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19231

DP/ID/SER.A/1516  
20 September 1991  
ORIGINAL: ENGLISH

INTEGRATED ENTREPRENEURSHIP DEVELOPMENT PROGRAMME

DP/BHU/88/001

BHUTAN

Technical report: Cottage, small and medium scale  
industrial policies and strategies\*

Prepared for the Government of the Kingdom of Bhutan  
by the United Nations Industrial Development Organization,  
acting as executing agency for the United Nations Development Programme

Based on the work of Leon Chico, expert on cottage,  
small and medium scale industrial strategies

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V.91 28154

## ABSTRACT

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The project was conducted from 20 May to 4 July 1991, for the purpose of collecting and analyzing information on the current and future constraints affecting cottage, small and medium scale enterprises (CSMI) in Bhutan and to provide recommendations to the Government on policies and strategies for the promotion and development of CSMI within the framework of the country's Seventh Five Year Plan (1992-97). Fieldwork was conducted in Thimphu and Phuntsholing.

The report concludes that, although a unique country with severe constraints in industrial development, the situation in Bhutan presents a stronger case than most developing countries for the promotion of cottage, small and medium scale industries (CSMI). A national policy for CSMI promotion and development is recommended to be included in the Seventh Five Year (1992-97), as well as several specific policies and strategies.

In order to achieve an integrated and coordinated approach in CSMI promotion and development, a Programme Coordinating Council and the upgrading of a re-named Bhutan Business Advisory and Assistance (BBAA) Centre is recommended. Moreover, a rational phased programme to rehabilitate existing "sick" industries is proposed. Policy measures on privatization, human resources, raw materials, productivity and appropriate technology are also recommended. The report proposes the institution of a "Skills Development Fund", through a levy paid by industries employing non-national workers.

Some measures to improve the financing of industries and the marketing of products are also recommended. A set of incentives based on priority industries and locations, and for exports are proposed. Finally, the report recommends some special programmes for the promotion of cottage, small and medium scale industries, which may be undertaken through technical assistance by donor agencies.

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## EXPLANATORY NOTES

Dates divided by a hyphen (1990-91) indicates the beginning and ending of a fiscal year(s), from July to June.

References to dollars (\$) are to the United States dollars, unless otherwise stated.

The local currency is the Ngultrum and is kept at par with the Indian Rupee. The exchange rate as at 24 June 1991 was:

US\$ 1.00 = Nu. 20.65

Totals may not add precisely due to rounding.

### In Tables:

Two dots (..) indicate that the data are not available or not separately reported.

Two dashes (--) indicate that the amount is nil or negligible.

A hyphen (-) indicates that the item is not applicable.

The following abbreviations are used in this document:

APCTT	Asia Pacific Centre for Technology Transfer
BBAA	Bhutan Business Advisory and Assistance Centre
BCCI	Bhutan Chamber of Commerce and Industry
BDFC	Bhutan Development Finance Corporation
BFAL	Bhutan Ferro Alloys Ltd.
BOB	Bank of Bhutan
BOIC	Business Opportunities and Information Centre
CSMI	Cottage, Small and Medium Industries
DANIDA	Danish International Development Agency
DTI	Department of Trade and Industry
EDTC	Entrepreneurship Development Trainer Consultant
ESCAP	Economic and Social Commission for Asia and the Pacific
FAO	Food and Agriculture Organization
INTIB	Industrial Technology Information Bank
IDRC	International Development Research Centre
MTI	Ministry of Trade and Industry
NWAB	National Women's Association of Bhutan
RBP	Royal Bhutan Polytechnic
RICB	Royal Insurance Corporation of Bhutan
RTI	Royal Technical Institute
STCB	State Trading Corporation of Bhutan
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organizations
UP ISSI	University of the Philippines Institute for Small-Scale Industries



## BASIC ECONOMIC INDICATORS

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GDP Per Capita (1990)	:	\$425
Population (1990)	:	600,000
Density of population (1990)	:	13 persons per square kilometer
Growth of GDP (percent)*	:	9.0
Exports (12 months)*	:	\$70 million
Foreign debt*	:	\$70 million
Inflation CPI (percent)*	:	8.8

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\* Asiaweek, 24 May 1991.



## EXECUTIVE SUMMARY

Except for some regulatory and licensing procedures, there is in Bhutan no system with policy measures in place to support the strategy to develop indigenous entrepreneurship in major areas of cottage, small and medium scale industries (CSMI). The UNIDO-assisted Integrated Entrepreneurship Development Programme fosters industrial entrepreneurship by means of an integrated package of technical assistance that covers the three levels of intervention: at the policy level; at the institutional level; and at the enterprise level. This report shall assist to address the needs of the project at the policy level.

In comparison to most developing countries, Bhutan is in many ways a unique country. Hence, policies and strategies that have proven to be successful elsewhere may not necessarily be applicable to Bhutan. And yet, some of the most common problems and constraints faced by CSMI entrepreneurs elsewhere are also experienced by Bhutanese entrepreneurs.

### **The Industrial Sector**

The industrial manufacturing sector in Bhutan is still relatively small and accounted only for 5.9 percent of GDP in 1988. A total of 340 manufacturing firms were licenced, of which 14 were publicly owned. About 80 percent of the total production value was accounted for by four publicly-owned firms producing cement, processed fruit, wood products and alcoholic beverages. The contribution of CSMI to GDP is estimated at less than 2.0 percent. Bhutan's comparative advantage vis a vis its major trade partners lies in resource based and power intensive industries due to the availability of natural resources such as forests, hydroelectric power, limestone, gypsum, marble, coal, slate and graphite.

The main occupation of the labour force is in agriculture (78.4 percent of men and 95.4 percent of women). Women are not well represented in the other occupations: in the government service (5.8 percent of the government labour force), in business (26.3 percent), and in other occupations (only 4.8 percent). In the capital town of Thimphu, only 46 percent of women participate in the labour force (compared to 83 percent of men). This appears to be a sheer waste of valuable human resources in an economy which does not have sufficient of them.

### **Level of Technology**

In the wood processing sector, except for the Gedu Wood sawmilling plant, all the sawmills in Bhutan have manually-operated, Indian manufactured machinery and equipment. A vast majority of these sawmills do not have their own tool repair and maintenance facilities. The country's secondary wood processing sub-sector, composed of 39 furniture and joinery shops, is just emerging from the primitive handicraft techniques of production and is just partially mechanized. Owing to the crude production techniques and lack of better precision machinery and equipment, the industry's output is very low and the quality very poor, acceptable only in the domestic market. The availability of sawn timber dictates the capacity utilization of most of the wood

based factories, with an estimated more than 50 percent of the shops operating intermittently.

In the mineral-based industry, the range of degree of 'sophistication' of the present firms may be regarded as "middle" by international standards. The sector has no highly advanced technological processes. In the largest enterprise, the carbide plant of BCCL, the methods are based on those earlier in the century with some improvements. The quarrying and breaking of rocks is usually labour-intensive, using mostly workers from India and Bangladesh including women. The total existing cement-making capacity is 142,000 tons per year, projected to increase to 703,000 tons per year in the future. Apart from electrical energy, BCCL's carbide operation is currently unable to make use of national resource inputs and is highly dependent on imported carbon based reducing agents from Madhya Pradesh.

Agriculture is the dominant sector in the economy of the country, with farming still remaining labour-intensive and strongly rooted to the traditional past. Only about 9.0 percent of the land in Bhutan can potentially be used for cultivation, with arable and permanent crop land of 126,670 hectares representing barely 3.0 percent of total land area. Most of the rural cottage scale sector are described as either "gravely sick and need help" or not operating for one reason or another. There is no licenced slaughterhouse-based industry in the country. Production of oranges, apples and potatoes have been increasing in response to export demand. The rapid growth of cereal imports, higher than the estimated population growth rate, suggests that cereal production is being replaced by these cash crops.

There is clearly an urgent need to attend to the individual problems of existing industries in the resource-based sectors where substantial investments have already been made. Problems of individual firms must be diagnosed and solutions found to bring them to an acceptable level of productivity and efficiency in their operations and enhance their contribution to the economy. This may require a type of "industrial extension" services to complement current efforts in entrepreneurship development. Those that are still government-owned should be privatized in a rational manner.

### **Institutional Framework**

The Ministry of Trade and Industry, through the Department of Trade and Industry, is the main agency of the RGOB promoting and regulating manufacturing, trading and service industries in the country. The Business Opportunities and Information Centre (BOIC) is the "front line" division of MTI/DTI in providing advice and assistance to potential and existing entrepreneurs. It currently has two units: Entrepreneurship Development and an Information Unit. As industrial and technological information is not readily available in Bhutan, the capability of the latter should be upgraded.

The Bhutan Chamber of Commerce and Industry (BCCI) is a purely private institution, consisting of some 7,000 members from the Bhutanese trade and industrial community and acts as the liasoning body between the Royal Government and the private sector. The National Women's Association of Bhutan (NWAB) aims to improve the quality of women's lives and has been active in initiating and implementing projects that benefit rural women.

There are three financing institutions providing credit to industry: Bhutan Development Finance Corporation (BDFC); Bank of Bhutan (BOB); and the Royal Insurance Corporation of Bhutan (RICB). On the other hand, two technical institutes, the Royal Bhutan Polytechnic (RBP) and the Royal Technical Institute (RTI), provide vocational and technical training for various occupations. The Royal Institute of Management is the only institution which offers courses in management and supervision in Bhutan.

The basic infrastructure for an effective CSMI development programme appears to be present in Bhutan. It could just be a question of formulating the appropriate policies, strengthening the capabilities of these existing institutions, and harnessing their resources into a joint and coordinated action. A Programme Coordinating Council is proposed to be set up, with BOIC serving as its Secretariat.

### **The Current Policy Environment**

The objectives and overall strategy of the Sixth Five Year Plan (1987-92) are equal or very similar to those found in many development plans. The Sixth Plan, however, is notable for the effort that has been made to provide operational significance to the Plan's objectives in the sectoral allocation of expenditures. Thus, the emphasis on self-reliance results in a large share for manufacturing, mining and power to carry out resource-based industrial and power projects to exploit markets in neighbouring countries, especially India.

The published Industrial Policies and Strategies for the Sixth Plan are: industrial ownership, through wide distribution of trade and industrial ownership; location of investment, which should foster a balanced industrial growth of all the industrial zones of the Kingdom; product standard, catering to international markets in addition to domestic requirements; import tariffs, which will be used as a last resort unless they are considered necessary to protect nascent industries; competition, by legally restricting monopolies and restrictive trade practices; training, by devising schemes to encourage management education; privatization, by handing over to the private sector government-owned industries; technologies for industries, by according priority to technologies from countries nearest to Bhutan; and foreign collaboration, by allowing foreign equity participation only in respect of agro-based and export-based industries.

The government, in order to enhance industrialization, shall give incentives and assistance to entrepreneurs but only after careful and detailed assessment of the industry.

The above policies are basically sound and reasonable. It is, however, significant that the Industrial Policies and Strategies for the Sixth Plan fail to mention cottage, small and medium scale industries. This "ommission" is expected to be rectified in the Seventh Five Year Plan (1992-97).

## **Public Sector Constraints and Opportunities**

Sixth major constraints are enumerated in the draft Seventh Five Year Plan of the Department of Trade and Industry: physical isolation; historical isolation; isolation from modern knowledge and practices; economic isolation; small population; and limited knowledge of resource base.

In spite of these constraints, there are many opportunities for imaginative potential entrepreneurs in Bhutan. The three sectoral studies of the resource-based industries – agro-based, mineral-based and forest-based – prepared by the UNIDO-assisted Industrial Planning Project give some of the opportunities for industries in the three sub-sectors.

### **Rationale for CSMI Promotion**

Although a unique country with severe constraints in industrial development, the situation in Bhutan presents a strong case for the promotion of CSMI. The pursuit of a vigorous CSMI sector implies, however, the provision of a policy environment conducive to the viability and growth of these enterprises. A unified strategy of industrial development would conceivably comprise a mix of separate (though related) policies towards large-scale industry and small-scale industry. The interplay of political and cultural factors should be taken into account, including the priority given to enhancement of the role of women and rural development.

CSMI should have equitable access to inputs, finance, incentives and other assistance. Policy measures for CSMIs should promote total factor productivity, remove inefficiencies, improve entrepreneurship and management, be positive and developmental, utilize delivery mechanisms and ensure growth. Separate preferential treatment may usually be justified for an initial period for disadvantaged groups, e.g. women, depressed areas, rural poor.

### **Summary of Conclusions and Recommendations**

Firstly, a national policy on CSMI should be included in the Seventh Plan giving priority to the promotion and development of the sector. The investment size categories of the various industries should be scaled down to better reflect the size of industries which need government assistance. A CSMI Programme Coordinating Council is recommended to be instituted to achieve an integrated and coordinated approach to CSMI promotion and development. The services of BOIC should be upgraded so that it eventually becomes a "one stop" shop of services to existing and potential entrepreneurs; possibly re-named as Bhutan Business Advisory and Assistance (BBAA) Centre.

A rational phased programme should be undertaken to diagnose actual problems of "sick" industries and solutions provided to rehabilitate them. Privatization should be pursued vigorously and the government should not own any small-scale industry. Competition is the essence of a free enterprise economy and licences should be issued even if there are already existing enterprises producing the same product, subject to availability of raw materials and the use of appropriate technology.

The human factor is the most vital ingredient in small-scale industry development and there is a vital need to develop entrepreneur-managers and skilled workers. Since spouses of civil servants comprise an important source of potential entrepreneurs, it is proposed that they be allowed to be engaged in industries subject to a "conflict of interest" rule. Special entrepreneurship development training courses exclusively for women and for those in rural areas should be considered.

Since skilled manpower continues to be a major constraint, it is proposed that the quota for non-nationals employed in industry be increased to 20,000, subject to certain conditions. A "Skills Development Fund" is proposed to be instituted and used exclusively for skills development of Bhutanese workers. This Fund will be financed through monthly levies paid by industries for each non-national employed by them, amounting to Nu. 24 million in the first year. A labour recruitment agency should be set up to screen non-national workers, possibly through BCCI.

With regards to raw materials, two possible short-term solutions are offered: a mandatory allocation for CSIMs of a certain percentage of raw materials available, prior to selling them at auction (in the case of timber); and organizing the small-scale manufacturers into "purchasing cooperatives" through BCCI.

Bhutanese entrepreneurs (including government and financing institution officers who evaluate projects) must be exposed to a wider choice of technology options, develop the capability to evaluate these options, and ensure that the capability for maintaining these equipment are assimilated. The Information Unit of BOIC should be linked to international sources of information and 'centres of excellence'. One important area for appropriate technology policy is to influence the change of bilateral and multilateral aid agencies towards the promotion of appropriate technology.

The issues in financing are the access of CSIMs to credit (collateral requirements), timely availment of financing (loan procedures) and the cost of financing (interest rates). Various measures are proposed to resolve these issues: converting a portion of the financing into equity; leasing of machinery and equipment; and setting up a guarantee fund to cover the deficiency in collateral. The current interest rate structure does not reflect the true costs of financing, i.e. lower rates for smaller loans, and may actually be a disincentive for financing institutions to provide small loans.

Bhutanese products would not be acceptable in foreign markets in terms of quality and standards, and filling up of the quantity requirements of markets abroad is uncertain. The following pre-requisites to exporting are proposed: setting up a focal point in every village to obtain an inventory of the capabilities of industries in each of the products that will be promoted abroad; and an Institute of Standards should be set up by DIT. With regard to the local market, preferential treatment to CSIMs should be given in government purchases (through a price advantage of say 10 percent). Initially at least, the expansion of rural income must depend on growth in agricultural production, which is a vital precondition for nonagricultural activities in the rural areas.

The report proposes some fiscal incentives based on sub-sector priorities, location in preferred areas, exporting, and re-investment of profits. These fiscal incentives would be in addition to government assistance that may be required. Finally, six special programmes for the promotion of CSMI are proposed. The recommendations are submitted for the consideration of RGOB and aid agencies in order to achieve an integrated approach in the promotion and development of CSMI.



## INTRODUCTION

### A. Brief Country Background

Bhutan is a small, isolated, landlocked Buddhist kingdom in the eastern Himalayas with an area of approximately 46,500 square kilometers. It has a north-south distance of 170 kilometers and an east-west distance of 300 kilometers. Bhutan is bordered to the North by the province of Tibet in China and by the Indian states of Sikkim, West Bengal, Assam and Arunachal Pradesh to the West, South and East. Bhutan is almost entirely mountainous, with the land rising from 300 meters to more than 7,000 meters from south to north. Flat land is limited to a few relatively broad north-south running river valleys and small areas below the foothills along the Indian border.

In 1988, the total population of Bhutan was officially estimated to be 1,375,400 with a population growth rate of 2.0 percent per year. However, demographic statistics were recognized as requiring improvement. Current modified estimates of total population are between 600,000 to 700,000 which are regarded to be more realistic figures. The main cities of Bhutan are the capital, Thimphu, with about 20,000 inhabitants and the Indo-Bhutanese border town of Phuntsholing with 13,000 inhabitants. Only about five percent of the land in Bhutan is cultivated or inhabited. Most of the rest remain in its natural state, with about one-third of the country's total surface barren or under snow and about half under natural forest.

The present political state was established in 1907 when the first hereditary monarch was appointed. The present king, His Majesty King Jigme Singye Wangchuck, is the fourth in the royal line. The National Assembly (Tshogdu) was established in 1953 and has 150 members. It is composed of representatives of the people, the civil service and the monastic order. The Royal Advisory Council (Lodoi Shokde), created in 1965, comprises nine members and advises the King, as the Head of Government, on key issues while at the same time supervising the implementation of programmes and policies laid down by the National Assembly. The judicial system consists of the High Court in Thimphu, which was established in 1968, and District Courts in each of the 18 districts (Dzongkhags).

The starting point for the modern and social development of Bhutan may be taken as 1961, when the first development plan was adopted by the Royal Government of Bhutan, including major external assistance which essentially came from India. In 1971, Bhutan became a member of the United Nations. Bhutan is also a member of the Non-Aligned Movement, the Colombo Plan, the IMF, the World Bank and the Asian Development Bank.

Bhutan's per capita GDP is \$425, with GDP growth averaging around 6.0 percent in recent years. The true standard of living in the country may actually be higher due to difficulties in measuring output in a subsistence rural economy with much barter. Nutritional surveys have indicated a daily per capita intake of about 2,500 calories, which is about 25 percent higher than for South Asia as a whole. However, some of Bhutan's other social indicators are worse than those of its neighbours. Its literacy rate is only 18.0 percent. Life expectancy at birth is only 46 years for males and 49 years for females, whereas

the infant mortality rate is 118 per thousand. There is one doctor per about 3,900 persons and one telephone per 270 persons. There is, however, evidence to show that these social indicators have improved over the last decade.

## **B. The Project**

Except for some regulatory and licensing procedures, there is in Bhutan no system with policy measures in place to support the strategy to develop indigenous entrepreneurship in major areas of the cottage, small and medium industries (CSMI) sector where a potential for growth has been identified. Today, there are no more than 300 small and medium scale industrial ventures operating in the country. In its efforts to identify, encourage and support industrial development, the government, through the Ministry of Trade and Industry, has defined the following industrial priority areas:

1. agro-based industries;
2. mineral (non-metallic) -based industries; and
3. wood-based industries.

These areas are supported with a package of incentives designed to encourage import substitution and export orientation, including ancillary units to the above-mentioned industrial priority areas.

Government initiatives have yet to be supplemented by policy interventions which must be viewed as long term. The UNIDO-assisted Integrated Entrepreneurship Development Programme has now carried out pilot training activities. These activities are part of a project which addresses a major priority objective of the country's Sixth Development Plan (1987-92) of creating employment opportunities and increase incomes through new or expanded industrial activities in the private sector, by focusing on identifying and fostering entrepreneurial activities.

Specifically, the UNIDO project aims to facilitate the establishment of a comprehensive programme, which fosters industrial entrepreneurship by means of an integrated package of technical assistance that covers the three levels of intervention in stimulating and sustaining persons who undertake innovative and enterprising ventures.

The project will provide the basis:

1. at the policy level, for an entrepreneurial strategic environment for appropriate policy measures;
2. at the institutional level, for demand-oriented mechanisms through accessible and effective delivery systems; and
3. at the enterprise level, for grassroots-based entrepreneurial networks and self-reliant mutually supportive activities.

This report shall assist to address the needs of the project at the policy level. Currently, a draft of the country's Seventh Five Year Plan (1992-97) is being developed with technical assistance from the UNIDO Industrial Planning

Project. The consultant also worked in close coordination with this planning project.

The mission was conducted from 20 May to 04 July 1991, with five weeks of fieldwork in Bhutan. The job description is given as Annex I. The consultant had the opportunity to observe the final week of the First Comprehensive Entrepreneurship Course, held group and individual discussions with the 18 participants and sat in as a member of the "bankers panel" to evaluate the business plans prepared by the participants. These sessions provided the consultant with a good perspective of the type of businesses being planned and the level of capability of some of the potential entrepreneurs. Visits and meetings were also held with various relevant organizations and individuals, including a field trip to Phuntsholing. A partial list of the organizations and individuals contacted is reproduced as Annex II.

The immediate objective of the mission is to enable the Royal Government of Bhutan, through the Ministry of Trade and Industry and other concerned government agencies, to adopt policies and strategies for the promotion and development of cottage, small and medium industries within the framework of the country's Seventh Five Year Plan. The report is also expected to be of interest to donor agencies in planning project initiatives affecting the CSMI sector.

In comparison to most developing countries, Bhutan is in many ways a unique country. The most distinct difference is that there appears to be no unemployment problem and one of its main concerns is to re-direct its human resources to an optimum level of productivity. Hence, policies and strategies that have proven to be successful elsewhere may not necessarily be applicable to conditions existing in Bhutan. And yet, some of the most common problems and constraints faced by CSMI entrepreneurs in other countries are also experienced by Bhutanese entrepreneurs. The report, therefore, takes into consideration both the unique characteristics of the country as well as its commonalities with the rest of the developing world.

## I. AN OVERVIEW OF COTTAGE, SMALL AND MEDIUM INDUSTRIES (CSMI) IN BHUTAN

### A. Definition

Industries in Bhutan are grouped into five broad categories on the basis of the investment, excluding working capital. The categories are large, medium, small, cottage and tiny (or micro). The investment range is periodically revised and updated to take into consideration inflation and other cost factors. An initial registration fee and annual licence fees are levied according to the size category of the industry. The latest revision approved on 30 May 1990 is shown in Table 1.

**Table 1:**  
Categories of Industries According to Investment and Fees Levied, 30 May 1990

Category (Nu. million)	Investment Fee (Nu.)	Registration (Nu.)	Licence Fee
Large	Above 20	8,000	4,000
Medium	5.0 to 20	4,000	2,000
Small	0.5 to 5.0	2,000	1,000
Cottage	0.1 to 0.5	1,000	500
Tiny	Below 0.1	300	300

Source: Ministry of Trade and Industry.

Cottage and agro-industries located in rural areas are exempted from obtaining an industrial licence and payment of fees. Locations not covered under municipal areas are considered as rural areas.

There are various ways in which the size of industries are defined in developing countries. The most common quantitative measures are: total assets (excluding land and buildings), which is closely similar to the definition used in Bhutan; number of employees; sales turnover; or a combination of these. Other measures are more qualitative, such as that determined by the "functions performed by the entrepreneur-manager" (Chico/UP ISSI) or as being "within the reach of people" (Harper). "Small" is a relative concept, and what is considered small in one country may be considered large in another.

The important consideration is "the size categories of industries that the government wants to promote and assist". The definition should be designed according to the purpose for which they will be employed and the administrative efficiency in implementing programs and incentives (i.e. facility of obtaining data and information). The definition used in Bhutan appears to be logical for the existing environment (i.e. investment size, excluding working capital), since small industries would tend to be more mechanized and less labour-intensive. Moreover, there are no reliable statistics available on the other possible measures. However, so that the measure of size would be more uniform, land and buildings should also be excluded from the investment so that an entrepreneur setting up an enterprise using his own land

and buildings will be treated in the same manner as another leasing these facilities in an industrial estate or elsewhere. Subject to this proposed modification, the measure of investment is deemed appropriate until more statistics become available.

In order to achieve a major objective of equity through a broadly based dispersal of industries, the investment ranges should be reduced to a lower level and incentives provided to cottage, small and medium industries. The category of tiny may be combined with cottage industries. The proposed categories of industries are as follows:

Category	Investment
Cottage	below Nu. 0.5 million
Small	Nu. 0.5 to 2.5 million
Medium	Nu. 2.5 to 10.0 million
Large	Above Nu. 10.0 million

These categories and investment ranges should be reviewed and updated periodically.

While recognizing the importance of large industries in certain sectors where economies of scale are necessary and their ability to spawn ancillary industries, this report will, however, mainly address the issues concerning cottage, small and medium industries. Simplification of licensing procedures as well the annual fees levied will be discussed in subsequent chapters.

## **B. Contribution to the Economy of the Industrial Manufacturing Sector**

The industrial manufacturing sector in Bhutan is still relatively small and accounted for only 5.9 percent of GDP in 1988. The manufacturing sector growth was 5.0 percent in 1988. By 1986, a total of 340 manufacturing firms were licensed, of which 14 were publicly owned. About 80 percent of the total production value was accounted for by four publicly owned firms producing cement, processed fruit, wood products and alcoholic beverages. Also of note was the completion of a medium sized calcium carbide plant in 1988. The contribution of cottage, small and medium industries to GDP is estimated at less than 2.0 percent.

Bhutan's comparative advantage vis a vis its major trade partners lies in resource based and power-intensive industries due to the availability of natural resources such as forests, hydroelectric power, limestone, gypsum, marble, coal, slate and graphite.

## **C. Number of Licenced Manufacturing Firms**

Categorized according to industrial sector and employment size, the number of manufacturing firms as of 1986 is given in Table 2. It is believed that updated figures will not alter significantly the picture shown. It will be noted that the food processing/milling sector is the most dominant comprising 73 percent of the total number of firms, followed far behind by the wood and

paper products sector with 16 percent. However, 95 percent of the firms in the food processing sector are relatively very small with less than 10 employees, whereas firms in the wood and paper products sector tend to be larger with over 50 percent employing 10 or more.

**Table 2:**  
Number of Manufacturing Firms by Industry Sector and Employment Size, 1986

Employment Size Industry Sector	Less than 10	10-19	20-49	50-99	100 and over	Total
Food Processing/ Milling	237	4	2	3	3	249
Textiles and Clothing	3	1	-	1	-	5
Wood and Paper Products	27	14	9	2	3	55
Chemical Products	8	1	1	1	1	12
Mineral Products	2	1	-	1	2	6
Other	8	-	4	-	1	13
<b>TOTAL MANUFACTURING</b>	<b>285</b>	<b>21</b>	<b>16</b>	<b>8</b>	<b>10</b>	<b>340</b>

Source: Ministry of Trade and Industry

#### D. Distribution of the Labour Force

A demographic sample survey conducted in 1984 gives an indication of the percentage distribution of the economically active labour force (ages 15-64) by sex among the major formal and informal sectors of the economy. This is shown in Table 3.

Table 3:  
Percentage Distribution of Labour Force, Ages 15-64, According to Economic Activity By Sex, 1984

Economic Activity	Men	Women	Total
Agriculture	78.4	95.4	87.2
Government Service	6.5	0.4	3.4
Business	1.4	0.5	0.9
Others	4.0	0.2	2.0
No Occupation	9.6	3.6	6.5
TOTAL	100.0	100.0	100.0

Source: Statistical Yearbook of Bhutan, May 1990.

As expected, the main occupation of the labour force is in agriculture (78.4 percent of men and 95.4 percent of women). Of special significance is that women are not well represented in the other occupations: in the government service (5.8 percent of the government service labour force), in business (26.3 percent), and others (only 4.8 percent).

If agricultural productivity can be increased, a portion of the work force can be channeled to other occupations. Special programs and incentives may be necessary to encourage women to go into business and be engaged in the other occupations.

A more recent survey (1990) in the urban town of Thimphu further shows this disparity of employment between men and women in occupations other than agriculture and cottage industries. This is given in Table 4. It will be noted that since there is no significant agricultural employment in Thimphu, only 46 percent of women participate in the labour force (compared to 83 percent of men). This appears to be a sheer waste of valuable human resources in an economy which does not have sufficient labour force.

**Table 4:**  
Population Aged 15 Years and Over by Sex and Principal Economic Activity,  
Thimphu Town, 1990

Principal Economic Activity	MEN		WOMEN		TOTAL	
	No.	%	No.	%	No.	%
Employed						
Agriculture						
Private business	920	28	440	22	1,360	26
Self-employed	620	19	400	20	1,030	20
Paid/unpaid employee	330	10	—	—	370	7
Government employee	2,200	67	660	33	2,860	54
Cottage industries	—	—	840	42	840	16
Total employed	3,260	100	2,010	100	5,270	100
Total not employed	660		2,380		3,040	
Total persons 15 years and over	3,920		4,400		8,320	
Labour force participation rate (%)	83		46		63	

Source: Statistical Yearbook of Bhutan, May 1990

It will further be noted that the ratio of men:women in the government service in Thimphu is more than 3:1. Per records of the Royal Civil Service Commission, the total employment in the civil service as of July 1989 stood at 15,802 (3,137 of which were non-nationals). There is presumably a significant number of women (spouses of government employees and their children) that can be harnessed into the productive sector, including industrial entrepreneurial activities. This will be further discussed later.

### **E. Exports**

In 1987, the total value of exports was Nu. 715.0 million. Most of the exports were to India, with only Nu. 12.6 million (1.76 percent) going to other countries. Special efforts (and incentives) are being made to increase exports to "hard currency" countries and this will again be emphasized in the Seventh Five Year Plan (1992-97). Table 5 gives a breakdown of the major commodities exported during the same year.



**Table 5:**  
Exports to India by Major Commodity, 1987

Commodity	Nu. in millions	Percent
Cement	103.2	14.7
Timber	121.2	17.3
Alcoholic beverage	17.5	2.5
Soft drinks	4.2	0.6
Veneers	0.9	0.1
Menthol	1.9	0.3
Block boards	29.3	4.2
Fruit products	22.3	3.2
Cardamom	21.9	3.1
Ginger	2.0	0.3
Potatoes	23.2	3.3
Oranges	19.7	2.8
Rosin	6.0	0.9
Apples	8.9	1.3
Electricity	275.9	39.3
Dolomite	13.2	1.9
<b>TOTAL EXPORTS (a)</b>	<b>702.4</b>	<b>100.0</b>

(a) Total includes other commodities not listed. Percent does not total to 100 due to rounding.

Source: Ministry of Trade and Industry.

Electricity was the major export commodity, followed by timber and cement. Manufactured exports (including timber) accounted for approximately 42.0 percent of total exports. The government clearly recognizes the need in increasing the exports of products with more value added.

## F. Major Resource-Based Industries and Levels of Technology

### 1. The Wood Processing Industry

#### a. Number of units

The wood processing industry is one of the major sectors in the country, which has great potential for exports to "hard currency" countries. As of 1990, there were 102 units registered. Most of them (56 units) were engaged in sawmilling. Table 6 shows the registered wood processing establishments in Bhutan.

**Table 6:**  
Registered Wood Processing Establishments, 1990

Type of Establishment	No. of Units
Primary wood processing	
Sawmilling only	47
Sawmilling, with crates/boxes	5
Particle board	1
Blockboard	1
Integrated primary/secondary wood processing	
Plywood/sawmilling/kiln drying/blockboard/ woodworks	1
Sawmilling/kiln drying/woodworks	1
Secondary/tertiary wood processing	
Broom handle manufacturing	2
Furniture	28
Handicrafts	1
Joinery products	4
Fruit and tea containers/components only	4
Furniture/fruit and tea containers/components	5
Partial downstream integration	
Sawmill/furniture manufacturing	1
Sawmill/joinery products	1
<b>TOTAL WOOD PROCESSING UNITS (a)</b>	<b>102</b>

(a) Total does not include three units whose end products are not known.

Source: Ministry of Trade and Industry.

Most of the sawmilling units operate intermittently or below capacity depending on the availability of timber. About 65 percent of the country's wood processing establishments are located in the western/southwestern region.

**b. Level of technology**

Except for the Gedu Wood sawmilling plant, all the sawmills in Bhutan have manual-operated, Indian-manufactured machinery and equipment. A vast majority of these sawmills do not have their own tool repair and maintenance facilities, which explains

the tremendous consumption of sawblades in the industry. A few mills which sharpen their own sawblades do so with manual and free-hand techniques which do more damage to the blades than not sharpening them at all.

The country's secondary wood processing sub-sector, which is composed of 39 furniture and joinery shops, is just emerging from the primitive handicraft techniques of production and is just beginning to be partially mechanized. Only a few of these factories have basic woodworking machines. Some have electric-powered hand tools. The units are heavily concentrated in the Phuntsholing area in the southwest and the Thimphu area in the northwest. The more advanced shops, in terms of being equipped with modern machine components, are the Gedu Wood joinery plant and the Penjor furniture/joinery shop in Lobesa.

Owing to the crude production techniques and lack of better precision machinery and equipment, the industry's output is very low and the quality very poor, acceptable only in the domestic market. Other aspects of modern woodworking operations are either not known or badly practiced, among which are: the use of properly designed jigs and fixtures; the use of working drawings to facilitate machining operations and attain a desirable degree of precision; the use of the proper types of adhesives and abrasives; the use of proper finishing materials and techniques; the use of adequately seasoned lumber; proper lay-outting and serial production techniques.

#### c. Capacity utilization

The availability of sawn-timber dictates the capacity utilization of most of the wood-based factories. An earlier study (Brion, 1990) estimates that more than 50 percent of the shops operate intermittently. Of the three shops visited in Thimphu, only one was in operation; of the five registered furniture/joinery shops in Phuntsholing, only one is still operating. The raw material problems of the wood-based industry needs to be urgently addressed, especially since this is an industry that has the potential for value-added exports.

Issues concerning technology, including productivity in existing industries, are important aspects which will be taken up further later in this report. It is imperative that the quality and productivity of existing enterprises in this industry be upgraded, in parallel with the promotion of new enterprises manufacturing higher value added products for exports.

A Forestry Master Plan is currently being prepared with the assistance of the World Bank. This would be an important step in the rationalization of the raw materials supply for industries in this sector, especially for small and medium industries which do not have their own forest concessions. No licences are

currently being issued by the Ministry of Trade and Industry and no credit applications are being accepted by the Bhutan Development Finance Corporation without adequate assurance that the raw materials are available.

## 2. The Mineral-Based Industry

### a. Number of units

The mineral-based sub-sector of industry consists of the mining, processing, marketing and/or consuming of entirely non-metallic rocks and minerals. The principal ones currently being exploited are dolomite, limestone, gypsum, aggregates, slate, marble, and talc; and at present inactive are coal and ochre, or iron oxide pigment. The number of units known to be currently operating is given in Table 7.

**Table 7:**  
Number of Mineral-Based Units by Product, 1990

Type of Product	No. of Units
Cement	2
Calcium carbide	1
Crushed dolomite	5-10
Crushed gypsum	1
Coal	1
Roofing slates	1
Marble tiles, chips, powder	1
Aggregates and concrete products	7
Ochre	2
Boulders	(?)

Source: UNIDO Sectorial Analysis, Neville R. Hill, 1990

Around 80 percent of the enterprises are privately owned, 65 percent are small or cottage scale and nearly 50 percent of the units are concentrated in the Phuntsholing region in the southwest.

### b. Level of technology

The range of degree of 'sophistication' of the present mineral-based industries in Bhutan is what may be regarded as "middle" by international standards (Hill, 1990). The sector has no highly advanced technological processes. In the largest enterprise, the carbide plant of Bhutan Carbide and Chemicals

Ltd., the methods are based on those established earlier in the century with some improvements.

Advanced technology is being proposed for the projected new Dungsam cement plant at Nganglam with a capacity of 1,500 tons per day. It intends to use a five-stage suspension pre-heater and a fully automated sampling, adjusting and mix adjusting system.

At the other end of the technological scale, the quarrying and breaking of rocks is usually labour-intensive using mostly workers from India and Bangladesh including many women. They use small hammers to break limestone and aggregates to size. There is little evidence of the utilisation or adoption of fairly simple, sustainable intermediate methods of processing such as are common in India and China. There appears to have been little or no adoption of intermediate technologies either in mining or in industrial processing, with the exception of the use of the vertical shaft kiln (VSK) technology by the Pendem Cement Authority and Yangzom for making cement clinker.

For its new marble crushing and shaker screen plant, Bhutan Marble and Minerals Ltd. has installed a traditional jaw crusher but the screens malfunctioned when tested and required adjustment by the supplier from India. The imported aerial ropeway at the Sha Slate Mines quarry gave problems not long after being installed and has been out of use for the past two years. It may however, be noted that the ropeway the company built itself in 1977, though lower in capacity, is still operable.

The above situations bring us back to the issue of the choice of sustainable modern technologies appropriate to the conditions existing in the country.

c. Capacity utilization

The total existing cement-making capacity is 142,000 tons per year. The projected new capacity is 561,000 tons per year, bringing the total future capacity to 703,000 tons per year. A small production unit of 50 tons per day is needed in the south of Thimphu to ensure that domestic construction and other projects are not paralyzed through external causes and to save on the high costs of transporting cement inland.

Apart from electrical energy, BCCL's carbide operation is currently unable to make use of national resource inputs and is highly dependent on imported carbon-based reducing agents as well as limestone from Madhya Pradesh. The Bhutanese crystalline type of limestone or marble tend to decrepitate in the lime kiln and produce 30 percent of lime (calcium oxide) fines, which are unsuitable for feeding to the carbide furnace.

Lime in the form of lump quicklime is being imported from India, although there is a licensed plant in Bhutan and limestone resources exist.

There is very little information on the rates of capacity utilization of plants processing other products.

### **3. The Agro-Based Industry**

#### **a. Types of products and land capacity**

As previously discussed, agriculture is the dominant sector in the economy of Bhutan, with farming still remaining labour-intensive and strongly rooted to the traditional past. Farming is primarily devoted to the cultivation of cereal crops (paddy, maize, wheat, barley, buckwheat and millet) to meet subsistence needs. Limited quantities of other subsistence crops (pulses, oilseeds and vegetables) are also grown. Livestock is an integral part of the farming system, which also supplements the diet with milk and meat products. In areas close to the Indian border and in a few inner valleys made accessible by road construction, there has been some developments in the last decade of commercial and horticultural crops: notably orange, cardamon and ginger in the south; apple and potato in the interior; and chilli almost all over the country.

Only about 9.0 percent of the land in Bhutan can potentially be used for cultivation. Arable and permanent crop land of about 126,670 hectares represents barely 3.0 percent of total land area. According to agronomic surveys undertaken in 1988 and 1989, there are an estimated 64,770 agricultural landholders in Bhutan. The majority of them have less than five hectares; an estimated 27 percent have less than one hectare; about 30 percent have between one and two hectares; and only about 10 percent have five hectares or more.

Present and projected cereal consumption in the Bhutan and the extent of self-sufficiency is shown in Table 8.

**Table 8:**  
Production, Net Imports, Consumption and Self-Sufficiency Percentage in Cereals, 1988

Cereals	Production (MT)	Imports (MT)	Consumption (MT)	Self-Sufficiency (%)
Rice	24,140	21,990	46,130	52
Wheat and wheat products	2,840	8,930	11,780	24
Maize	22,000	200	22,200	99
Other cereals (a)	12,270	180	12,450	99
All cereals	61,260	31,300	92,560	66
Edible oils	443	1,739	2,182	20

(a) Barley, millet and buckwheat

Source: AFPP Report, 1990.

Rice consumption has been increasing and the deficit is substantial (22,000 metric tons or 48 percent of consumption). Throughout Bhutan, a strong preference for rice exists as its consumption is associated with high social status.

As of 1986 (Table 2), there were 249 licenced firms in the food processing/milling sector. There are now only 61 firms in urban areas and those in rural areas, falling under the category of cottage scale, have been exempted from licensing and de-licenced. The sector-wise breakdown of the licenced units is given in Table 9.

**Table 9:**  
Licenced Agro-Based Industries According to Activity or Products, 1990

Product or Activity	No. of Units
Slaughtering, preparing and preserving meat	1
Canning and preserving fruits and vegetables	6
Manufacture of vegetable oils and fats	17
Grain milling products	2
Manufacture of bakery products including noodles	20
Sugar factories and refineries	1
Manufacture of chocolate and sugar confectioneries	2
Manufacture of prepared animal feeds	1
Distilling, rectifying and blending of spirits	3
Softdrinks and carbonated water industries	1
Food products not elsewhere classified (a)	7
<b>TOTAL LICENCED AGRO-BASED INDUSTRIES</b>	<b>61</b>

(a) such as local tea and chilli powder.

Source: UNIDO Agro-based Industry Sectoral Study by Ravi Awasthi, 1990.

b. Technology and productivity

Most of the units in the rural cottage scale category are described as either "gravely sick and need help" or not operating for one reason or another. There is no licenced slaughterhouse-based industry in Bhutan. The Himalayan Instant Food Industries purchases some meat and dries it (in the sun or by impoverished solar dryer) into strips for local consumption in very small quantities. Out of the six fruit and vegetable canning units, only one, the Bhutan Fruit Products in Samchi, is doing well commercially. The Agro-Industries Development project, a DTI-supported unit, has been operating at a loss for the last three years. It is, however,



experimenting and preparing itself for a larger unit to be donated by DANIDA.

Almost all of the expeller units process mustard seed on service basis and charge fees from customers who bring the oilseed for pressing of oil. These units are not functioning for most of the year as there is not enough mustard seed at the right price. Other possible reasons is that the owner does not have enough funds to buy oilseeds in bulk and the available oilseeds are pressed in the villages in cottage industries owned by the farmers.

Only the Dralha Flour Mill is commercially operated, the rest are cottage scale grinding mills (Atta Chakkis) which operate intermittently as service mills at not more than 25 percent of their capacities. Only a few of the bakeries operate successfully and none of the noodle units are commercially profitable as their products are of very low quality.

The Lozen Confectionery unit operates only for six months a year using primitive cottage technology methods. The other so-called chocolate unit has not been functioning at all. Most of the traditional tea (Jari) units are operating only at between 10 to 30 percent of their capacities.

Under the Department of Animal Husbandry (DAH) of the Ministry of Agriculture, there is an UNDP/FAO-assisted pork processing plant in Wangchutaba near Thimphu, with equipment imported from West Germany in 1986. The plant is expected to slaughter 10 pigs a day, but it hardly meets this goal. The slaughtered pigs are supposed to be processed, but due to the breakdown of the refrigeration units (burnt compressors) and in the absence of sheep casing for sausages which comes from Calcutta, no actual processing was being done during a visit by a mission in September 1990 (Awasthi). It was reported that the compressors were burnt about two years earlier and these could not be replaced or repaired locally. One of the weighing balances had also broken down. The plant did not have any laboratory for quality control checks and, at the time of the visit, the plant floors, wash tables, basins and machines were very dirty and in an unhygienic condition.

A modern milk processing plant under the DAH has been recently established in Phuntsholing. Due to the faulty supply of some of the tanks and equipment from a supplier from India, the commissioning of the plant was delayed. The plant is expected to process about 5,000 litres of milk per day to be supplied to customers in Phuntsholing and Thimphu in plastic sachets. The unit can actually process more, but the low supply of local milk is a constraint. For a long time, it will also depend on the supply of butter oil and skimmed milk powder by the

World Food Programme which will be fortified with the fresh local milk.

c. Export crops

About 22,000 metric tons of potatoes are produced, mostly for exports. The principal horticulture crops are oranges and apples. Current production of oranges is estimated at 43,000 metric tons and of apples at 5,200 metric tons. Production of oranges, apples and potatoes has been increasing in response to export demand. The rapid growth of cereal imports, higher than the estimated population growth rate, suggests that cereal production is being replaced by cash crops of oranges, apples and potatoes (Awasthi, 1990). The development of export markets for fruits and vegetables linked by the internal road network has allowed farmers living near the roads to replace some of the subsistence crops with cash crops.

Yield of all crops are generally low due to poor soil. Traditional labour-intensive production techniques are employed. There is believe to be little scope for mechanization on the steep slopes with very narrow field sizes. It may, however, be possible to adapt small farm implements used in other countries and develop technologies that are appropriate to the unique conditions existing in Bhutan.

**IN SUMMARY, one of the important conclusions that may be drawn from the existing situation in the major resource-based industries in the country is that, while special programmes and efforts should continue to be implemented to promote new entrepreneurs and develop new industries, especially CSMIs manufacturing high-value added products for export markets, there is clearly an urgent need to attend to the individual problems of existing industries where substantial investments have already been made. Those that are still government-owned should be privatized in a rational manner.**

**The problems of the individual firms must be diagnosed and solutions found in order to bring these enterprises into the mainstream of the industrial sector. The contribution to the economy of these "sick" industries can be made much more positive if they are brought to an acceptable level of productivity and efficiency in their operations. This may require a type of "industrial extension" services to complement current efforts in entrepreneurship development. This will be further discussed in subsequent chapters.**

## II. EXISTING INSTITUTIONAL FRAMEWORK FOR THE PROMOTION OF COTTAGE, SMALL AND MEDIUM INDUSTRIES IN BHUTAN

### A. Ministry of Trade and Industry (MTI)

The MTI is the main agency of the Royal Government of Bhutan promoting and regulating manufacturing, trading, and service industries in the country. It has three major operating departments: Trade and Industry, Geology and Mines, and Power; and two attached corporations: the State Trading Corporation of Bhutan (STCB) and the Bhutan Tourism Corporation. The Department of Trade and Industry is the licensing unit of the ministry and has three operating divisions: Trade; Industry; and the recently organized Business Opportunities and Information Centre (BOIC).

#### *Business Opportunities and Information Centre*

The BOIC is intended to be the "front-line" division of the Ministry in providing advice and assistance to potential and existing entrepreneurs, especially of CSMEs. It currently has two units: Entrepreneurship Development, which implements the UNIDO-assisted Bhutan Integrated Entrepreneurship Development Programme (DP/BHU/88/001); and a computerized Information Unit, which is linked to the UNIDO-assisted Industrial Planning Project (SI/BHU/87/027).

The Entrepreneurship Development Programme focuses on the development of the capacity of the RGOB/MTI and NGOs to organize and conduct a nationwide integrated entrepreneurship development. Five officers have been assigned to the Programme and trained as trainer-consultants (EDTCs): one from MTI; one from the Bhutan Chamber of Commerce and Industry (BCCI); one from the National Women's Association of Bhutan (NWAB); and two from the Bhutan Development Finance Corporation (BDFC). Several entrepreneurial awareness workshops have been conducted in different places in Bhutan, culminating in the completion of the first comprehensive training course on 31 May 1991. Eighteen potential entrepreneurs went through five weeks of intensive training and completed their business plans. Applications for licence, raw material supply, and financing are currently being processed, with the assistance of the EDTCs. Three more comprehensive training courses and several workshops are being planned during the next two years.

Proposed future directions of the UNIDO-assisted Bhutan Integrated Entrepreneurship Development Programme (DP/BHU/88/001) is given in Annex 3.

Meanwhile, the Information Unit of BOIC is in the process of compiling trade/industrial statistics and other information that will be of use to MTI and to potential and existing entrepreneurs. As may be noted from the preceding sections of this report, industrial and technological information is not readily available in Bhutan. The

capability of this unit should, therefore, be upgraded in order to effectively assist existing and potential industries. Linking with international sources of information and 'centres of excellence' should be arranged so that industries in Bhutan will be fully informed and have a wider choice of alternative technologies.

Compiling technological information is a long and tedious process. Technological innovations and improvements are being constantly developed and, before one can even begin to compile a good information base, the information may already be obsolete or new developments may have taken place. The most important thing is to know where technological information exists and how to tap them. Part of the assistance that may be requested from donor agencies is subscriptions to some 200 technological and trade journals on industries that are relevant or applicable to Bhutan.

#### **B. Bhutan Chamber of Commerce and Industry (BCCI)**

With the objective of acting as the liasoning body between the Royal Government and the private sector, the BCCI was re-established on 1 May 1988. It also aims to initiate and motivate enterprising persons, particularly the younger generation, to take up trade and industry as their career. BCCI is a purely private institution consisting of members from the Bhutanese trade and industrial community. It is mandatory for all licenced enterprises to be members of BCCI and about 7,000 of them are currently its members. The BCCI is an effective forum where the private sector businessmen discuss problems relating to the development and growth of trade and industrial activities within the country and seek possible solutions. It liasons between the government community. In this regard, since its inception, the BCCI had several dialogues with the Government including His Majesty the King to discuss issues affecting the business sector. The BCCI could be one of the major private-sector institutions that can effectively assist in industrial policy formulation and entrepreneurship development in Bhutan. It has also the potential to expand further its activities for the benefit of the business sector and be truly a partner of government in the socio-economic development of Bhutan.

#### **C. National Women's Association of Bhutan (NWAB)**

The NWAB was formed in April 1981, with Her Royal Highness Princess S.C. Wangchuck as its President. Its primary objective is to improve the quality of women's lives, especially in the rural areas. Since its inception, the NWAB has been active in initiating and implementing projects that benefit rural women. It has pioneered training programmes in weaving and knitting. NWAB has distributed yarns on credit basis to rural women. Weaving is a traditional activity in eastern and central Bhutan and knitting in the south. Its future plans include an expansion into all the 18 districts of Bhutan and the implementation of major projects in health and nutrition, education, agriculture, employment and labour force participation with the support of the government and selected

donors. The NWAB recognizes that the participation of women in occupations other than agriculture and rural cottage activities is very low and should be addressed. It is expected that their collaboration in the promotion of women entrepreneurs would be indispensable. Because the role of women in business and in development in general needs to be expanded, the NWAB could be an effective focal point in activities related to women.

#### **D. Financing Institutions**

There are three major financing institutions providing credit to industry, including CSMI. These are: Bhutan Development Finance Corporation (BDFC); Bank of Bhutan (BOB); and Royal Insurance Corporation of Bhutan (RICB). Although each of these institutions have their own specific programmes and loan and appraisal procedures, the interest rates charged are uniform as dictated by the Royal Monetary Authority.

##### **1. *Bhutan Development Finance Corporation (BDFC)***

The BDFC was established recently (January 1988) to provide assistance and finance to the industrial sector. In addition, it also provides rural credit to improve agricultural activities. It has 72 offices in the country, 48 of which are devoted to rural credit. It considers the viability of the project as its first evaluation criteria, although the normal collateral requirement is 150 percent of the loan including the funded project assets. Entrepreneurs are expected to provide 25 percent of the project cost from their own sources. Thus far, their experience in rural credit is a recovery rate of 72-80 percent in contrast to 60-65 percent in industrial loans. They have sufficient resources for providing loans, Nu. 120 million for industrial loans and Nu. 60 million for rural credit. However, they feel that there are not enough industrial projects and are looking forward to the loan applications of the graduates of the Entrepreneurship Development Programme.

##### **2. *Bank of Bhutan (BOB)***

The BOB is a partnership between the Government of Bhutan and the State Bank of India. In addition to loans to industry, the BOB has a special scheme for cottage industries and artisans with no tangible security. The initial processing and endorsement is undertaken by the zonal administration and the applications forms are fairly simple. The security consists of guarantee from friends and inventory of materials. The average loan given is Nu. 15,000. The experience, however, is that very few cottage industries have sought credit and most of the loans have been given to general grocery stores. The BOB also conducted a 15-day Entrepreneurship Development Programme two years ago and would be willing to collaborate with BOIC/Entrepreneurship Development Unit in the future.

### 3. *Royal Insurance Corporation of Bhutan (RICB)*

The RICB provides credit to transport and manufacturing industries. Realizing the shortage of capital in the private sector, RICB also finances the purchase of shares in industries. Like BDFC and BOB, it is also seeking good projects to assist as its financial resources is accumulating.

Based on the discussions with the above three financing institutions, it appears that funds for financing CSIMs are available. However, There seems to be not enough entrepreneurs with good bankable projects. On the other hand, the procedures and collateral requirements for obtaining credit have to be further examined with a view of simplifying the loan application procedures and relaxing the collateral requirements.

#### **E. Technical Institutes**

There are two technical institutes in Bhutan: the Royal Bhutan Polytechnic (RBP) and the Royal Technical Institute (RTI). These institutes provide technical and vocational training for various occupations. They have a faculty of about 30 each (as of 1988) and a combined enrollment of less than 600 (mostly males). The graduates of the various courses are employed in industry and other sectors, such as in construction for those completing the two-year certificate course in survey and drafting.

The Royal Technical Institute in Kharbandi is the only existing training institution which is in a position to help in the development of the wood-based industry, provided that its training facilities are upgraded by the replacement of existing "hobby-type" of machinery and equipment with models that are actually used in modern woodworking industrial establishments. Moreover, its training courses could be modified to make them more industry-oriented and responsive to the changing demands for skilled labour by the wood processing industry. An on-going technical assistance is being provided by the German Government to the Institute. A DANIDA-assisted small furniture operation, located in Thimphu, will be completed in August 1991. This equipped with modern facilities and will serve as training and demonstration centre for the furniture industry. It will also provide some services to the industry.

A third institution, the Royal Institute of Management, is the only institution which offers courses in management and supervision in Bhutan. Being newly established, the thrust of their efforts appear to be towards developing the upper levels of managerial positions in the country's industrial and commercial establishments.

**The basic infrastructure for an effective cottage, small and medium industries development programme appears to be present in Bhutan. It could just be perhaps a question of formulating the appropriate policies, strengthening the capabilities of these existing institutions, and harnessing their efforts and resources into a joint**

and coordinated action towards the promotion of the CSMI sector. This is, of course, easier said than done. In most countries, wherein well-intentioned institutions proliferate, it is common that "the left hand does not know what the right hand is doing". We cannot afford such a situation in a country with scarce human and financial resources. It may be useful to set up a coordinating mechanism, such as a Programme Coordinating Council that meets regularly (say every three months, or as often as may be necessary) to discuss programmes and other issues affecting CSMI development. The Council may be composed of the representatives of private-sector institutions (BCCI, NWAB, BDFC, BOB, etc) and concerned government departments. Ideally, it should be chaired by a representative of the private sector with the BOIC serving as the Secretariat.

### III. THE CURRENT POLICY ENVIRONMENT

#### A. The Sixth Five Year Plan (1987-92)

##### 1. *Objectives and overall strategy*

The objectives of the Sixth Plan are: (i) strengthening of the Government administration, (ii) preservation and promotion of national identity, (iii) mobilization of internal resources, (iv) enhancement of rural incomes, (v) improvement of rural housing and resettlement, (vi) consolidation and improvement of development services, (vii) development of human resources, (viii) promotion of people's participation, and (ix) promotion of self-reliance. Moreover, sectoral ministries have additional objectives which either complement or supplement the national objectives, thus leading to a wide range of objectives.

Objectives equal or very similar to these are found in many development plans. The Sixth Plan, however, is notable for the effort that has been made to provide operational significance to the Plan's objectives in the sectoral allocation of expenditures. Thus, the emphasis on self-reliance results in a large share for manufacturing, mining, and power to carry out resource-based industrial and power projects to exploit markets in neighbouring countries, especially India; 27 percent of total expenditures and 45 percent of capital expenditures were allocated to these sectors.

##### 2. *Industrial sector objectives, policies and strategies*

The objectives of the Industrial Sector for the Sixth Plan are:

- i. To increase the GDP through industrial development.
- ii. To balance trade internally and externally.
- iii. To substitute imports through domestic production.
- iv. To earn hard currency by exporting manufactured and processed goods to the international markets.

The published Industrial Policy and Strategies for the Sixth Plan are:

##### **o Industrial ownership**

It is the avowed policy of the government that the benefits of industrialization should accrue to the largest number of Bhutanese people. This can be attained through wide distribution of trade and industrial ownership. Public issue of shares in industrial and commercial projects will be vigorously encouraged.



**o Location**

Each industry should be set up in a location considered ideal for the purpose. Investment should foster a balanced industrial growth of all the three industrial zones of the Kingdom. This objective must be borne in mind and brought to bear on the industrial licensing policy. Industries based exclusively and solely on fiscal subsidies vis-a-vis India will be discouraged.

**o Product standard**

Industrial production must cater to the international market in addition to domestic requirements. The quality and price of various industrial products should pass the quality test and be competitive for international markets.

**o Import tariffs**

Restrictions may be imposed on certain items of imports and exports, if such restrictions are considered necessary to protect nascent industries. This would be used as the last resort. Government permission will be necessary to import raw materials, particularly against payment of "hard" currency.

**o Competition**

Although the private sector will be given full encouragement, the Government will legally restrict monopolies and restrictive trade practices.

**o Training**

The Government shall devise schemes and programmes to encourage management education and training to provide a sound managerial base for bolstering industrial development. Training of persons for manning lower level positions as well as development of skilled labour shall be important responsibilities of the Government.

**o Privatization**

In view of the absence of adequate and qualified entrepreneurs, a few revenue earning industries will be set up in the government sector. These industries may be handed over to the private sector when the Government is confident of the management capability of the private sector.

o **Technologies for industries**

The technology to be utilised will be pinpointed and carefully selected keeping in mind Bhutan's acute shortage of skilled manpower and limited foreign exchange reserves. Technologies from countries nearest to Bhutan should be accorded priority.

o **Foreign collaboration**

Transfer of technology and know-how should be through import of plant, machinery and employment of foreign experts and technicians on a case by case basis. The Government will favour technical collaboration with foreign companies in preference to financial collaboration. Payment of royalties in the case of technology transfers may also be permitted.

Foreign equity participation will be permitted, but the Government will review each submission on individual merit and will allow foreign equity participation only in respect of agro-based industries and export-based industries.

3. *Incentives and assistance*

The government, in order to enhance the industrialization process in the country, shall give incentives and assistance to entrepreneurs but only after careful and detailed assessment of the industry. The incentives shall comprise concessions on income tax, custom duty, excise duty and sales tax. The assistance will include obtaining short, medium and long term finances for approved industries, in acquiring technology and raw material, in manpower development and in marketing of processed goods.

4. *Priority industries*

o **Agro-based industries**

Agro-based industries is in the high priority category. The Government will permit the import of viable technology, technical expertise and plant and equipment for the establishment of these industries, whenever justified. Other incentives shall be provided to such industries.

o **Export-oriented industries**

The Government will view favourably those industries that export their entire production, even if a major portion of their raw materials are imported. Induction of latest technologies, know-how and machineries will be permitted. Such industries will, however, be required to

submit comprehensive and time-bound training programmes for utilizing domestic manpower and reducing the import of foreign labour.

#### **o Mineral-based industries**

High priority will be accorded to industries based on the utilization of available mineral resources in the country. Importance will be laid on dolomite, followed by limestone, coal and on those resources that can be exported to third countries. Those that have maximum potential to earn "hard" currency will be given preferential treatment and they will receive requisite Government help and assistance.

The above policies are basically sound and reasonable in the Bhutanese context. Some policies, however, have to be more clear cut and would require implementing guidelines. For example, the policy on privatization is ambivalent and the incentives and assistance given to entrepreneurs is not very clear. Moreover, it is significant that the Industrial Policy and Strategies for the Sixth Plan does not mention cottage, small and medium industries at all. In fact, a careful reading of the policy on industrial ownership and on privatization tend to give the impression that larger enterprises are encouraged although this may not be the intention. However, based on the current draft of the Trade and Industrial proposals for the Seventh Plan (1992-97), this "omission" is expected to be rectified and policies that will promote cottage, small and medium industries are expected to be taken up.

### **B. The Seventh Five Year Plan Proposals (1992-97)**

#### **1. Thematic and national objectives of the Seventh Plan**

The Planning Commission has proposed that the following Thematic Objectives be integrated, to the extent possible, into all Seventh Plan programmes:

- i. Environmental conservation
- ii. Regional balance
- iii. Institution building
- iv. Export promotion
- v. Women in development

The national objectives in the Sixth Plan are also expected to be carried over to the Seventh Plan.

#### **2. Seventh plan objectives of the Department of Trade and Industry**

In keeping with Planning Commission Guidelines and Thematic Objectives proposed for the Seventh Plan, the National Objectives of the Sixth Plan and considering the constraints

and opportunities for development, the objectives of the Department of Trade and Industry are:

- i. To enhance the Kingdom's net national income by increasing the proportion of Net National Product originating in the industrial sector.
- ii. To achieve greater economic self-reliance.
- iii. To promote industrial development by the private sector within a free enterprise economy.
- iv. To regulate trade and industry in the national interest.
- v. To increase third country exports.
- vi. To promote more regionally balanced industrial development.
- vii. To improve government revenue through greater tax collections from a larger and more successful industrial sector.
- viii. To improve employment opportunities and promote the formation of a skilled labour force.
- ix. To maximize the benefits from the utilization of the Kingdom's natural resources.
- x. To promote, where possible, sustainable development of the Kingdom's resources.

**At this stage, it is proposed that objectives (ix) and (x) be combined as follows:**

- ix. To maximize the benefits from the utilization of the Kingdom's natural resources and promote sustainable development.

A tenth objective is proposed:

- x. To promote the development of cottage, small and medium industries especially in rural areas.

The rationale for this proposed objective will be taken up in a separate section of this report.

The DTI proposal to the Seventh Plan carries a section devoted to "Policy for Small and Medium Industry (SMI)", which reads as follows:

*"The integrated Entrepreneurship Development Programme aimed at cottage, small and medium industry commenced in June 1990 and has been accumulating experience by holding awareness workshops in various areas of the country. Based on this experience and an analysis of the programmes of other countries, the DTI will formulate an SMI policy during the pre-plan.*

*"The size classification for cottage, small, medium and large industry has been revised. The new classes are:*

(as shown in Table 1)

*"The new sizes classes are a clear indication that the overwhelming number of new enterprises will be medium-sized or smaller. This will be in keeping with the current level of managerial capability in Bhutan. For example . . .*

*(cost estimates for sawmilling, kiln-drying and joinery facilities are given)*

*"The policy implications are clearly the necessity to support SMIs as they will form the backbone of the industrial structure of Bhutan. Large enterprises will still have a role to play, but it will be a diminished one as the experience of absorbing the technology and developing the managerial and technical competence to properly operate a large factory have proved difficult and expensive."*

Although the policies are not yet in place, and it is hoped that the recommendations in this report will provide some useful inputs to an SMI policy, this initial statement in the draft Seventh Plan is an important first step.

3. *Proposed incentive programme for the development of the industrial sector of Bhutan during the Seventh Plan period*

The introduction to the proposed programme reads:

*"The Incentive Programme (IP) presented below is consistent with the Planning Commission's Guidelines and the need to develop a more rationalized mode of providing advice and assistance to industry than the case-by-case approach. The government policy shift toward the private sector as the main agent in the process of industrialization and the privatization of existing companies makes it necessary to clarify and standardize the DTI's incentive programme in order to gain investor confidence that all projects will receive identical treatment. Projects with foreign partners will still be handled on a case-by-case basis.*

*"Conceptually, the programme is based on an evenhanded treatment of investors, respect for confidentiality of private sector information, and an understanding that considerable assistance is required both at the stage of project generation and operations when the lack of skilled labour at all levels will be felt most. The programme recognizes that many enterprises will be producing for the Indian market as well as the domestic market implying competition from low cost labour which may also have higher productivity with similar capital. A crucial requirement for investor confidence in DTI and*

*Government is the stability of the incentive package over time. Once agreed upon, every effort should be made to maintain the provisions of the IP over a period of time long enough for investors to make their calculations and realize the incentives offered at the time an investment is made.*

*"Scrupulously evenbanded treatment of investors combined with a guarantee that incentives in effect at the time of final approval or licensing of a project will be observed may well be the most important element for developing private sector confidence and willingness to invest.*

***"A small and medium industry (SMI) programme will be developed by the Entrepreneurship Development and Industrial Planning Programmes." (underscoring ours)***

Incentive programme targets are:

- i. A significant increase in capital investment;
- ii. Establishment of convertible currency export-oriented industries (EOI);
- iii. Establishment of efficient import-substituting industries;
- iv. Balanced regional development;
- v. Human resource development emphasizing entrepreneurship and private sector needs;
- vi. Promotion of small- and medium-sized industry (SMI); and
- vii. Strengthening and consolidation of existing enterprises.

This report fully endorses all the proposed objectives enumerated above.

In order to significantly increase the level of capital investment, the incentive programme is designed to have an impact in each of three main phases of the project: (1) during the pre-investment phase via financing or assisting in the financing of studies; (2) during implementation via financing or assisting in the financing of final design and engineering work, relief from import duties/taxes, and infrastructure provision in industrial estates and/or locational assistance for less developed areas; and (3) during the operating period via export, employment of nationals and reinvestment incentives, relief from import duties/ taxes, and channeling of technical assistance. The DTI will assist enterprises in obtaining raw materials and in human resource development. The incentives are graded according to the DTI's sub-sectoral and regional priorities, with special incentives intended to promote EOI and reinvestment of profits.

The specific set of incentives should be understood as being still currently under discussion and in a very preliminary stage.

## **C. Legal Aspects in Establishing and Operating Industries**

### **1. *The Companies Act, 1989***

The Company's Act of the Kingdom of Bhutan, 1989, governs the operations of incorporated companies whether privately-owned, government or jointly owned. It supersedes all provisions of the previous Companies Act, Corporate Charters and regulations. Its provisions are generally what may be found in similar acts in other countries. Most CSMLs are, however, registered as single proprietorships.

### **2. *Licensing and registration procedure***

The initial application form for obtaining an industrial licence is simple and the information required is reasonable, as reproduced in Annex IV. What makes it difficult for a potential entrepreneur with little training and education is the attachment required of a project report/profile. Most of the potential entrepreneurs would require assistance in preparing this project report/profile. Since the financing institutions also normally require a project profile, it is recommended that a simplified uniform format be adapted and agreed upon by DTI and the financing institutions.

At least two endorsements are normally required before DTI approves the application for licence: the recommending authority of the concerned Dzongkhag and the comments of the Regional DTI Officer. Where critical raw materials are required by the industry, the application is also referred to the department concerned. According to DTI, if assistance is not needed by the applicant and there is no problem with raw materials, the licence is released expeditiously. Normally, however, an application for an industrial licence takes approximately 3-4 months before approval is given.

A slightly modified form should also be devised for the annual renewal of licences. This will give enable DTI/BOIC to compile statistics and other information that may be required for planning and other purposes.

### **3. *Income tax***

In the discussions held with various individuals and organizations, including existing and potential entrepreneurs, there appears to be no issues and problems concerning taxation. The income tax levied on businesses is 30 percent, while a tax of two percent is deducted from the employees' payroll. Almost Everyone seems to recognize their obligation to contribute to the revenue requirements of the government.

Cottage and rural agro-industries are exempted from payment of income taxes, since they are not licenced or registered.

#### 4. Interest rates

The interest rates in the country are fixed by the Royal Monetary Authority of Bhutan. Table 10 gives the lending rates of financial institutions and have been in effect since 1 May 1989.

**Table 10:**  
Financial Institutions - Lending Rates, 1989

Percent per Annum

Sector/Purpose of Interest	Maximum Rate	Maximum Repayment Period
1. Trade		
(a) General Trade	15	1 year
(b) Export Trade (1)	12	1 year
2. Transport		
(a) Buses, lorries, trucks and light vehicles	15	5 years
3. Agriculture (including animal husbandry)		
(a) Up to Nu. 20,000	10	5 years
(b) Above Nu. 20,000 to Nu. 100,000	12	7 years
(c) Above Nu. 100,000	13	10 years
4. Industry		
(a) Up to Nu. 200,000	10	10 years
(b) Above Nu. 200,000 to Nu. 1,000,000	12	10 years
(c) Above Nu. 1,000,000 to Nu. 5,000,000	13	10 years
(b) Above Nu. 5,000,000	14	10 years
5. Working Capital	15	1 year
6. Housing	14	15 years
7. Tourism	13	10 years
8. Miscellaneous (including personal loans)	15	5 years
9. Government Employee Loan	13	3 years



- (1) Applied only to third country exports against which payment is received in a convertible currency.

**Source: Royal Monetary Authority of Bhutan.**

It will be noted that rates for smaller industrial loans are lower. The repayment terms for industrial loans are also more liberal. There should, however, be a distinction between fixed working capital loans which should also be charged lower rates at longer terms and short-term working capital.

## **IV. PRIVATE SECTOR CONSTRAINTS AND OPPORTUNITIES**

### **A. Constraints on industrial development in Bhutan**

The draft Seventh Five Year Plan of the Department of Trade and Industry clearly recognizes the constraints on industrial development in Bhutan. It enumerates six major constraints:

#### **1. Physical isolation**

Bhutan's physical isolation stems from three factors, the effect of which is to increase the cost of economic activity. First, it is landlocked so that its outlets to the sea are either in India or Bangladesh. Second, the High Himalaya in the north, which are not traversed by a road, limit access to Tibet and China making Bhutan as a nation "one-half" a growth pole. Third, the mountainous terrain of Bhutan raises the cost of internal transportation and communications reducing the opportunities for rapid and easy development of an internal market which would offer greater opportunities for economically viable facilities.

#### **2. Historical isolation**

Its historical isolation and connection with Tibet via animal tracks over the High Himalaya has limited the exposure of Bhutan to the rest of the world until the post World War II period starting in 1945. In particular, Bhutan did not develop along with the economy of the Indian sub-continent. There was a subsistence economy, without roads for cars and trucks until the early 1960's. It may well be that almost 90 percent of the population is still in the rural agricultural/subsistence sector. This historical isolation puts Bhutan in the "latest latecomer" group of developing nations, clearly a constraint as it is part of a Free Trade Area with India, a poorer country but so large that it produces most of the goods and services of a modern economy. Thus, Bhutanese entrepreneurs must learn to produce goods and services while competing directly with low cost imports from India. With some important exemptions, a sales tax of from 5 to 25 percent is levied on these imports. At the same time, India has a protected market for Bhutan's output.

#### **3. Isolation from modern knowledge and practices**

A concomitant of physical and historical isolation is isolation from modern knowledge and practices. A recent survey by the RCSC shows that there are only 650 qualified undergraduates out of about 13,000 civil service employees. The proportion of qualified undergraduates is even smaller in the private sector. Clearly, Human Resource Development which brings with it modern knowledge and the ability to master modern practices must have a very high priority in Bhutan. Since domestic higher

educational institutions have limited scope and size, much of the HRD Programme has to take place outside the country. This is costly, whether in terms of grants which could have alternative uses or out-of-pocket costs.

The development of educational institutions, libraries, and other sources of modern knowledge, information and skills are still in their infancies. This shows up clearly in the lack of familiarity with most industrial products and how they are made leading to slow growth of the private sector and the need, until very recently, for the government to take a leading role in the process of industrialization.

#### **4. Economic isolation**

The economic isolation of Bhutan is most evident in the few destinations for exports and sources of imports from countries other than India. At present, only Bangladesh can be considered a second regular export market. Since the ngultrum and rupee are freely exchanged at par, only third country exports earn freely convertible currencies. Most importantly, the lack of modern knowledge combined with economic isolation inhibits the search for capital goods necessary for industrialization. This can result in unnecessarily high initial investment costs for many enterprises as well as difficulties in assimilating the chosen technologies. Currently, the main supplier is India but there are, at times, large imports from Western Europe when entire plants are being equipped. There are machinery imports from Japan and Asian NICs. Agricultural machinery is imported under a special programme from Japan.

#### **5. Small population**

The population of Bhutan, approximately between 600,000 and 700,000, is small and there is no clear estimate of the existing or future labour force, its characteristics or growth. Enterprise owners/managers indicate they are constantly short of personnel from unskilled sweepers to skilled workers and plant managers. Employees are unused to industrial work and do not take to it readily. On the other hand, government reductions in the amount of immigrant labour permitted into the country have significantly increased wage rates for Bhutanese. This is likely, over time, to attract labour that migrates from the agricultural sector but lacks the qualifications for government and most other skilled employment. This leads back to the HRD problem. The only available historical estimate indicates that there may have been little change in the size of the industrial workforce (mining and manufacturing) from late 1987 until the present because of a large reduction in immigrant labour.

## 6. Limited knowledge of resource base

Bhutan has important natural resources, particularly forests and hydroelectric potential, but data are often lacking for an assessment of the potential for resource-based industry. There are very few inventories and management plans for forest areas preventing a rational assessment of the sustainable yield and appropriate locations for logging, often leaving the wood processing industries without a regular and adequate supply of raw material. Hydroelectric power potential exists in most parts of the country, but is developed only in the western part of the country, causing an excessive concentration of industry there. Not enough is currently known about the occurrence of minerals as mainly southern areas have been surveyed, but there are important deposits of limestone, marble, dolomite, gypsum, quartzite and low grade coal. A tungsten deposit is under exploration. It is expected that recent data collection on agricultural production by the Department of Agriculture will furnish a clearer picture of potential for the agro-industry sector.

### B. Opportunities for the Private Sector

In spite of the constraints, there are many opportunities for imaginative potential entrepreneurs in Bhutan. One could just take a cursory survey of the needs of the population, the government and the business community and match them with the available resources in the country. A considerable number of products and services that are currently imported could be done in the country. Export opportunities for high value added products also exist, but are perhaps more limited at this stage. Productivity and technology has to be upgraded, product design and quality improved so that they could be acceptable and competitive in foreign markets. This is not to say that efforts should not be continued to search for markets abroad.

Two important sectors, the metalworking and engineering/machining industries which are regarded as pre-requisites to a viable industrialization process, do not appear in the proposals for the Seventh Plan submitted by the four zonal authorities. The main reason could be that the skills and raw material resources are not available in the country.

The three sectoral studies of the resource-based industries prepared by the UNIDO Industrial Planning Project in November 1990 give some of the the opportunities for industries in the sectors concerned. It should, however, be noted that the projects are listed at random. In most cases, feasibility studies may have to be undertaken before investment decisions are made. These industrial opportunities should, therefore, be regarded only as a "shopping list" of potential projects.

## 1. Agro-based industries

The following are recommended as industrial opportunities in the agro-based sector, including the suggested most likely feasible locations:

- a. Edible oil and fats plant, in Sarbhang (Gaylegphug), Tashigang, Samchi
- b. Breakfast foods (corn flakes, museli, rice crispies, oats, enriched kharang), in Mongar, Tashigang, Chirang, Samdrup Jongkhar, Samchi
- c. Brewery, in Phuntsholing, Thimphu
- d. Orange concentrate and tomato paste (including citrus oil and pectin), in Damphu (Chirang), Sarbhang (Gaylegphug)
- e. Multi-purpose fruit and vegetable processing (canning, bottling, dehydration, tetrapak, convenience foods, etc.), in Samdrup Jonghar
- f. Cardamon and chilli drying plant, in Darachu (Chirang)
- g. Chilli dehydration, paste and powder, in Mongar, Kurte (Lhuntshi), Paro, Samchi, Tashingang, Pemagatshel
- h. Biscuit, noodle and confectionery, in Paro, Thimphu
- i. Ginger drying and oil, in Samchi, Gaylegphug, Samdrup Jongkhar
- j. Distillery, in Jakar (Bumthang)
- k. Mushroom dehydration, in Gedu, Bunakha
- l. Essential oils distillation, in Mongar, Tashigang, Lhuntshi
- m. Mineral water plant, depends on suitable water source
- n. Milk processing (improve breed and output of livestock) in Phuntsholing, Gedu, Tala
- o. Milk processing/hide tannery complex, in Phuntsholing, Gaylegphug
- p. Winery, in Paro, Punakha-Wangdi Valley
- q. Mobile fruit processing units, in interior fruit growing areas

It has been difficult to develop agro-industries in Bhutan, because of a small domestic market and an uncertain and often relatively high cost of domestic raw materials. From a strategic point of view, it appears that the best way to overcome these limitations is to ensure that factories operate at full capacity by taking advantage of the Free Trade Area and purchasing raw materials when necessary from India. Economies of scale in production can be achieved by selling to India as well as the domestic market. This strategy has the potential of avoiding the "chicken and egg" problem of whether raw materials must exist before a factory is built or whether the existence of a factory brings forth the needed raw materials.

## 2. Mineral-based industries

There is no logical need at present to distinguish between "mining" and "industry" operations in Bhutan, as is the case in many other countries. These two are frequently indistinguishable

in Bhutan and the mining/industry sector should benefit by being under the umbrella of one ministry. A main factor is going to be the opportunities provided by electrical energy. This includes the glass and ceramics industries and any developments, such as the discovery of high silica, low iron sand or quartzite, and other materials such as feldspar will be important steps in their establishment. Another is the possibility of making magnesium metal, which can be based BFAL's ferro-silicon and existing dolomite.

Some of the proposals are:

- a. Dolomite application in Bhutanese agriculture.
- b. Concrete products
- c. Lime
- d. Gypsum plaster
- e. School chalks
- f. Bottled acetylene gas
- g. Slate
- h. Coal mining
- i. Talc
- j. Rock phosphate fertilizer
- k. Graphite
- l. Magnesium metal
- m. Pigments
- n. Mineral and distilled water
- o. Scouring powders
- p. Sharpening stones
- q. Special cements: masonry, low heat, Portland pozzolana
- r. Paint, including cement-based 'snowcem'

As already known, there are few opportunities for backward and forward linkages in the sector and any that exist are of an weak. (Backward linkages have been difficult to develop due the free trade with India.)

### **3. Forest-based industries**

The investment opportunities in the forest-based industries may be divided into three general categories: those with the main objective of supporting the industry, but are not necessarily part of the industry; those that directly allied to the wood processing industry; and those which provide technical/management services to the industry.

These suggested opportunities are:

- a. Common service centres, in machine/equipment repair and maintenance including knife grinding, saw filing, and jigs/fixtures fabricating
- b. Marketing co-ordinator services, pooling of production capacities of small and medium wood processing units to meet export market demands

- c. Quality control assurance services, especially for the export market
- d. Mobile woodworks service centres, to serve villages in precision cutting and surfacing of furniture and joinery parts
- e. Designing services, for the furniture/joinery and handicraft industries
- f. Hardware and fastener supply
- g. Machinery and equipment supply
- h. Kiln-drying facilities for lumber
- i. Cutting tools and production supplies for the industry
- j. Technical/management services
- k. Wooden parts and components for domestic and export markets
- l. Handicrafts

In addition the above, there would still be opportunities for manufacturing improved quality and better designed furniture and joinery products. Not listed above are products made of rattan and bamboo as they may not be classified as wood-based.

## V. THE RATIONALE FOR THE PROMOTION OF COTTAGE, SMALL AND MEDIUM INDUSTRIES IN BHUTAN

In most developing countries, small-scale industries play a vital role in the pursuit of socio-economic progress. Even in the industrialized countries (i.e. the United States, Japan), small-scale account for about 90 percent of the number of enterprises. The potential of small-scale industries to address equity and regional development issues is significant. Although a unique country with severe constraints in industrial development, the situation in Bhutan presents a stronger case for the promotion of small-scale industries (the term including cottage and medium industries). Its small population and its physical characteristics makes it a more friendly environment to small-scale operations. This should not be taken to mean that small-scale industries are less efficient and less productive than larger manufacturing plants. The opposite may, in fact, be true considering the type of products that may be appropriate for Bhutan. (Again, several examples may be cited from Japan and the United States of more efficient small-scale industries.)

The promotion of small-scale industries should not be considered as an alternative to the promotion and development of large industries. Rather, a strong and productive industrial sector can only be achieved where cottage, small, medium and large industries not only co-exist but also function in symbiotic relationship.

The qualitative contributions of small-scale industries (SSIs) include the following:

### *a. Nursery of entrepreneurial talent*

Many large industries start small, hence SSIs serve as a training ground for entrepreneurial ability and managerial talent. Small-scale industries enable risk-taking of motivated individuals to find avenues for their talents to new types of business activities and innovations.

### *b. Capital saving and rural employment creation*

In most countries characterized by a low rate of capital formation, SSIs are important source of off-farm and non-farm employment in the countryside at relatively low capital cost.

### *c. Dispersal of industries*

Small-scale industries tend to develop in various regions of the country, hence contributing to reduce concentration of industries in urban areas and promoting balanced economic growth.



*d. Income distribution*

SSIs help build a strong middle by producing a group of entrepreneurs-managers, hence discouraging the concentration of economic power in the hands of a few persons.

*e. Utilization of local resources*

Small-scale industries utilize local resources like capital (such as family savings), skills (in traditional crafts which can be harnessed to produce basic goods), or material resources.

*f. Strengthening the industrial structure*

Through sub-contracting and other complementary relationships, SSIs complement large industries by performing certain operations that are less feasible on a large scale, providing raw materials and components for the latter and utilizing their outputs to produce other products.

*g. Flexibility*

SSIs are more flexible in their operations and can better adjust to changes in market conditions and preferences.

**The pursuit of a vigorous small-scale manufacturing sector implies, however, the provision of a policy environment conducive to the viability and growth of these enterprises. The strength and economic viability of these industries is strongly affected by the policy climate in which they operate. A unified strategy of industrial development would conceivably comprise a mix of separate (though related) policies towards large-scale industry and small-scale industry.**

**In formulating an appropriate strategy and a coherent set of policies, the national objectives of Bhutan and the interplay of political and cultural factors should be taken into account. These factors include the priority given to enhancement of the role of women and rural development. Apart from ensuring income growth and favourable demand conditions, small-scale industries should have equitable access to inputs, finance, incentives and other assistance.**

**Policy measures for CSIMs should promote total factor productivity, remove inefficiencies, improve entrepreneurship and management, be positive and developmental, utilize delivery mechanisms and ensure growth. Separate preferential treatment may usually be justified for an initial period for disadvantaged groups, e.g. women, depressed areas, rural poor.**

## VI. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Based on the information given in the preceding sections of this report, the following conclusions and recommendations are proposed for the promotion and development of cottage, small and medium scale industries in Bhutan:

### 1. A national policy for CSMI promotion and development

A national policy on CSMI should be included in the Seventh Plan, which may read as follows:

*"It shall be the policy of the Royal Government of Bhutan to give priority to the promotion and development of cottage, small and medium scale industries, especially those located in preferred areas (i.e. rural areas and designated dzonkhags). This policy shall be reflected in all the Government's regulations, incentives, procurement, financing and other programmes.*

*"The importance of large industries is, however, recognized in industrial sectors where the economies of scale require large scale operations. Whenever feasible, large industries should promote small ancillary industries and sub-contract components and services to small-scale industries."*

### 2. Size categories of industries

As discussed in Section I of this report, the investment size categories of the various industries should be scaled down to better reflect the size of industries which need government assistance (i.e. cottage, small and medium industries). This proposed modification would be more consistent with the objective of equity through a broadly based dispersal of industries.

Category	Investment (a)	Annual Fees (b)
Large	above Nu. 10.0 million	Nu. 5,000
Medium	Nu. 2.5 to 10.0 million	Nu. 2,000
Small	Nu. 0.5 to 2.5 million	Nu. 2,000
Cottage	Below Nu. 0.5 million	(c) -

- (a) Investment shall exclude land and building and working capital. In case of annual renewal of licence, investment shall be measured on the basis of total assets, excluding land and building.
- (b) The registration fee should already be included in the licence fee to facilitate start-up of new industries and simplify collection of fees.
- (c) Cottage industries will be exempted from payment of fees, but they should be registered, even just at the Regional DTI Officer level, so that more reliable statistics could be compiled and

their performance monitored. Some of them will eventually "graduate" into the small industry category.

### **3. Institutional framework**

In order to achieve an integrated and coordinated approach in CSMI promotion and development, the following institutional mechanisms are proposed:

#### **o CSMI Programme Coordinating Council (CPCC)**

As discussed in Section II of this report, this Council will be composed of representatives of relevant government and private organizations and meet periodically to discuss programmes and issues related to CSMI promotion and development. The Council should preferably be chaired by a representative from the private sector with the secretariat based at BOIC/ED Unit. Some of the institutions that may be represented in the CPCC are: Department of Trade and Industry, Bhutan Chamber of Commerce and Industry, National Women's Association of Bhutan, Ministry of Finance, Bhutan Development Finance Corporation, etc. Other institutions may be invited either as permanent members or on an ad hoc basis.

#### **o Bhutan Business Advisory and Assistance Centre (BBAA)**

The services of the Business Advisory and Information Centre (BOIC) of DTI should be upgraded so that it eventually becomes a "one-stop" shop of services to existing and potential entrepreneurs. It could be renamed as BBAA. Aside from continuing a vigorous Entrepreneurship Development Programme and upgrading its capability and international linkages in providing industrial information, a third unit providing assistance and diagnostic service to existing entrepreneurs would be necessary to provide solutions to the many "sick" enterprises.

### **4. Upgrading the capability of existing enterprises**

This is already one of the strategic objectives of the proposed Incentive Programme of the Ministry of Industry. It should, however, be re-emphasized that more than just incentives would be necessary to rehabilitate these "sick" industries as substantial investments have already been made in terms of human and financial resources. A rational phased programme should be undertaken to diagnose actual problems in each of the enterprises and solutions provided. We may actually find that most of the problems cannot be cured by incentives.

As a related measure, it is proposed that the UNDP/UNIDO consider providing a specialist to assist both the DTI/BOIC and BCCI in re-structuring their activities in order to provide

complementary and coordinated services to industry. The BCCI, in particular, should develop the capability to conduct management training to its members (possibly in cooperation with the Royal Institute of Management) using resource persons from industry itself and other institutions. Being the main representative of the private business sector, the BCCI could do much more for the benefit of its members.

## **5. Privatization and free enterprise**

Privatization in a free enterprise economy is already a cornerstone in the government's policy pronouncements and should be pursued vigorously. As implementing guidelines, two measures are proposed:

- o The Government should not own any small-scale industry. When the establishment of such industries are provided through grants by donors, these enterprises should immediately be in the hands of the private sector.
- o Competition is the essence of a free enterprise economy. In the long run, this will benefit industry, the public and the country in general. Licences should be issued even if there are already existing enterprises producing the same product. It is, of course, understood that concerns regarding the availability of raw materials and the importation of equipment are evaluated.

It is proposed that technical assistance from UNIDO be requested on "privatization". A specialist should look into the overall aspects of privatization, prepare necessary guidelines, and recommend measures for the privatization of each of the specific industries not yet privatized.

## **6. Human resources**

The human factor is the most vital ingredient in small-scale industry development. There is a vital need to develop entrepreneur-managers and skilled workers in the country. These resources are currently very scarce in Bhutan.

### *a. Entrepreneurs*

It is often emphasized: "No entrepreneurs, no development". Bhutan's entrepreneurial potential would initially come from its more educated population and eventually those who are currently engaged in agriculture, especially women. The following proposals are submitted for consideration:

- o Modification of the policy prohibiting spouses and children of civil servants from engaging in business. Since this group of Bhutanese, particularly women, is an important source of potential entrepreneurs it is proposed that they be allowed to be engaged in industries subject to a "conflict of

interest" rule, i.e. they would not be allowed to enter into transactions with the government in activities where their spouses exercise direct or indirect influence. Detailed rules may be formulated to effect this proposed modification.

- o BOIC/ED Unit, BCCI, BDFC, NWAB, and relevant agencies should consider running special entrepreneurship development training courses exclusively for women, especially for those in rural areas.

*b. Skills development fund*

This is a three-part inter-related proposal. Since skilled manpower continues to be a major constraint, it is proposed that:

- o The quota for non-nationals employed in industry be increased to 20,000 (about double the present number), subject to the proviso that for every one non-national employed there should correspondingly be at least two Bhutanese, i.e. a ratio of 1:2. No non-national will be contracted for more than three years. The avilment of this quota to industry will be monitored by BCCI.
- o A levy will be collected from the company for each non-national employed: Nu. 100 per month for the first year, Nu. 200 per month for the second year, and Nu. 300 per month for the third year of employment of each non-national worker. This levy will be exclusively used for the skills development of Bhutanese workers and be called "Skills Development Fund". Assuming 20,000 non-national workers are employed, the expected revenue would be Nu. 24 million during the first year of employment. The proposed levy will not only "force" industries to train skilled Bhutanese workers and discourage the long-term employment of non-nationals, but also provide the funding for a viable Skills Development Programme in Bhutan.

BCCI, in cooperation with DTI, will prepare an annual skills development programme on the uses of the Fund. Some of the possible uses of the Fund would be: grants for company-sponsored or other training courses, either locally or abroad; bringing into the country mastercraftsmen, with necessary tools and equipment, to train local craftsmen; and other activities that are consistent with the main objective of upgrading the skills of Bhutanese workers, technicians and supervisors.

- o A labour recruitment agency should be set up to screen non-national workers, possibly through BCCI. Nominal fees would be charged for providing this service to enterprises (not more than the equivalent of one-month's salary)..

## **7. Raw materials**

While awaiting the rationalization of the resource-based industries, such as the creation of a Timber Industry Authority, the criteria for supplying raw materials to small industries should be made clear. Two possible short-term solutions could be:

- o A mandatory allocation of a certain percentage of raw materials available prior to selling them at auction (in the case of timber), based on the requirements of CSMLs.
- o BCCI could organize the small-scale manufacturers into "purchasing cooperatives" in order to enable them to buy their materials in bulk and possibly even compete at the auctions. One suggestion is to limit the auction buyers to Bhutanese, but this could be easily circumvented through the use of "dummys".

## **8. Productivity and appropriate technology**

The issues of productivity and appropriate technology are inter-related. As pointed out earlier, most of the industries visited by different UNIDO missions are operating at a very low level of productivity partly because inappropriate equipment and techniques are employed. Appropriate equipment may not always be available in neighbouring countries, where labour-intensive techniques of production are normally encouraged. Bhutanese entrepreneurs (including government and financing institution officers who evaluate projects) must be exposed to a wider choice of technology options, develop the capability to evaluate these options in relation to the country's limitations, and ensure that the capability for maintaining these equipment are assimilated. The following proposals are submitted for consideration:

- o Upgrading the capability of the Information Unit of BOIC, possibly through technical assistance, by linking it with 'centres of excellence' and international sources of information. (The International Development Centre (IDRC) of Canada, for example, has an Information Science Program and has provided assistance to several information centres. UNIDO in Vienna has its Industrial Information and Technology Information Bank (INTIB). The Asia-Pacific Centre for Technology Transfer (APCTT) in Bangalore and the Asian Institute of Technology in Bangkok are among several institutions that provide information services). Membership to Technonet Asia, based in Singapore, may also be considered.

- o The BOIC/IU subscribing to some 200 industrial journals on industries relevant to Bhutan. These should be scanned by BCCI and BOIC/IU and photocopies of articles relevant to specific industries should be circulated. In other words, these journals should not remain in the shelves of BOIC/IU but should be used by industry. The possible assistance of donor agencies could be sought in acquiring these publications. The Skills Development Fund may also be tapped for this purpose.
- o Foreign aid donors are often major decision makers in the choice of technology. This is also true in Bhutan. One important area for appropriate technology policy is to influence the change of bilateral and multilateral aid agencies towards the promotion of appropriate technology (AT). This would involve: giving priority to aid for small-scale projects; incorporating appropriate technology into project aid explicitly, so that the search for AT methods becomes an explicit element in project aid; using LDC consultancy firms or individuals; and eliminating aid-tying, such as capital cost only and foreign exchange element only aspects of aid financing.

## **9. Financing of industries**

The more important issues in financing are the access of CSMEs to credit (restricted by collateral requirements), the timely availability of financing (cumbersome loan procedures) and the cost of financing (interest rates). It is our understanding that funds are available in financing waiting for good projects.

The 25 percent equity required of borrowers is reasonable. However, when this is translated into a 150 percent collateral requirement (including funded assets) many potential small-scale entrepreneurs experience difficulties in complying with this requirement. Banks often accept third party guarantees. Other options may also be considered:

- a. converting a portion of the financing into equity, as long as the bank is only a minority partner and the bank's equity will eventually be sold to the entrepreneur. Such a "buy back" provision should be incorporated in the agreement.
- b. leasing of machinery and equipment may be considered by the financing institution as a viable option. This would also be applicable to cottage industry and agricultural financing.
- c. setting up a guarantee fund to cover the deficiency in collateral provided. A guarantee fee of 2.0 percent will be charged and, in most developing countries, this has proven to be sufficient to cover losses.

As discussed earlier, the project report/profile format for CSMTs should be simplified and made uniform with the format of DTI. The current experience is that even the more educated potential entrepreneurs need assistance in preparing a project profile. (The Asian Development Bank has provided BDFC with a consultant who is looking into this aspect, among other issues.) An initial working format, adapted from the business plan format used by the Entrepreneurship Development Programme, is given in Annex V.

The current interest rate structure does not reflect the relative true costs of financing, i.e. bigger loans are charged higher rates. While this is of benefit to CSMTs in the short-run, it may actually inhibit their access and avilment of credit as it serves as a disincentive for financing institutions to provide small loans. The administrative cost of processing small loans is higher (and the risk possibly greater) in relation to large loans. Since access and avilment are more important to CSMTs, the interest rate structure should be modified to minimize this built-in subsidy.

## **10. Marketing**

As discussed earlier, most Bhutanese products would not be acceptable in foreign markets in terms of quality and standards. A second dimension is filling up the quantity requirements of markets abroad. The sending of trade missions and exhibiting Bhutanese products abroad are normally effective marketing tools and have often been suggested. However, to ensure that the objectives of these activities are effectively fulfilled, the following pre-requisites are proposed:

- a. setting up a focal point in every village to obtain an inventory of the capabilities of industries (in terms of quality and quantities) in each of the products that will be promoted abroad. The BCCI and NWAB could possibly undertake this activity, with the assistance of the DTI Regional Officer.
- b. the DTI should consider setting up a Division or an Institute of Standards to assist entrepreneurs in meeting foreign standards as well as provide quality assurance to buyers abroad. This is, of course, a long process but a start could be made in products with the greatest potential overseas.

With regard to the local market, preferential treatment to CSMTs should be given by the government in all its purchases when the products are available locally. The government is potentially the biggest single buyer for some CSMT products. This may be in the form of a price advantage (say 10 percent) accorded to CSMT in tenders issued by the government.

In the final analysis, however, the expansion of real incomes of rural households could provide the stimulus to the development of



CSMIs. Initially at least, the expansion of rural income must depend on growth in agricultural production, which is a vital precondition for nonagricultural activities in the rural areas. In countries like Bhutan, that are predominantly rural and have a high incidence of rural poverty, increasing rural incomes might well be the most effective means and, through multiplier effects, sustain 'economic growth and equity'.

## **11. Incentives to CSMI**

An Incentive Programme (IP) is being prepared by MTI in line with the objectives and priorities of the Seventh Five Year Plan. In the case of CSMI, facilitating the initiation and development of their projects, assistance in providing the physical infrastructures necessary, in procurement of raw materials, in financing, in marketing and in human resource development would be more effective tools of CSMI promotion (if not more) than fiscal incentives. The latter would, however, be useful in directing the location and type of investments and in encouraging growth.

The following specific fiscal incentives for CSMI are proposed, some of which may also be given to large industries:

- a. a 100 percent exemption from all taxes and duties for a period of years for industries in the first priority, i.e. for agro-based industries, located in least developed Dzongkhags (Lhunsi, Pema Gatsel, Dagana, Tongsa and Shemgang), and will be exporting at least 50 percent of their output. They will also be allowed to carry over 100 percent of their losses for the first years, until such time that these losses have been recovered. All the assistance required by the project will be provided.
- b. a 50 percent exemption for all taxes and duties for a period of five years for industries in the second priority, i.e. mineral-based and wood-based industries, located in second priority less developed Dzongkhags (Haa, Punakha, Wangdi, Mongar, Bumthang and Tashigang), and will be exporting at least 50 percent of their output. They will also be allowed to carry over 50 percent of their losses for the first five years, until such time as these losses (50 percent) are recovered. All the assistance required by the project will be provided.

The type of incentive given, (a) or (b), will depend on lowest priority criteria, i.e. if a first priority industry is located in a second priority location, then incentive (b) will apply.

- c. all industries not included above, will be granted an exemption of 50 percent from all taxes and duties for a period of five years if 50 percent of their output is exported and 50 percent of their raw materials are available locally. All the assistance required by the project will also be provided.

- d. all industries, including those in (a), (b) and (c) will be granted a further exemption of 50 percent from income tax if their profits are re-invested in the company. Incentives will, however, not be cumulative and cannot be carried over.
- e. any of the above incentives may also apply to existing industries that will be re-structured and whose facilities will be upgraded.

## **12. Special programmes for the promotion of CSMI**

Some very brief concepts are given in Annex VI on potential programmes/projects that may be pursued for the promotion and development of cottage, small and medium industries. These are:

- a. Industrial Extension and Diagnostic Services, for existing industries.
- b. Re-structuring of BCCI and BOIC, to provide effective and complementary services to industries.
- c. Upgrading of Technical Information Services, in order that a wider choice of technologies appropriate to Bhutan would be available to entrepreneurs.
- d. A Mastercraftsmen Programme, to assist in the development of the handicraft and artisanal industries.
- e. Privatization of Industries, that are still government-owned.
- f. Setting up an Institute of Standards, initially to cover export products.

The above recommendations are respectfully submitted for the consideration of the Royal Government of Bhutan and other institutions involved, including donor agencies. We are confident that an integrated and coordinated "total approach" to CSMI promotion and development will greatly benefit the country and its population, especially women and those in rural areas.

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The writer wishes to acknowledge with deep gratitude the valuable inputs and advice provided by Karl L Udarbe, Chief Technical Adviser of the UNIDO/RGOB Entrepreneurship Development Programme (DP/BHU/88/001), and Richard S Lissak, Chief Technical Adviser of the UNIDO/RGOB Industrial Planning Project (SI/BHU/87/027), and their respective counterparts, Bap Kuenga, Joint Director of the DTI Business Opportunities and Information Centre, and Sangay Khandu, Director of the Department of Trade and Industry.

UNIDO

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

DP/BHU/88/001/11-02

**JOB DESCRIPTION**

- Post title : Expert on Cottage, Small and Medium Scale Industrial Strategies
- Duration : 1.5 months
- Date required : 15 May 1991
- Duty station : Thimphu, with some travel to other parts of the country

Overall duty to be performed:

Study the existing industrial infrastructure and recommend specific strategies for the encouragement and support of cottage, small and medium scale industries including legal instruments (e.g. licensing and permits), financial incentive schemes (e.g. loan requirements), marketing schemes, provision of appropriate technical and administrative skills, the government industrial policy framework, and other promotional schemes for SMIs.

Duties to be performed:

1. Review and study existing literature (studies, reports, curculars, guides, industrial plans) that provide a basis for establishing the existing industrial infrastructure and future directions.
2. Conduct in-depth discussions with key government officials and non-governmental organizations (e.g. Chamber of Commerce, Women's Association, etc.) that serve to develop, influence, enact and execute the government's industrial policies that would include an identification of constraints and opportunities to an improved entrepreneurial environment.
3. Conduct discussions with the private sector through representatives of the Bhutan Chamber of Commerce on private sector needs, problems and opportunities within the entrepreneurial framework of the country.
4. Encourage and facilitate a dialogue or a forum for discussion between concerned government agencies, NGOs and the private sector to ensure improved and consistent understanding of recommended strategies for cottage, small ad medium scale industries.

5. The expert will be expected to prepare a final report, setting out the findings of the mission and recommendations to the Government on further action which should be taken to encourage the development of a strong and vigorous Cottage, SME sector. A draft report should be prepared and presented to UNDP/UNIDO and GOB officials prior to leaving duty station.

**QUALIFICATIONS:**

Consultant must have extensive experience working in, or providing advice to, governmental and private sector institutions concerned with promotion and/or regulation of business, especially small and medium scale business. An understanding of the effects of regulations, taxation, procedures, and incentives on business formation, operation, and expansion is required.

A Bachelor degree is required, and an advanced degree (preferably a Masters degree in Business Administration, Public Administration, Industrial Economics or related field) would be desirable.

Fluency in English required.

**PARTIAL LIST OF ORGANIZATIONS AND INDIVIDUALS CONTACTED**

- o **Ministry of Trade and Industry**
  - . Lyonpo Om Pradhan, Minister of Trade and Industry
  - . Sangay Khandu, Director, Dept of Trade and Industry
  - . Bap Kuenga, Joint Director, BOIC
  - . Pema Rinzing, EDTC
  - . D N S Dhakal, Department of Geology and Mines
- o **Ministry of Finance**
  - . Dasho Yeshe Zimba, Joint Secretary
- o **Ministry of Agriculture and Forests**
  - . Sangay Wangchuck, National Project Coordinator
- o **Royal Civil Service Commission**
  - . G M Pillai, HRD Project Coordinator
  - . Shyam Nigal, Manpower Planning Advisor
- o **Bank of Bhutan**
  - . Tshering Dorji, Executive Director
  - . G P Sharma, General Manager (Credit Department)
- o **Bhutan Development Finance Corporation**
  - . Pema Tenzin, Managing Director
  - . Tenzin Thinley, Industrial Credit Officer
  - . Sheka Tejan Lamin, UNV Accountant
  - . Tandin Dukpa, EDTC
  - . Sonam Perjore, EDTC
- o **Bhutan Chamber of Commerce and Industry**
  - . Thinley Penjore, General Secretary
  - . Lt Tenzing Dhendup, Vice President
  - . Game Tshering, EDTC
- o **Royal Insurance Corporation of Bhutan**
  - . Sonam Dorji, Asst General Manager
- o **Handicrafts Development Corporation Ltd.  
Handicrafts Emporium**

Tshering Yonten, Managing Director

- o National Women's Association of Bhutan
  - . Ms Thinley Lam, EDTC
  - . Ms Thinley Dorji, Member
  - . Ms Luise Dorjee, Executive Committee Member
  
- o United Nations Agencies
  - . Terence D Jones, UNDP Resident Representative
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  - . W. E. Jonsay, UNDP/IFAD
  
- o Asian Development Bank
  - . Tomasito V Alcantara, PDCP Consultant
  - . Marilyn G Ardiente, PDCP/EDP Manager
  
- o DANIDA
  - . Kens Peter Nielsen, Furniture Industry Expert
  
- o FACTORIES VISITED
  - . Gedu Wood Industries (plywood, veneers, joinery)
  - . Rabten Wood Industries (mop handles, etc)
  - . Druk Carpets (hand-woven carpets)
  - . Karma Steel Fabrication (office furniture)
  - . Karma Feeds (animal feeds)
  - . Yarkey Tea Bowls (Bhutanese tea)
  
- o POTENTIAL ENTREPRENEURS
  - . Druk Incense Manufacturing  
Mrs Dikkey Namgyal Dorji
  
  - . Tawgay Poultry Farm  
Tawgay Dukpa
  
  - . Druk Sugar Mill  
Tshering Dorji Dhendup
  
  - . Rinchen Chopstick Manufacturing  
Mrs Sangay Sam

- . Bhutan Oxygen and Acetylene Gas  
Geden Dorji
- . Metal Fabrication and Joinery Works  
Chundu Tshering
- . Druk Embroideries  
Ms Karma Wangmo
- . Druk Offset Printing  
Dago Tshering
- . L R Noodles Manufacturing  
Sherub Cyeltsin
- . Ngasum Shoes and Leather Goods  
Ms Rinzzy Chhoden
- . Bhutan Hand Paper  
Rinzin Ongdra Wangchuk
- . Kencho General Engineering Works  
Nacphey Kencho
- . Ugay Watch and Electrical Service Centre  
Ugay Dukpa
- . National Offset Printer  
Namgay Wangdi
- . Karma Lights (matches)  
Karma Gyaltsen
- . Ugyen Motor Service  
Ugyen Puntsho
- . Piggery Farming  
Naiten Wangchuk
- . Recycling Paper  
Lotey Tshering



**PROPOSED FUTURE DIRECTIONS OF THE PROJECT  
Bhutan Entrepreneurship Development Programme  
(DP/BHU/88/001)**

The project has started very well with the completion the First Comprehensive Entrepreneurship Course on 31 May 1991. Eighteen participants completed the course with their own solid business plans which were reviewed by a "bankers panel". At least 12 of the proposed industries appear to be feasible and bankable. The remaining six are also good projects, but would require some re-packaging of the proposals including a second look at the choice of technology and developing the skills of the proponents (or at least a thorough familiarity by them) of the type of business.

Moreover, the project enjoys the support of RGOB and the cooperating institutions at the highest possible level. There are great expectations in the results of the project and it is very critical that these expectations are achieved.

The task for the remaining two years of the project would be:

1. Ensure that a majority of the 18 proposed businesses are implemented within the next few months. Intensive monitoring and assistance should be provided.
2. The next course should be postponed to January or February 1992. This will give more time for preparation, enable EDTCs to concentrate in providing assistance to the 18 proposed businesses and perhaps more importantly upgrade the capability and extension/ consultancy skills of the EDTCs through further training and the proposed study tour to other countries.
3. The EDTCs do not yet appear to have sufficient skills and confidence to be able to fully assist on their own new and existing entrepreneurs. An intensive mini-MBA/industrial extension training course of about five weeks, followed by a study tour of about four weeks in the Philippines and Thailand (and possibly Malaysia or Indonesia) is proposed. Details are given in the attachment. This should be implemented prior to the next comprehensive entrepreneurship training course, ideally from September to December 1991 (for both the EDTC training and study tour).
4. Continue implementing the three remaining comprehensive entrepreneurship training courses as per project plan. The possibility of running a course exclusively for women (spouses of civil servants, etc) should be explored. The curriculum should be constantly reviewed and modified as necessary. There should be some sessions with "successful" entrepreneurs.

5. There is a need to increase the number of fully qualified EDTCs to possibly 8 or 10, also providing for any attrition. Assistance should be provided not only to those participating in the training courses, but also for others who are setting up new industries.
6. The capability to provide technical information services and assist entrepreneurs in technology choice should be developed, either through an expansion of the current project or by upgrading the capability of the Information Unit at BOIC. This capability is not readily available in Bhutan, especially in CSMIs.
7. A more formal linkage with relevant cooperating institutions should be developed – i.e. Bank of Bhutan, Bhutan Development Finance Corporation, Bhutan Chamber of Commerce and Industry, National Women's Association of Bhutan, etc. These institutions may also be able to provide more tangible contributions to the project.
8. Even this early, a Phase II of the project should be planned to ensure continuity. Potential activities for a second phase may include technical information services, industrial extension and consultancy services, technology transfer including mastercraftsmen training, etc. In addition to UNDP/UNIDO, other donors may be willing to provide support (IDRC, JICA, GTZ, WB, ADB, etc.).
9. The BOIC should perhaps be moving towards becoming a "one-stop shop" of services for CSMI. It could perhaps be re-named into the Bhutan Business Assistance and Advisory (BBAA) Centre. Charging of nominal fees should be considered, depending on the ability-to-pay of the assisted enterprises.
10. Continue looking into the problems, constraints and opportunities of CSMI entrepreneurs with a view of providing further inputs to government policies and incentives. Policy formulation is a continuing process as conditions in the country change and industrial development evolves. It could be built-in as a session of the training courses, as well as through periodic dialogues with members of the BCCI and NWAB. Attendance to the regular meetings of these associations, in an observer capacity, may be requested. This early, there is no question that the UNIDO-assisted project is fulfilling one of the major needs of the country – that of developing the capability for entrepreneurial promotion and development. The project should be evaluated on the quality of its outputs, rather than the quantity.

## PROPOSED MINI-MBA/INDUSTRIAL EXTENSION COURSE

### Introduction

Currently, no industrial extension or consultancy service for CSMI exists in Bhutan. The five Entrepreneurship Development Trainer Consultants (EDTCs) trained in the UNIDO project now form the core group of an industrial extension service. In addition, staff of BDFC, BOB, MTI/DTI, BCCI and possibly some well selected existing and potential entrepreneurs would benefit from the proposed course. These entrepreneurs can provide inputs to future courses and be invited as resource persons.

The objective of the training is to expand the capability of EDTCs and the staff of other institutions to assist existing and prospective entrepreneurs in analyzing and solving their internal and external problems.

More than 100 industrial extension courses have been conducted all over Asia during the last 15 years. The profession has grown in quality and numbers from virtually zero in 1976 to over 5,000 officers today. The duration of such training courses are from four weeks to as long as six months. In some cases, the training has been divided into a basic course and an advanced course. Considering the background and demonstrated capability of the EDTCs, a course of five weeks (4-6 hours a day) would be sufficient.

### Course Outline

The proposed course will consist of six modules. The following topics should be considered as just an initial draft and could be further modified.

#### I. An Overview of CSMI in Bhutan

- . The environment of CSMI, prospects and problems
- . Government policies and incentives
- . Starting and setting up a business in Bhutan

#### II. The Total Approach to CSMI Management

- . The process of management
- . Do-it-yourself marketing research and sales forecasting
- . Pricing techniques
- . Organization and human resource management
- . Planning, analysis and control of production systems
- . Financial evaluation and appraisal
- . Business policy
- . The business plan

### III. Cost Reduction and Profit Maximization Tools

- . Costing and cost control techniques
- . Materials management and inventory control
- . Value engineering
- . Methods engineering
- . Work sampling and production study
- . Fundamentals of quality control
- . Environmental safety and hygiene

### IV. Technological Development

- . Technology choice and appropriate technology
- . Diagnostic techniques
- . Technology audit
- . Low cost automation technology (an introduction)
- . Technology information
- . Technical report writing

### V. Practicum (throughout the course, including report writing)

Depending on administrative convenience and the cooperation of existing enterprises, the following options may be taken:

- . The participants will be divided into five groups, each headed by an EDTC, to study an existing enterprise, diagnose its problems and recommend solutions.
- . Each participant will be assigned an existing enterprise to study (same as above).
- . Alternatively, the whole class can be given exercises on such techniques as market survey and other tools and/or be taken on field trips to observe existing enterprises.

### VI. Final Seminar

- . Presentation of reports (owners of enterprises will be invited to be present and give comments).
- . Sharing of experiences
- . Extension practices, communication skills
- . Selected topics

#### Reference materials:

- . Industrial Extension Manual for Small and Medium Industries in Developing Countries, Vols. One and Two, Chico etc., published by Technonet Asia, Singapore.
- . Other relevant materials will be selected.

**Resource persons-consultants:**

- . **Chief trainer for 8 weeks**
  - 1 week for course development and compilation of materials**
  - 1 week briefing/pre-course orientation in Bhutan**
  - 5 weeks course supervision/lecturing**
  - 1 week post-course report writing/debriefing**
- . **Co-trainer for 4-6 weeks**
- . **CTA and other resource persons from Bhutan on selected topics**

**PROPOSED STUDY TOUR TO THE PHILIPPINES AND THAILAND**  
(Possibly also Malaysia, with sidetrip to Singapore)

**Objective:** To observe institutions providing support services to CSMI, financial institutions with special schemes for CSMI, and selected industries relevant to Bhutan.

**Suggested institutions:**

**1. Philippines (3 weeks)**

- . UP Institute for Small-Scale Industries (host)  
Demonstration of low-cost automation, etc.
- . Technology and Resource Center
- . Development Bank of the Philippines
- . Small Business Advisory Centers
- . International Rice Research Institute
- . Forest Products Research and Development Commission
- . Center for Rural Technology Development
- . Technology Application and Promotion Institute
- . Center for International Trade, Expositions and Missions
- . Wood-based industries
- . Handicraft industries
- . Agro-based industries
- . Mineral-based industries
- . Possibly an offset printing and other industries relevant to Bhutan

**2. Thailand (1 week)**

- . Industrial Development Centre, Department of Industrial Promotion (host)
- . Industrial Services Centre
- . Productivity Development Centre
- . Agricultural Research Organization
- . Furniture Industry Development Centre
- . Engineering Industries Development Centre
- . Selected industries

**3. Malaysia (1 week)**

- . Forest Research Institute of Malaysia
- . Standards and Industrial Research Institute of Malaysia
- . MARA
- . Technology Park
- . Agricultural university
- . Selected industries

#### 4. Singapore (2-3 days)

- . Singapore Science Park
- . Singapore Institute for Standards and Industrial Research
- . Technonet Asia

#### Contact Persons:

- . UP ISSI Philippines - Prof Melito S Salazar Jr  
Director  
Sonia T Aquino  
Deputy Director

- . Dept of Industrial Promotion,  
Ministry of Industry - Manu Leopairote  
Deputy Director-General

The assistance and co-funding support (airfares) of the UN ESCAP, ECDC/TCDC Section may also be sought.

- . Dr Moeljono Partosoedarso  
Technical Cooperation Division  
UN ESCAP  
Rajdamnern Avenue  
Bangkok 10200, Thailand

Other organizations and contact persons may be provided later, if necessary.

## INDUSTRIAL LICENCE APPLICATION FORM

## 1. APPLICANT'S ADDRESS

- a) Name : \_\_\_\_\_
- b) Age : \_\_\_\_\_
- c) Citizenship Card No. : \_\_\_\_\_
- d) Village : \_\_\_\_\_
- e) Dungkhag : \_\_\_\_\_
- f) Dzongkhag : \_\_\_\_\_

2. Type of industry proposed : \_\_\_\_\_

\_\_\_\_\_Dungkhag.

3. Location proposed under \_\_\_\_\_

\_\_\_\_\_Dzongkhag.

## 4. PROPOSED CAPITAL INVESTMENT

- a) Initial fixed investment : Nu. \_\_\_\_\_
- b) Working capital : Nu. \_\_\_\_\_

## 5. MODE OF FUNDING

- a) Own : Nu. \_\_\_\_\_
- b) Borrowed : Nu. \_\_\_\_\_

6. Name of proposed industry : \_\_\_\_\_

7. Who will manage the industry: \_\_\_\_\_

## 8. MANPOWER REQUIREMENT

- a) Technical : Nationals \_\_\_\_\_ Non-nationals \_\_\_\_\_
- b) Non-technical : Nationals \_\_\_\_\_ Non-nationals \_\_\_\_\_



9. RAW MATERIALS REQUIRED	MAIN PRODUCTS/OUTPUT
1.	1.
2.	2.
3.	3.
4.	4.

10. Project report/profile is attached : Yes\_\_\_\_\_ No\_\_\_\_\_

If 'Yes' how many copies : \_\_\_\_\_

11. Whether the applicant has any other licensed business? If so:

a) Location of shop/industry : \_\_\_\_\_

b) Type of shop/industry : \_\_\_\_\_

c) No. of non-national employees : \_\_\_\_\_

I hereby declare that neither myself nor my spouse is in the Government service. (This declaration may be modified if the recommendations in the report is accepted.)

I also understand that granting of the licence does not in any way constitute an obligation by the Licence Issuing Authority or any other Government Agency to provide land/space to me to carry out my business.

In the event any aspect of the above declaration is found to be false, I may be strictly penalized by cancelling the licence and making me ineligible for fresh licence thereafter.

Signature of the applicant  
(REVENUE STAMP Nu. 1/-)

Seal and signature of the  
recommending authority of  
the concerned Dzongkhag

Comments of the Regional  
Trade and Industry Officer

**PROJECT PROFILE FORMAT**

Name of Business: \_\_\_\_\_

Type of Business: \_\_\_\_\_

Name of Principal(s):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Mailing Address : \_\_\_\_\_

Location of the  
Project : \_\_\_\_\_

**INITIAL INVESTMENT**

a) Land and Building : \_\_\_\_\_

b) Fixed Assets : \_\_\_\_\_

c) Working Capital : \_\_\_\_\_

Total Investment : \_\_\_\_\_

**MODE OF FINANCING**

a) Owner's Equity : \_\_\_\_\_

b) Bank Borrowing : \_\_\_\_\_

Convertible Currency  
Required : \_\_\_\_\_

**ITEMS TO BE PURCHASED WITH LOAN**

**COST**

1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____

**DESCRIPTION OF PRODUCTS/SERVICES**

**Name of Products/Services**

**Cost**

**Selling Price**

1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____

**SOURCES OF RAW MATERIALS**

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**MARKET/CUSTOMERS**

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**COMPETITION**

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## ADVANTAGES OVER COMPETITION

Price: \_\_\_\_\_

\_\_\_\_\_

Quality: \_\_\_\_\_

\_\_\_\_\_

Services: \_\_\_\_\_

\_\_\_\_\_

Location: \_\_\_\_\_

\_\_\_\_\_

Methods of Selling: \_\_\_\_\_

\_\_\_\_\_

Other Important Things: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## COST AND PRICING

Selling Price : Nu. \_\_\_\_\_

Production Cost

Raw Materials : Nu. \_\_\_\_\_

Labour : Nu. \_\_\_\_\_

Transportation : Nu. \_\_\_\_\_

Overhead/Other  
Costs : Nu. \_\_\_\_\_

Total Cost : Nu. \_\_\_\_\_

PROFIT : Nu. \_\_\_\_\_

**KEY PERSONNEL AND RESPONSIBILITIES**

Name of Person	Position	Responsibilities
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**SALES EXPECTED (FIRST YEAR)**

Product	No. of Units	Selling Price
_____	_____	Nu. _____
_____	_____	Nu. _____
_____	_____	Nu. _____
_____	_____	Nu. _____

**PROFIT AND LOSS STATEMENT (FIRST YEAR)**

TOTAL SALES EXPECTED : Nu. \_\_\_\_\_  
TOTAL EXPENSES EXPECTED : Nu. \_\_\_\_\_  
TOTAL PROFIT EXPECTED : Nu. \_\_\_\_\_

**EXPLANATION OF PROFIT AND LOSS STATEMENT**

We believe our sales expected are accurate based on the following facts:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

We believe our expenses expected are accurate based on the following facts:

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**APPENDIX**

List any other information you feel would be useful for DTI and the financing institution:

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**SECURITIES OFFERED FOR LOAN**

<b>Name of Asset</b>	<b>Estimated Value</b>
_____	Nu. _____
_____	Nu. _____
_____	Nu. _____
_____	Nu. _____

Signature of Applicant(s): \_\_\_\_\_

Date : \_\_\_\_\_

Name of Officer Receiving Application:

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Date : \_\_\_\_\_

The International Development Research Centre has assisted in developing various information centres around the world and may be approached for possible assistance.

Inputs required would be consultant services, hardwares and softwares needed, subscriptions, staff training locally and abroad, and payment of membership fees to regional organizations.

#### **4. Mastercraftsmen Programme**

The handicraft and artisan industries in Bhutan lag very much behind compared to countries in Southeast Asia, especially Thailand, Indonesia and the Philippines. This proposed project would be of potential benefit to women in rural areas. The project envisions bringing into Bhutan "mastercraftsmen" from Southeast Asia, together with their tools and small equipment which they will leave behind, to train people in the villages in specific crafts. These mastercraftsmen may stay for a period of 4-12 months, depending on the type of craft and the number of villagers to be trained. Project inputs will include services of mastercraftsmen, tools and equipment, raw materials needed, vehicles, and training costs.

#### **5. Privatization of Industries**

This involves consultant services, possibly from UNIDO, on the privatization of enterprises and activities currently still government-owned. A detailed phased programme of privatizing these enterprises and activities will be recommended after a study of the existing conditions in each of them.

#### **6. Setting up of an Institute of Standards**

A similar project is already proposed in the draft Seventh Five Year Plan. However, since setting up such an institute would be a long and tedious process, it is proposed that its programmes be phased so that exports standards which are relevant to Bhutanese industries be given priority.

**BRIEF CONCEPTS OF POTENTIAL PROJECTS****1. Industrial Extension and Diagnostic Services**

This will complement the Entrepreneurship Development Programme which addresses the creation of new entrepreneurs. In turn, the Industrial Extension and Diagnostic Services will focus its attention to existing "sick" enterprises, diagnose their problems and provide solutions.

A cadre of well-trained officers, at least 10, coming from DTI/BOIC, BDFC, BOB, BCCI, and possibly NWAB, will be developed to provide these services to industry. Project cost components will include: training of at least 10 officers, both locally and abroad; consultant services for setting up the service, provide classroom and on-the-job training, prepare manuals, etc.; office equipment and vehicles.

**2. Re-structuring of BCCI and BOIC**

This will involve short-term consultant services of about 4-6 person months to determine the needs of industry, especially CSMI, and re-structure the activities of both BCCI and BOIC so that they could provide complementary services that are more responsive to the needs of industry. If some of the proposals made in the report are accepted – particularly the setting up of purchasing cooperatives, the Skills Development Fund, a labour recruitment agency, etc. – more than one consultant may be required.

**3. Upgrading of Technical Information Services**

The current services of the Information Unit of BOIC is not fully responsive to the needs of industry for information on technology options, product trends, and market data. Arrangements should be made to "link" these services with international sources of information and data bases and "centres of excellence" in different technologies. Subscriptions to regular trade and technological journals should also be provided.

To be effective, the Information Unit should provide the following services:

1. Current awareness service (CAS) on new information available;
2. Selective dissemination of information (SDI) service on information relevant to specific industry sub-sectors; and
3. Technical enquiry service (TES) in response to specific questions by entrepreneurs.