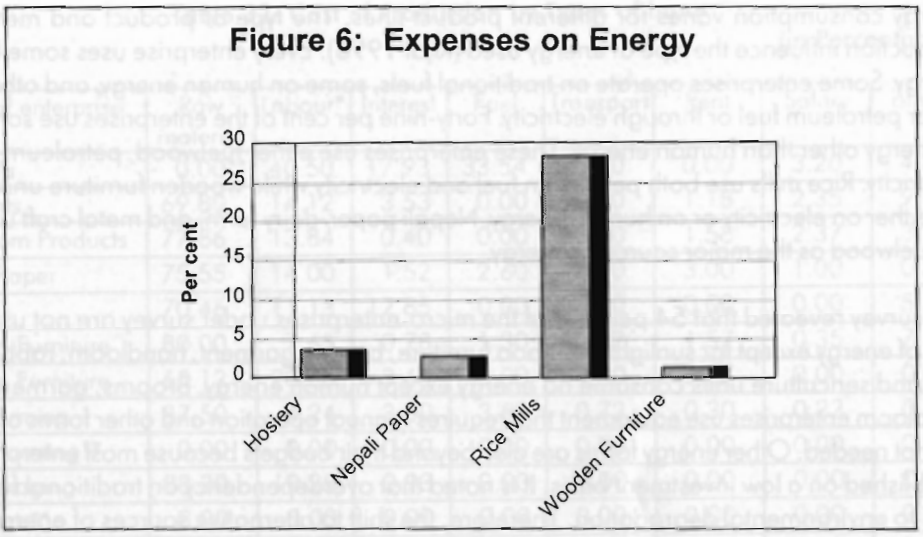


Table 34: Types of Energy Used by Different Enterprises

No.	Type of Products	PF	FW	EL
1	Rice Mills	15		2
2	Nepali paper		10	
3	Wooden Furniture	2		2
4	Dairy Farming		5	
5	Metal Crafts		10	
	Total	17	25	4

Source : Field Survey 1996

Note: PF = petroleum fuel FW= fuelwood EL = electricity

7
Growth, Expansion Plans and Problems

7.1 Growth of the Enterprises

Some of the critical questions that relate to the success or stagnation of the micro-enterprises are: what contributes to the growth of enterprises? what are the causes for slow growth or stagnation of enterprises? Are these entirely dependent on entrepreneurs' own capabilities or on external forces or a combination of both? Most often, the commonly used indicator of success or failure is profitability, and this can be measured by examining production trends in physical units over a period of time. Production trends indicate the performance of the enterprise. Financial statistics might exhibit growth due to inflationary trends; whereas in reality the production of physical units might be declining. Growth performance is based on the physical production over a period of five years. Growth of 11 per cent and above is an indicator of success, while negative growth reflects decline or stagnation. In the case of the enterprises under study growth has been uneven. Some products have exhibited high growth rates, while others show stagnation. The growth can be explained by growing demands for these products, while the negative growth rates can be ascribed to declining demands. There is a variation in growth among different product lines.

Table 35: Growth Rate in Production of Micro-enterprises

(Annual Average)

Types of Product	More than 20%	11-20%	Less than 10%	Negative
Rice Mills	2	3	10	2
Garments	6	2	2	4
Handloom Products	3	4	4	2
Nepali Paper	4	3	3	0
Hosiery	3	1	1	3
Wooden Furniture	1	3	1	1
Bamboo Furniture	0	1	1	1
Dairy Farming	1	2	1	1
Rabbit Farming	1	1	1	0
Tea Packaging	1	1	0	1
Sericulture	3	0	0	0
Broom Making	2	2	1	0
Metal Crafts	0	0	1	9
Total	27	23	26	24

Source: Field Survey 1996

Twenty-seven per cent of the enterprises under study exhibit an annual average growth rate of more than 20 per cent. Similarly, 24 per cent of enterprises exhibit an annual growth rate of 11-20 per cent, whereas 26 per cent of enterprises have a growth of less than 10 per cent (Table 35). Nearly 25 per cent of the enterprises have a negative growth rate. The enterprises with negative growth rates are those involved in metal crafts. The gradual decline in metal crafts is mainly a result of a fall in patronage due to tough competition from similar products being imported from India. But quite a few enterprises making other products, such as garments, handloom, hosiery, rice milling, have also experienced a decline in output over the previous five years. On the other hand, some of the enterprises making brooms, garments, Nepali paper, and wooden furniture and dairy and tea packaging and all of the sericulture units have a growth rate higher than 20 per cent .

Roads and market accessibility have been crucial for growth patterns. The growth patterns vary among different product lines; viz., traditional/non-traditional, agricultural/non-agricultural, common and exclusive products, in the two districts. Among the common and traditional products, 43 per cent of the garment units show growth rates of 20 per cent and above. The units located in Ilam tend to be performing better than their counterparts in Bhojpur. Also, Nepali paper units in Ilam out perform their counterparts in Bhojpur. Sericulture and broom units demonstrate better growth over all their product lines. All sericulture units have growth rates of 20 per cent and above. Similarly, 40 per cent of the broom units exhibit high growth rates. Forty per cent of the Nepali paper units exhibit growth rates of 20 per cent. This could be ascribed to growing demand, market linkages, and institutional support. What has emerged from the above analysis is that, in all product lines, both common as well as exclusive, entrepreneurs whose motivation and capabilities have been reinforced by institutional support and access to infrastructural facilities and the market perform better than others. From the perspective of gender roles, the survey demonstrates that women are good managers for certain product lines. Sericulture and garments are some of the exclusive products that are owned and operated by women. Among all garment units, those owned by women exhibit higher growth rates than those owned by men.

7.2 Expansion Plans

An enquiry was made concerning the factors affecting the entrepreneurs' decisions about expansion. Of the total enterprises under survey, 65 per cent report that they would like to expand their businesses and the rest (35%) do not want to expand. All broom, bamboo, tea packaging, and sericulture units are in favour of expansion, whereas all rice mills and metal craft enterprises are not in favour of expansion. Sericulture has the highest growth rate and has the potential for expansion of production. The demand for brooms is found to be growing both in the domestic and external markets as well. Thus, the potential for expansion exists in the broom-making sector as well.

Entrepreneurs who are willing to expand their businesses face shortages in capital, lack of market for the products, and no access to technology advancement. Over 50 per cent of the entrepreneurs who want to expand complain about capital deficiency, while 25 per cent of the entrepreneurs feel the market is a hindrance and six per cent complain about the lack of technological advancement. Old and backward technology is thought to be the factor hindering expansion for five rice mills, one handloom unit, two Nepali paper enterprises, and one tea packaging unit (Table 36).

Table 36: Expansion of Business

Type of Enterprises	Willing to expand shortfalls in			Not willing to expand shortfalls in					
	Capi-tal	Market	Tech-nology	Market	Tech-nology	Manage-ment	Stagnant Business	Raw Material	Profit
Rice Mills				10	5		6		4
Garments	11	4			1	1	1		
Handloom Products	8	2	1	1		1		5	
Nepali Paper	7	3	2	3					3
Hosiery	4	1					4		
Wooden Furniture	4	4		2					
Bamboo Furniture	3	3							
Dairy Farming	3	2		2					
Rabbit Farming	1	3	2	1					
Tea Packaging	3		1						
Sericulture	3								
Broom Making	5	3							
Metal Crafts				10	2		2	2	
Total	52	25	6	29	8	2	13	7	7

Source: Field Survey 1996

7.3 Constraints

All micro-enterprises face multiple constraints. Credit and market availability and access are seen to be the most pressing constraints faced by micro-enterprises in both Ilam and Bhojpur districts. Sixty per cent of the micro-enterprises face credit problems and 47 per cent face market problems (Table 37). Micro-enterprises are mostly established with the entrepreneur's own savings, support from family members, and loans from other informal sources (Table 27). All tea packaging, broom, and most of the garment units face the problem of lack of credit due to the nature of the business. All rabbit farming enterprises under survey face the problem of a market for their products. Availability of raw materials also features as a problem in the case of 28 per cent of the enterprises. Lack of raw materials is a serious problem in the case of handloom, hosiery, metal crafts, and Nepali paper products. Except for sericulture, bamboo furniture, and rabbit farming enterprises, others face problems of shortage of power (Table 37).

Table 37: Major Problems Faced by Micro-enterprises

Type of Enterprise	Availability of Raw Materials	Price of Raw Materials	Labour	Market	Credit	Power
Rice Mills				10	5	15
Garments	3			4	11	5
Handloom Products	5			5	8	5
Nepali Paper	5	1		3	7	2
Hosiery	4			4	4	6
Wooden Furniture	2			1	4	4
Bamboo Furniture				3	3	
Dairy Farming				2	5	4
Rabbit Farming				3	1	
Tea Packaging			1		3	3
Sericulture					3	
Broom Making				3	5	1
Metal Crafts	9			7	1	
Total	28	1	1	53	60	45

8
Summary and Conclusion

The purpose of the present study was to investigate the factors that help or hinder the emergence, growth, and sustainability of micro-enterprises in mountain areas on the basis of a field survey among 100 sample enterprises in eastern Nepal. The study used a comparative framework for analysis by selecting enterprises in different product lines in two districts with very different characteristics in terms of development, basic occupation, infrastructure, and accessibility. Thus, the study covered traditional skill-based and local material-based products, as well as those catering to local consumption demands and those oriented towards the market elsewhere in Nepal and abroad. The two study locations - Ilam and Bhojpur districts — presented somewhat contrasting features insofar as the former is an agriculturally transformed district whereas the latter is still dominated by subsistence agriculture. Additionally, Ilam has a well-developed physical infrastructure, while Bhojpur is backwards and most areas are still inaccessible by road.

8.1 Summary of Findings

Enterprises have a varied structure in terms of commodities produced; size of capital and employment; sources of raw material; and the market, growth, and prospects and problems faced in enterprise expansion. This survey of 100 enterprises brought out some of the dominant and common characteristics as well as differential patterns of growth experiences.

8.1.1 The Entrepreneurs

Most enterprises are run by men. Yet, well over 33 per cent of them are managed by women, particularly hosiery, handlooms, sericulture, and rabbit farming. There are, however, no women entrepreneurs in the Nepali paper, bamboo furniture, broom, and metal craft product lines.

Most entrepreneurs are relatively young. About 66 per cent below 40 years of age, over 33 per cent below 30 years, and 15 per cent are under 20.

Educational levels are low. Only 20 per cent of the entrepreneurs have graduated from high school. Those with high school or higher educational qualifications are still lower (9.5%) among the entrepreneurs in Bhojpur, where almost 25 per cent of them are illiterate. Less than three per cent of the entrepreneurs in Ilam are illiterate.

Given the predominantly agricultural nature of the economy and population, 80 per cent of the entrepreneurs belong to families with farming as their primary occupation. But practically all entrepreneurs in the traditional skill-based activity of metal crafts in Bhojpur consider metal working their principal family occupation. The traditional stranglehold of certain castes in some activities is decreasing as income-earning opportunities in some occupations have attracted members of castes other than those who carry it out traditionally. Yet metal crafts, particularly *khukuri* making, are still exclusively the domain of *Kami*(s).

Most entrepreneurs were inspired by their families and friends to set up their enterprises. About 33 per cent, in fact, have inherited their businesses from their parents. But, significantly, almost 33 per cent of the entrepreneurs have been motivated by some government or non-government agency. The Cottage and Small Industries' Development Committee seems to have played an important role in this respect, being instrumental in promoting 22 per cent of the entrepreneurs in different product lines.

Most entrepreneurs started business in the product line of their choice in which they saw good market potential. But a good number in rice milling, garments, and broom units were motivated by high profit margins. A majority of those in metal crafts and quite a few in garments chose these activities because they were traditional occupations of their families.

Very few (about 11%) have received formal training in entrepreneurship or skill development. But a sizeable percentage (about 50%) have received apprenticeship training — mostly in the family-run enterprises.

8.1.2 The Enterprises

All enterprises are sole proprietorship concerns, owned and run by families. In fact, 72 per cent are operated from within the residential premises. In the rest of the cases, independent premises, always taken on rent, seem to have been necessary owing to the nature and location of raw materials, nature and size of processing equipment, and scale of production and employment.

Except for dairy farming, tea packaging, and Nepali paper, enterprises are small in size with a capital investment of less than Rs 150,000, the average for the entire sample being Rs 96,200. The lowest investments, i.e., of Rs 1,700 and Rs 3,000 are in rabbit farming and sericulture units respectively.

Similarly, the employment generated by enterprises is also generally very small, averaging 5.2 workers per enterprise (for all the 100 enterprises). Fourteen of them, in fact, are single worker enterprises and only 10 employ more than 10 workers. The Nepali paper units employ the largest number of workers (13 per unit), followed by dairy(11) . In rabbit farming and sericulture, only one worker (a woman) is engaged in each unit.

Of the total workers in the sample enterprises, about 25 per cent are unpaid family workers. Women constitute about 25 per cent of the total workers, but their proportion is higher at 39 per cent among the unpaid family workers. In enterprises in garments, handloom, and hosiery, a majority of workers, both in the paid and unpaid categories, are women. The only other product line in which women are engaged as paid workers to some extent is the Nepali paper units. None of the other product lines employ women as paid workers, though all of them, except those in bamboo furniture, employ women as unpaid family workers.

Employment intensity for the sample enterprises is Rs 18,400, i.e., a capital investment that generates employment for one person. The figure is as high as Rs 35,000 in tea packaging, Rs 33,000 in rice mills, and Rs 31,600 in dairy units, but as low as Rs 1,700 in rabbit farming and Rs 3,000 in sericulture. Nepali paper units seem to generate relatively more employment in total as well in relation to capital investment.

Most enterprises are new. Fifty-eight per cent started only during the last five years and only 18 per cent have been around for longer than 10 years. A larger proportion of new enterprises implies faster growth in the number of enterprises. In that respect, Ilam shows much faster growth, with 75 per cent of the enterprises being less than five years old, than Bhojpur, with a corresponding figure of only about 36 per cent. Applying the same logic, garments, handloom, broom, tea, rabbit farming, and hosiery units turn out to be faster growing product lines than others, and metal crafts, with no new units and having been established over the last 5 years, are the slowest growing product line.

Micro-enterprises in Ilam and Bhojpur are mostly based on locally available raw materials. Only about 16 per cent of enterprises use raw materials from elsewhere in Nepal and three per cent from outside Nepal, wholly or partially. The structure of the enterprises thus seems to have strong backward linkages locally and within the country.

Institutional finance seems to have had a limited role in enterprise development. Only seven per cent of the enterprises use bank loans to finance their operations. Seventy-five per cent of entrepreneurs use their own savings to finance their businesses; and, in another 13 per cent of cases, the relatives help. Moneylenders also play a limited role; funding only four per cent of enterprises; charging an interest of 27 per cent per annum according to the survey findings; only marginally higher than the 24 per cent charged by relatives, but significantly more than the 16 per cent charged by the banks. Most loans are of relatively short duration, repayable within a period of two years.

Micro-enterprises in both Ilam and Bhojpur do not seem to face any acute marketing problems: 66 per cent sell directly to consumers and the rest to traders, mostly retailers. Only about 14 per cent sell on the basis of prior orders, mostly enterprises producing garments, paper, and hosiery. Most of them receive raw materials or credit as an advance on orders.

Raw materials account for 81.22 per cent of the cost of production, labour another 8.53 per cent, and fuel 3.31 per cent.

About half of the enterprises use energy other than human energy; the cost being 5.48 per cent of the total production cost. Fuelwood is used most often (54.3%), followed by petroleum fuel (37.0%), and electricity (8.7%).

8.1.3 Growth, Prospects and Problems

Growth performance of micro-enterprises in the sample is mixed: while over 25 per cent of enterprises have been growing at a rate of over 20 per cent in terms of their physical output, another almost 25 per cent have actually declined in their output over the last five years.

Growth of enterprises in Ilam has been much faster than in Bhojpur. Enterprises in product lines common to both districts have done better in the former than in the latter; and also those specific to Ilam have been growing faster than those specific to Bhojpur. Thus, in fact, in one major product line specific to Bhojpur, namely, metal crafts, nine out of 10 sample enterprises have experienced a decline and another, bamboo furniture, also has experienced relatively low growth. On the other hand, tea packaging, sericulture, and broom, specific to Ilam, have experienced high growth.

Besides the above products, the product groups demonstrating high growth include garments, paper, and wooden furniture; those with moderate growth are handloom, hosiery, dairy, and rabbit farming units; and those with low growth include rice mills.

About 66 per cent of the enterprises want to expand production: all enterprises involved in tea packaging, broom, sericulture, and rabbit farming and most enterprises in wooden furniture, dairy products, and garments. All metal craft units and most of the enterprises in rice mills and hosiery do not want to expand on account of a stagnant market demand. Low profit margins feature as a reason for not expanding in the case of some Nepali paper units and rice mills, while lack of raw materials is the reason given by handloom and metal crafts for not expanding. Those willing to expand have been unable to do so mainly because of lack of capital, followed by problems, in marketing. In garments, Nepali paper, and dairy units, capital seems to be the main problem while marketing is an equally serious constraint in the case of enterprises producing wooden and bamboo furniture. In some units producing Nepali paper and handloom products and rabbit farming, technology is reported to be a constraint to expansion.

8.2 Diversification of Agriculture, Infrastructure and Micro-enterprises : Contrast between Ilam and Bhojpur

The comparative study of the two districts very sharply brings out the importance of agricultural development and transport infrastructure in the development of micro-enterprises in predominantly agricultural, hilly, and mountainous areas. The fact that the enterprises in Ilam have performed far better than in Bhojpur is amply evident. It is also clear that, despite both districts having a predominantly agricultural economy, agriculture in Bhojpur is almost entirely subsistence oriented and is operated on the basis of very small land holdings, whereas, in Ilam, it is significantly commercialised and is operated on the basis of relatively larger holdings. The average size of operational land holdings in Bhojpur is only 0.81 hectares compared to 1.43 hectares in Ilam. Only four per cent of the cultivated area in the former is used for commercial crops, the corresponding figure for Ilam being 19 per cent.

It is, however, not only through the backward and forward production linkages that more productive and diversified agriculture stimulates development of micro-enterprises. No doubt, the largest product group among the registered enterprises in Ilam consists of rice and flour mills, but the product structure of enterprises is quite diversified — including a large number of product lines with no forward linkages with agriculture. A more productive and diversified agriculture implies higher income levels and a higher demand for commodities; and thus an impetus is given to the development of enterprises in diverse product lines. And all this is made possible by developed infrastructure, particularly for road transport. In Ilam, 40 VDCs are connected by road and the remaining seven are in the process of being connected. In Bhojpur, none of the 63 VDCs are connected by road.

An interesting phenomenon observed in the study, that relates to the significance of transport infrastructure, is that the geographical dispersal of enterprises is better in the area served by transport than in the area in which most places are inaccessible by road. Ilam and Bhojpur are almost equally rural with 92 per cent of the population in the former and 94 per cent in the latter living in rural areas. But, in Ilam, there are more enterprises (72 per cent) in rural areas than in Bhojpur (49 per cent). It thus seems that improvement in accessibility not only leads to

faster growth and greater diversification, but also to wider locational dispersal of enterprises. This has significant implications for diversified development and poverty eradication strategies in mountain areas.

8.3 Micro-enterprises and Women

Though the present study did not specifically focuss on women entrepreneurs and the participation of women in micro-enterprises, these aspects were investigated and examined to a certain extent. As reported earlier, over 33 per cent of the entrepreneurs in the sample were women, but they were mainly concentrated in handloom, garments, and hosiery units or in low investment (or no investment) activities such as sericulture and rabbit farming. They also seemed to be doing better in terms of productivity. But it appears that lack of capital resources (or control over them) and absence of marketing support has restricted women entrepreneurs from starting enterprises in more promising but investment-intensive product lines or even from expanding the scale of their current business activities.

Women constitute about 25 per cent of the work force in micro-enterprises, but more often they work as unpaid family labour rather than as paid employees. To that extent, the value of their work is not fully estimated and appreciated and the chances of improving their status through earning cash incomes are reduced.

8.4 Policies, Programmes and Interventions

Besides the broader issues of strategies for development and diversification of agriculture and improvements in accessibility that have emerged as crucial factors in the development of micro-enterprises in mountain areas, some specific implications have also emerged from our study. They relate to overall policies on micro-enterprises, public and institutional support for credit and marketing, and programmatic interventions by the government and NGOs.

In spite of a general recognition that micro-enterprises in diverse products with relative advantages in mountain areas are of vital significance to the development of and poverty alleviation in these areas, there does not appear to be a well focussed policy to promote their development. Policy statements are too general; not directed to area-specific products, nor to the mountain areas. It, therefore, appears necessary to review existing policies in this perspective in order to evolve a more focussed policy framework.

The impact of the limited and dispersed efforts made by government agencies such as CSIDC is visible on the margins. A good number of enterprises has been promoted by the Council. But support is often merely focussed on training and there is very little follow-up and support for sustained development of enterprises. It would be advisable to have an integrated programme providing a package of credit, training, and marketing and systematic follow-up and support. An area-cum-product(s) approach rather than the general one practised may prove more effective.

In spite of the number of credit-based, micro-enterprise development programmes run by government and non-government agencies, there are still very few enterprises that have access to institutional credit: and credit continues to be the main constraint faced by entrepreneurs. A

more systematic and sustained effort based on self-help groups of micro-entrepreneurs in different product lines, on an area basis, needs to be developed in order to improve access to credit.

For marketing, besides whatever support government agencies and NGOs can provide, it is necessary that entrepreneurs organize themselves into different product lines for marketing on a collective basis, with a view to both pooling their resources and improving their bargaining strength.

Finally, women entrepreneurs need to be supported through special programmes meant for them, as they lack the most important inputs for enterprise development, namely, availability of and control over capital and the capacity and mobility required for marketing. Programmes meant for them also need to be more inclusive and integrated in terms of the kinds of inputs and support, as it is not always possible for them to go to different agencies and programmes for different inputs and services such as credit, training, marketing, etc. Special programmes are required for them, because it has been observed that they hardly benefit from the general ones due to their special handicaps and the tendency on the part of men to monopolise the benefits and facilities.

9
References

APROSC, 1991a. *Nepal Hill Fruit Development Project : Baseline Survey, Bhojpur District.* Kathmandu: ASPC.

APROSC, 1991b. *Nepal Hill Fruit Development Project : Baseline Survey, Ilam District.* Kathmandu: ASPC.

Bhaktapur Craft Printers (BCP), 1992. *Expansion of Handmade Paper-making in Eastern Hill Districts.* Kathmandu: BCP.

District Agricultural Development Office, Ilam, 1996. *'Agricultural Development Programme: A Synoposis - 1996'* (in Nepali). Ilam: DADO.

District Agricultural Development Office, Bhojpur, 1996. *'Agricultural Development Programme: A Synoposis - 1996'* (in Nepali). Bhojpur: DADO.

HMG, 1996. *Nepal District Profile* (Ilam and Bhojpur). Kathmandu: HMG Press.

Koirala, G. 1992. *'Transformation of Ilam District: A Search for Replicable Experiences from Nepal'*. Kathmandu: ICIMOD.

National Tea and Coffee Development Board, 1994. *Tea — A Tea Quarterly*, Vol. 2, Year 1. Kathmandu: Nepal.

Nepal Rastra Bank, 1988. *Multi-Purpose Household Budget Survey*. Kathmandu: NBA.

NRB, 1992. *Rural Credit Survey*. Kathmandu: NBA.

Partap, T., 1995. *High-value Cash Crops in Mountain Farming: Mountain Development Processes and Opportunities*. Kathmandu: ICIMOD.

Rijal, K., 1996. *Developing Energy Options for the Hindu Kush-Himalayas: Re-thinking the Mountain Energy Development Paradigm*. Discussion Paper No. 96/1. Kathmandu: ICIMOD.

Suwal, P.N., 1988. *Wood Based Energy System in Rural Industries and Village Application: Nepal*. Bangkok: FAO.

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ICIMOD serves as a multidisciplinary documentation centre on integrated mountain development; a focal point for the mobilisation, conduct, and coordination of applied and problem-solving research activities; a focal point for training on integrated mountain development, with special emphasis on the assessment of training needs and the development of relevant training materials based directly on field case studies; and a consultative centre providing expert services on mountain development and resource management.

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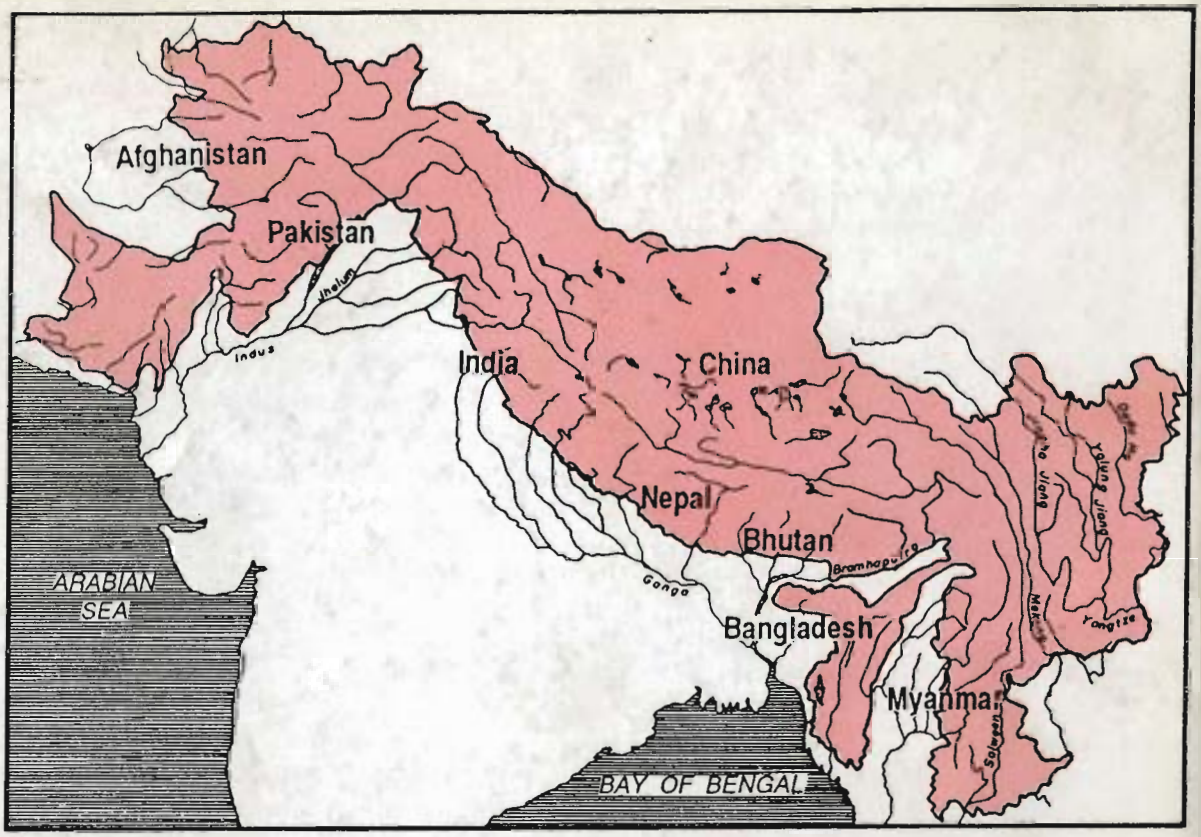
Participating Countries of the Hindu Kush-Himalayan Region

- Afghanistan
- Bangladesh
- Bhutan
- China
- India
- Myanmar
- Nepal
- Pakistan



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