UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

16863

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Distr.
LIMITED
PPD.79
19 May 1988
Original: ENGLISH

INDUSTRIAL DEVELOPMENT REVIEW SERIES

NEPAL

Industrialization, international linkages and basic needs

Prepared by the
Regional and Country Studies Branch

V.88-24891

INDUSTRIAL DEVELOPMENT REVIEW SERIES

NEPAL

Industrialization, international linkages and basic needs

PREFACE

This Industrial Development Review is one of a series of country studies prepared by the Regional and Country Studies Branch of the United Nations Industrial Development Organization (UNIDO).

The Reviews present brief factual and analytical surveys of industrial development in developing countries. Such industry-specific Reviews are in demand for a variety of purposes: to provide an information service to relevant sections within UNIDO and other international organizations and aid agencies concerned with technical assistance to industry; to be used as a reference source for financial organizations, public and private industrial enterprises, and economic research institutes in developed and developing countries; and to serve as a handy, useful information source for policy-makers in developing countries. The Reviews do not represent in-depth industrial surveys. With an exclusive focus on industry they present information and analyses on the broad spectrum of the industrial development process in the countries concerned in a condensed form.

The Reviews draw primarily on information and material available at UNIDO headquarters from national and international sources as well as data contained in the UNIDO data base. Generally, specific field surveys are not undertaken. The presentation of up-to-date information on sub-sectoral manufacturing trends is usually constrained by incomplete national data on the industrial sector. To supplement efforts under way in UNIDO to improve the data base and to monitor industrial progress and changes on a regular basis, it is hoped that the relevant national authorities and institutions and other readers will provide comments and further information. Such response will greatly assist in updating the Reviews.

The present Review was prepared on the basis of information available at UNIDO headquarters by early-1988. It is divided into two rather distinct parts. Chapters 1 and 2 are analytical in character, giving first a brief overview of the country's economy and its manufacturing sector and then a more detailed review of the structure and development of its manufacturing industries, with a focus on the task of meeting the basic needs. Chapter 3 reviews policy measures relevant to industrial development and presents information on the more important governmental and other institutions involved in industrial development. Chapter 4 contains information on Nepal's resource endowments for industrial development and identifies crucial areas requiring technical assistance.

It should be noted that the Reviews are not official statements of intention or policy by governments nor do the views and comments contained therein necessarily reflect those of the respective governments.

CONTENTS

Page

ANNEXES:

LIST OF TABLES

LIST OF STATISTICAL ANNEX TABLES

EXPLANATORY NOTES

Regional classifications, industrial classifications, trade classifications, and symbols used in the statistical tables of this report, unless otherwise indicated, follow those adopted in the United Nations Statistical Yearbook.

Dates divided by a slash (1986/87) indicate a crop year or a financial year. Dates divided by a hyphen (1986-1987) indicate the full period, including the beginning and end years.

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

Totals may not add precisely due to roundings.

In Tables:

Three dots (...) indicate that data are not available or not separately reported;
Two dashes (--) indicate that the amount is nil or negligible;
A hyphen (-) indicate that the item is not applicable.

Basic indicators and graphical illustrations of manufacturing trends contained in this Review are based on data sourced from the UNIDO data base, international organizations, commercial and national sources.

The following abbreviations are used in this document:

ADB	Asian Development Bank
ADBN	Agricultural Development Bank of Nepal
CSI	Cottage and small industry
DRC	Domestic resource cost
EEC	European Economic Community
EPR	Effective protection rate
EPZ	Export Processing Zone
GDP	Gross domestic product
GNP	Gross national product
IFAD	International Fund for Agricultural Development
IPB	Industrial Promotion Board
ISC	Industrial Services Centre
ISIC	International Standard Industrial Classification
MVA	Manufacturing value added
NIDC	Nepal Industrial Development Corporation
NPC	National Planning Commisssion
NRs	Nepalese Rupee
OPEC	Organization of Petroleum Exporting Countries
PME	Public Manufacturing Enterprise
SAARC	South Asian Association for Regional Co-operation
SITC	Standard International Trade Classification

BASIC INDICATORS 1

The economy

GNP (1986/87)	:	NRs 56,013 million[a/]
Population (1988)	:	17,994 thousand[b/]
Annual average growth rate	:	2.66 (1971-1987)
Economically active population (1986)	:	7.76 million
GDP *per capita* (1986/87)	:	NRs 3,270 ($156)

Annual real growth rate of GDP at 1974/75 prices (per cent) :

1974/75-1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87[a/]
3.3	3.8	-3.0	7.8	3.0	4.0	2.3

GDP by sector of origin (percentage) :

	1974/75	1984/85[a/]
Agriculture[c/]	71.8	61.7
Industry	8.0	11.9
Manufacturing	4.2	4.6
Services	20.2	26.4

Annual average rate of inflation[d/] :

1974/75-1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
6.5	10.4	14.2	6.2	4.1	15.9

Exchange rate (NRs equivalents to $1) :

1980	1981	1982	1983	1984	1985	1986	1987	1988(Feb)
12.0	13.2	14.3	15.2	18.0	20.7	22.0	21.6	22.0

a/ Preliminary estimate.
b/ Estimate.
c/ Including fisheries and forestry.
d/ Urban consumers' price index.

BASIC INDICATORS 2

Resources and transport infrastructure

Principal cash crops ('000 tons, 1986/87)[a]	: Sugarcane (586), oil seeds (79), tobacco (5), jute (23), potato (391)
Food ('000 tons, 1985/86)	: Paddy (2,804), wheat (598), maize (874), millet (138), barley (23)
Forest (total forest area) (per cent)	: 6.3 million ha hard wood forest (53.5), mixed forest (20.7), conifer forest (14.9), shrub forest (10.9)
Minerals ('000 tons, 1985/86)	: Agri-lime (7.0), clay (6.7), magnesite (63.2), talc (8.8), lime stone (167.8)
Transport (1986/87)	
Roads	: 6,134 km of which 2,761 km paved
Railways	: 52 km
Ropeways	: 42 km

a/ Preliminary.

BASIC INDICATORS 3

Foreign trade and balance of payments

Exports (1985/86)		
Total value (F.O.B.)	:	NRs 3,078 million
Main goods	:	Food and live animals, crude materials, and inedibles, finished products
Main destinations (1986)[a/] (per cent)	:	India (29.0), the United States (23.7), Sri Lanka (15.5), United Kingdom (6.4)
Imports (1985/86)		
Total value (C.I.F.)	:	NRs 9,341 million
Main goods	:	Manufactured materials, machinery and transport equipment, chemical drugs, mineral fuels and lubricants, food and live animals
Main origins (1986)[a/] (per cent)	:	India (30.3), Japan (23.0), P.R.China (7.3), Singapore (6.1), Republic of Korea (5.5)
Balance of payments (current account deficit, NRs million)	:	1980/81: 295.9; 1981/82: 392.3; 1982/83: 1671.4; 1983/84: 1343.4; 1985/86: 1373.9; 1986/87[b/]: 1934.4
Foreign exchange holdings (April 1987)	:	NRs 2,235.3 million
Outstanding foreign debt (mid-1987)	:	$600 million
Percentage of GDP (mid-1987)	:	25 per cent
Debt service (mid-1987) Percentage of export earnings	:	6.7 per cent

a/ Based on estimate figures.
b/ First nine months provisional.

BASIC INDICATORS 4

The manufacturing sector

Manufacturing value added (1984/85)[a]	:	NRs 1,792 million			
MVA *per capita* (1984/85)	:	NRs 107.4			
Employment in manufacturing (1981/82)	:	81,050			
as percentage of total labour force	:	1.2 per cent			
Structure of MVA	:		1972/73	1977/78	1981/82
		Consumer goods	86.5	87.6	92.0
		Intermediate goods	11.2	9.0	5.5
		Capital goods	2.3	3.4	2.5
Annual real growth rate of industrial output at 1974/75 prices (per cent)	:	1974/75-1980/81	1981/82	1982/83	1983/84
		6.2	11.5	19.7	8.7
		1984/85	1985/86	1986/87[a]	
		-1.5	18.7	27.6	
Trade in manufacture (1985/86)					
Total value - exports	:	NRs 1,829 million			
- imports	:	NRs 6,803 million			
Share of manufacture					
- in total exports	:	59.4 per cent			
- in total imports	:	72.8 per cent			

a/ Preliminary estimate.

BASIC INDICATORS 5

Inter-country comparison of selected indicators

	Unit	Nepal	Bangladesh	Bhutan	Burma	India	Sri Lanka
I. DEMOGRAPHIC INDICATORS a/							
Area	'000 sq.km.	141	144	47	677	3,288	66
Population (mid-1985)	millions	16.5	100.7	1.2	36.9	765.1	15.8
Population growth (1980-85) (average annual growth rate)	per cent	2.4	2.6	2.2	2.0	2.2	1.4
Primary school enrollment as percentage of age groups (1984)	per cent male/female	104/47	67/55	32/17	87/81 b/	105/75 b/	105/101
II. ECONOMIC INDICATORS a/							
GDP (1985)	$ million	2,340	16,110	180	7,070	175,710	5,500
GDP growth rate (1980-85) (average annual growth rate)	per cent	3.4	3.6	---	5.5	5.2	5.1
GNP per capita (mid-1985)	$	160	150	160	190	270	380
Agriculture (1985)	per cent of GDP	62	50	50	48	31	27
Industry (1985)	per cent of GDP	12	14	18	13	27	26
Manufacturing (1985)	per cent of GDP	5	8	4	10	17	15
Services (1985)	per cent of GDP	26	36	32	39	41	46
Gross domestic investment (1985)	per cent of GDP	21	13	---	17	25	25
Merchandise trade							
Exports (1985)	$ million	161	999	---	303	10,260	1,333
Imports (1985)	$ million	4,59	2,772	---	283	14,608	1,[illegible]32
III. Industrial indicators							
MVA (1984) (at 1980 prices)	$ million	---	1,381	---	692	30,035	834
MVA per capita (1984)	$	---	14	---	19	40	52
Share of manufactured exports c/ in total exports (1985)	per cent	59.0	65.8	---	2.9 d/	58.6 f/	26.6 g/
Share of manufactured imports c/ in total imports (1985)	per cent	64.7	44.3	---	76.8 e/	31.4 f/	52.8 g/

a/ Based on the World Bank data presented in the World Development Report 1987. It shoud be noted that the UNIDO data base, United Nations statistics, national statistics and World Bank data base do not always tally precisely and, therefore, discrepancies may be found between Baisc Indicators 5, and the text and Tables.

b/ Years other than 1984.

c/ SITC 5 to 8 less (67 and 68).

d/ 1976.

e/ 1977.

f/ 1981.

g/ 1984.

SUMMARY

The economy of Nepal rebounded well in 1987/88, with around 6 per cent increase in GNP and about 12 per cent increase in food grain production against the sluggish growth trends which had prevailed in the preceding few years. The pace of economic growth in Nepal had remained subdued in 1986/87, as growth of GDP in real terms faltered from 4 per cent in 1985/86 to 2.3 per cent. The sluggish growth trend was explained largely by the vulnerability of agricultural production, the mainstay of the economy, to periodic droughts. In consequence of unfavourable weather conditions food production fell by 7.8 per cent in 1986/87.

Despite Nepal's efforts to diversify its economy, progress has been slow with growth of GDP barely keeping pace with the growth of population, currently estimated at 2.66 per cent a year. With a per capita income of about $156 in 1986/87 Nepal is classified as one of the least developed economies in Asia. This poor economic performance has stemmed largely from the country's landlocked, difficult terrain, limited natural resources and inadequate resource mobilization. In the face of rapidly growing spending, the government became increasingly dependent on external assistance.

Total guaranteed external public debt in mid-1987 stood at around $600 million, representing 25 per cent of GDP. The debt service ratio of about 6.7 per cent reflects the degree of concessionality in the foreign assistance package. It is estimated that the average rate of interest on the outstanding debt of Nepal is only 1.1 per cent.

The World Bank has established a $150 million loan facility for the period 1985-1990. Within the framework of the World Bank-induced Structural Adjustment Programme the government endeavours to raise domestic resources, reduce budgetary deficits and control credit expansion. The envisaged target of an average annual growth rate of 4.5 per cent during the Seventh Plan (1985-1990) is based on the assumption that the country's agricultural sector would grow at 3.5 per cent annually and the non-agricultural sector would record an average annual growth rate of 5.7 per cent during the Plan period.

In terms of growth the manufacturing sector in Nepal constitutes the most dynamic sector of the Nepalese economy. Although it still accounts for only about 5 per cent of GDP it has grown at a real average rate of about 10 per cent during 1981-1987. The manufacturing sector is characterized by a high degree of dualism - with most enterprise being of a cottage industry type, employing little capital and getting weak infrastructural support. The larger manufacturing establishments are concentrated in a relatively few manufacturing branches - food processing, textiles and non-metallic minerals. There is almost a complete absence of capital goods production and the metal processing industry is also relatively underdeveloped. Little structural change has taken place in the manufacturing sector during the last decade.

Productivity growth within the manufacturing sector has remained low. While the gross profit to value added ratio is exceptionally high by developing country standards, high material costs per unit of production have meant that surplus for reinvestment remains typically small. Bank and government loan financing have thus been important determinants of the level of investment growth. Improving enterprise efficiency depends crucially upon a corresponding improvement in the infrastructural facilities. The absence of an efficient transportation system remains perhaps the single most important constraint on the growth of Nepalese manufacturing.

Despite the fact that most branches are domestic demand oriented manufactures constitute a large proportion of total Nepalese exports. The export structure is not diversified, however - consisting of textiles, garments and a small range of manufactured products. The scope for export diversification is small and Nepalese exporters have not benefited from the relatively unrestricted trade policy that India has adopted vis-à-vis Nepal. Nepal usually has a very large deficit on the balance of manufacturing trade. There exists a very high level of import dependence - industrial policies have not yet sufficiently exploited the scope for import substitution. Competitive import substitution can contribute towards the development of a better balance in the regional distribution of large- and medium-scale enterprise, but the crucial constraint in this respect, is once again the relatively weak infrastructural support for manufacturing enterprises outside the Eastern and Central regions.

Multilateral technical assistance can contribute significantly towards the industrial development of Nepal. There is need for the provision of assistance for the establishment of institutional mechanism for linking private and public management structures. This is crucial for the success of the government's privatization programmes. Few entrepreneurs are interested in simply taking over existing enterprises but there remains some scope for the negotiation of joint ventures and imaginative technical collaboration agreements. The State's capacity to utilize concessional funds, its ability to monitor the operation of industrial enterprises and to ensure compliance with its directives also requires strengthening. Particularly important in this connection is the development of an effective industrial data base.

Assistance also needs to be provided for skill upgrading particularly within the cottage and small-scale industry sector. Enhancement of administrative, accountancy and managerial skills here can have a significant positive impact on productivity. The development of an institutional framework for the promotion of ancillarization and subcontracting linkages between large and small manufacturing enterprise is also of considerable importance.

Nepal's development efforts are currently attuned to the government's endeavour to meet the basic needs of the people by the year 2000. The government also aims at achieving the pace of economic expansion needed to raise per capita income to average South Asian levels by the year 2000. With a view to achieving the above objectives, the New Industrial Policy announced in October 1987 is committed to create an atmosphere conducive to the rapid growth of the manufacturing sector. The government tends to rely on the progressive expansion of the private sector in order to translate its ambitious targets into reality.

1. THE ECONOMY OF NEPAL

1.1 Recent economic trends

The economy of Nepal rebounded well in 1987/88, with GNP and food grain production growing at around 6 per cent and 12 per cent respectively, compared with the sluggish growth trends which had prevailed in the preceding few years. With a 2.3 per cent increase in GDP in 1986/87, down from 4 per cent in 1985/86 in real terms, the pace of economic growth in Nepal had remained subdued. This sluggish growth trend had largely been due to a 7.8 per cent decline in food grain production in 1986/87 caused by unfavourable weather conditions. However, the growth in the industrial sector had been impressive even during these years. The growth rate of industrial production was estimated at 27.6 per cent in 1986/87; much higher than an 18.7 per cent increase achieved in the preceding fiscal year. The unprecedented rate of expansion of the industrial sector in recent years could not significantly contribute to the aggregate expansion of the economy because of the preponderance of the agricultural sector in Nepal. During 1987 there was a significant acceleration of inflationary pressure - the annual rate of inflation exceeded 20 per cent. This created a need for a corresponding depreciation of the Nepalese Rupee, the nominal external value of which fell by about 8 per cent.

The balance of payments situation continued to deteriorate during 1987. The trade deficit during 1985/86 was of the order of NRs 6,260 million (equivalent to about 10 per cent of GDP). Over the eight-month period from July 1986 to March 1987 exports fell by 2 per cent - due mainly to a ban on grain exports - and imports rose by over 13 per cent. The trade deficit was expected to expand significantly during 1987. Foreign reserves at end 1987 were equivalent to about four months import cover. The trade deficit with India increased by 17 per cent during 1987. The balance of payments was likely to show a small surplus of SDRs 7 million in 1987/88 due to increased worker remittances and foreign aid inflows.

Nepal has continued to borrow heavily from multilateral and bilateral concessional sources in recent years. Total guaranteed public debt in mid-1987 stood at slightly over $600 million - equivalent to 25 per cent of GDP. The debt service to export ratio has tripled between 1951 and 1986 - but is still equal to only 6.7 per cent in 1987/88 due to the heavily subsidized character of Nepalese borrowing. The average interest rate on foreign loans paid by Nepal is only 1.1 per cent. In order to accelerate foreign aid inflows the government announced early in 1987 a commitment to reducing the budgetary deficit by 50 per cent in the 1986-1991 period, achieving an annual GDP growth rate of 4.5 per cent and lowering annual population growth from 2.66 per cent to 1.2 per cent in that year. The World Bank has established a $150 million loan facility for the 1985-1990 period. The Nepal aid consortium substantially increased commitments in April 1987 - from $307 million for fiscal year 1986/87 to $570 million in fiscal year 1987/88. Seventy-five per cent of the 1987/88 commitment relates to the financing of development projects of particular interest to Nepal's success in meeting the basic needs of the people. During 1987 aid has also been obtained from the People's Republic of China for financing sugar and tyre production projects. The government endeavours to introduce several changes in fiscal, monetary and pricing policies within the framework of the World Bank-induced Structural Adjustment Programme, with a view to raising domestic resources, reducing budgetary deficits and controlling domestic credit expansion.

The budgetary deficit for 1987/88 is estimated at 35 per cent of government expenditure, compared with 41 per cent in 1986/87. Annex Table A-1 shows that whereas government revenue is expected to increase by 26 per cent during 1987/88 foreign receipts (loans and grants) are estimated to grow by 63.5 per cent and total expenditure is to increase by 33 per cent. The 1987/88 budget expects foreign grants and loans to provide for 43 per cent of total government expenditure and for 61 per cent of expenditure on development projects. Foreign borrowing is expected to account for about 75 per cent of the budgetary deficit - in 1984/85 this ratio was estimated at 51 per cent. In that year foreign grants and loans accounted for about 36 per cent of total and 53 per cent of development expenditure. Dependence on foreign funds as a means for financing the budgetary deficit has increased.

A rapid increase in foreign borrowing and commitments and disbursements is seen as essential for achieving the government's current endeavour to meet the basic needs of the people by the year 2000. The Seventh Plan (1985-1990) encourages an annual increase of 4.5 per cent in GDP . The envisaged target calls for a growth rate of 3.5 per cent in agriculture and 5.7 per cent in the non-agricultural sector annually. The government seeks to achieve the pace of economic expansion essential to achieve the objective of raising per capita income to average South Asian levels by the year 2000.

1.2 Economic structure

With a per capita income of about $156 in 1986/87 Nepal is classified as one of the least developed economies in Asia. Its economic problems are compounded by its geography - dominated by isolated mountain terrain, lacking direct access to the sea. Growth of real GDP has barely kept pace with the growth of population in the past 15 years. The country's population is estimated at 18 million in early 1988.

GNP per capita has grown at the rate of 0.1 per cent over the 1965-1985. Nepal is thus the slowest growing economy in the South Asian Association for Regional Co-operation (SAARC) region, with the possible exception of Bhutan.[1/] Per capita income is estimated to have grown at the rate of 1.7 per cent per annum during the Sixth Plan period (1980-1985), but the growth momentum has slackened since then and as noted earlier per capita income declined by 0.5 per cent during 1986/87.

An overview of the relative importance of agriculture and non-agricultural sectors is given in Table 1.1. The dominant position of the agricultural sector emerges clearly. The shares of agriculture and non-agriculture sectors as components of GDP in 1986/87 were 58.3 per cent and 40.7 per cent respectively at current market prices, and 61.6 per cent and 38.4 per cent respectively in real terms. Paddy production, which occupies a dominant position among food crops, fell by 15.4 per cent in 1986/87, and the area under cultivation also decreased by 4.2 per cent in the same year. With the exception of wheat, other crops were affected by the adverse impact of unfavourable weather conditions.

1/ Members of SAARC include Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. Time series estimates for GNP growth are not available for Bhutan.

Table 1.1: Distribution of GDP by major sectors in current and constant prices, 1974/75-1986/87
(NRs in million)

	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1934/85	1985/86a/	1986/87b/
Nominal GDP	16,571	17,394	17,280	19,732	22,215	23,351	27,707	30,988	33,761	38,184	41,738	50,124	56,013
Agriculture	11,150	11,611	10,506	11,752	13,522	13,683	15,679	17,903	19,282	22,317	24,641	29,895	33,210
Non-agriculture	5,021	5,783	6,774	7,980	8,693	9,668	11,628	13,085	14,479	15,867	17,097	20,229	22,803
Real GDP (1974/75 price)	16,571	17,300	17,822	18,607	19,048	18,606	20,158	20,920	20,297	21,873	22,520	23,432	23,962
Agriculture	11,550	11,615	11,141	11,141	11,480	10,933	12,066	12,616	12,478	13,668	13,990	14,608	14,752
Non-agriculture	5,021	5,685	6,681	7,466	7,568	7,673	8,092	8,304	7,819	8,205	8,530	8,824	9,210

Source: Central Bureau of Statistics.

a/ Revised preliminary estimate.
b/ Preliminary estimate.

Annex Table A-2 shows that the share of agriculture in GDP has declined in recent years, from 69 per cent in 1974/75 to 56.8 per cent in 1980/81 and 50.4 per cent in 1984/85. Stagnation occurred in the 1976/77-1979/80 and 1981/82-1984/85 periods, which was partly related to droughts: production declined further in 1986/87. In spite of the country's vast water resources, irrigated agriculture is still very uncommon.

Growth has been fastest in the finance and real estate sector. This sector does not account for a large share of GDP yet; in 1985, the last year for which detailed data were available, it stood at 7.3 per cent. Its growth is probably related to the conspicuous growth of the construction sector, which represented 6.5 per cent of GDP in 1984/85. Much of the expansion in the two sectors is due to investment in facilities for the tourist industry. Growth in the "other" services sector reflects the growth of government services during the past decade. The manufacturing sector has not significantly increased its share: in 1974/75 it provided 4.2 per cent of GDP and in 1984/85 its share stood at 4.4 per cent. Most manufacturing is of a small-scale or cottage nature: of the 4,900 industrial enterprises enumerated in the 1981/82 Census of Manufacturing Industry (many cottage industries were not covered by the Census), less than 300 enterprises had fixed assets worth more than NRs 500,000.

Despite the relatively weak growth performance, both domestic savings and investment rates have increased appreciably over the past two decades. The gross domestic saving to GDP ratio was less than 10 per cent in 1965, in 1984/85 it equalled 12 per cent. The domestic investment to GDP ratio increased from 6 per cent to 21 per cent over the same period. Nepal has a domestic savings rate lower than that of India, but more than twice as high as that of Pakistan and three times that of Bangladesh. Its investment rate is higher than that of Bangladesh and Pakistan and lower than that of India and Sri Lanka. Both domestic savings and investment ratios are expected to decline during the Seventh Plan: the former is expected to be about 8 per cent and the latter 17 per cent of 1990.[1/] Increased emphasis is thus being placed on greater utilization of "foreign savings" - remittance, aid and flows - and on the achievement of a significant lowering of the incremental capital output ratio during the second half of the 1980s.

Nepal's export/GNP ratio averaged 5 per cent during 1980-1985 - in 1985 the value of this ratio was lower for Nepal than for any other SARC member. The main exports are carpets, leather and jute products; a wide range of food products (generally of a low degree of processing) is also exported in varying quantities. Imports constitute a much larger share of GDP: from 15.29 per cent in 1979/80 they rose to 17.73 per cent in 1984/85. The major categories of goods imported are machinery and vehicles, fuel, textiles, iron and steel. As exports are small and stagnating, the trade deficit has grown strongly in recent years.

Although the almost complete trade dependence on India has diminished since the late 1960s, most of Nepal's trade is still with that country. India's share of Nepalese exports declined from 61.6 per cent in 1980/81 to 43.6 per cent in 1986/87. The Indian share of Nepalese imports was 49.1 per cent in 1980/81 but declined to 46.3 per cent in 1984/85. Exports to India included food products, jute goods and leather products. Carpets are mainly

---

1/ Government of Nepal, Seventh Plan 1985-1990, Kathmandu, 1985.

exported to Europe. On the import side, India dominates insofar as food is concerned, and the same is true, to a lesser extent, for chemicals and drugs. Almost all fuel is imported from overseas. Apart from India, Japan stands as the major overseas trading partner.

Nepal's trade dependence on India is a consequence of its landlocked position. Transit costs of overseas trade are considerable. Nepal's nearest port, Calcutta, is located 1,100 km from the southern border. A road connexion with the People's Republic of China exists, but intensive trade contacts are inhibited by the high costs and seasonal nature of road transport through the Chinese Himalayas.

Despite a large and growing trade deficit, Nepal has usually had a surplus on its balance of payments during the 1980s. This is mainly due to a large increase in official capital inflows which have risen from NRs 577 million in 1979/80 to NRs 1,700 million in 1986/87. Foreign loans - obtained at concessional rates of interest - have risen in roughly similar proportion. In 1986/87 they exceeded inflows obtained as direct government grants. Amortisation has increased from NRs 28 million to NRs 166 million over this period. Total external debt is currently estimated at about $600 million. The debt to GNP ratio was about 25 per cent in 1987. The value of this ratio was lower for Nepal than for any other SAARC member country in 1985, excepting India. Due to the highly concessional nature of Nepal's foreign borrowings the debt service ratio is only 6.7 per cent - significantly lower than that of any other South Asian country. Thus despite its heavy dependence on foreign capital inflows Nepal is one of the least indebted economies of that region.

Virtually all foreign loans obtained have been through the government which plays an important role within the economy. The government is also a major purchaser of domestically produced goods. There were 59 public sector enterprises in the mid-1980s, of which 43 were fully government-owned. Most of the larger manufacturing enterprises are public enterprises.

The contribution of public enterprises to GDP has stagnated at around 2.3 per cent; the performance of public trading companies has been especially disappointing in recent years. Since the late 1970s no new public enterprises have been created, and some efforts have been made to make the existing ones more productive by operating them on commercial criteria. Apart from those employed in public enterprises, the government employs some 70,000 civil servants.

Nepal's development efforts are currently attuned to the government's endeavour to meet the basic needs of the people by the year 2000. With a view to achieving this objective, the government is committed to create an atmosphere for the manufacturing sector to play a dynamic role in accelerating the pace of economic expansion and in generating productive employment opportunities. Although industrialization is still in a incipient stage of development in Nepal, many opportunities exist for profitable investment in import substitution and in export-oriented industries. Priority is given to industries which meet the basic needs of the people, i.e., textiles, shoes and sandals, cement, bricks and construction materials, paper, pencils and other educational materials, medicine and health related equipment. The government tends to rely on the expansion of these manufacturing activities to translate its aspirations towards meeting the basic needs of the people into reality.

1.3 Overview of the manufacturing sector

Nepal's manufacturing sector is six times smaller than that of Burma, nine times smaller than that of Sri Lanka and thirteen times smaller than Bangladesh. However, the rate of growth of MVA per capita in Nepal has been high and significantly higher than that of developing countries taken as a group. Nevertheless in 1984 MVA per capita in Nepal equalled 3.7 per cent of the average per capita MVA level in developing countries. In 1984 MVA was estimated at $100 million, with MVA per capita approximately at $6.

Manufacturing activities in Nepal remain in light industries, with limited progress in intermediate and capital goods. The latest industrial census for 1982/83 estimated the number of enterprises employing ten workers or more at 4,903, of which 3,532 (72 per cent) were rice or oil mills employing 74,000 workers. The total number of operating manufacturing units disposing of more than NRs 200,000 worth of machinery and equipment was around 422 in 1984. It was estimated in 1980 that less than 1 per cent of the labour force was employed in the large-scale industrial sector in Nepal. The corresponding figure for Bhutan was 3 per cent, Bangladesh 6 per cent, India 13 per cent, Sri Lanka 13 per cent and Burma 19 per cent. This comparison once again shows that despite its relatively rapid growth manufacturing activity represents a very small segment of the economic life of Nepal.

Cottage industries[1/] are mainly involved in food processing; cereal and oil milling and ghee making (clarified butter) standing out as major activities. Cottage industry production for the market mainly consists of textiles (cotton fabrics, floor coverings) and bamboo products. There is a trend towards cereal and oil milling by special, mechanized units. The most important modern industries include brick and tile manufacture, construction materials, paper, foodgrain processing and vegetable oil extraction, sugar refining and brewery. Nepal's traditional industries, such as basket making, cotton fabrics, edible oils, etc., employ around 1 million workers. Cotton garments became Nepal's chief export item when Indian manufacturers redeployed operations to Nepal. To reduce the large influx of Indian labourers totalling around 60,000 in 1985, the government instituted a registration policy for garment manufacturers. Within the textiles branch, jute and cotton manufacturing are major industries; carpets have more recently become an important product. Sawmilling, furniture making and printing are major activities in the wood, paper and allied industries. The chemicals branch is still at an early stage of development; polythene pipes have in recent years become an important product.

Of the mineral-based industries in operation, nine organized industrial units are significant. Among these are the Himal Cement, which has recently expanded its capacity, the Hetauda Cement, which has begun its commercial operations, two small cement production units in the private sector, the Agriculture and Lime Industry, the Grodavari Marble Industry, the Iron Foundry, as well as the Orinol Magnesite and the Ganegh Lead Industry, which are ready to begin production.

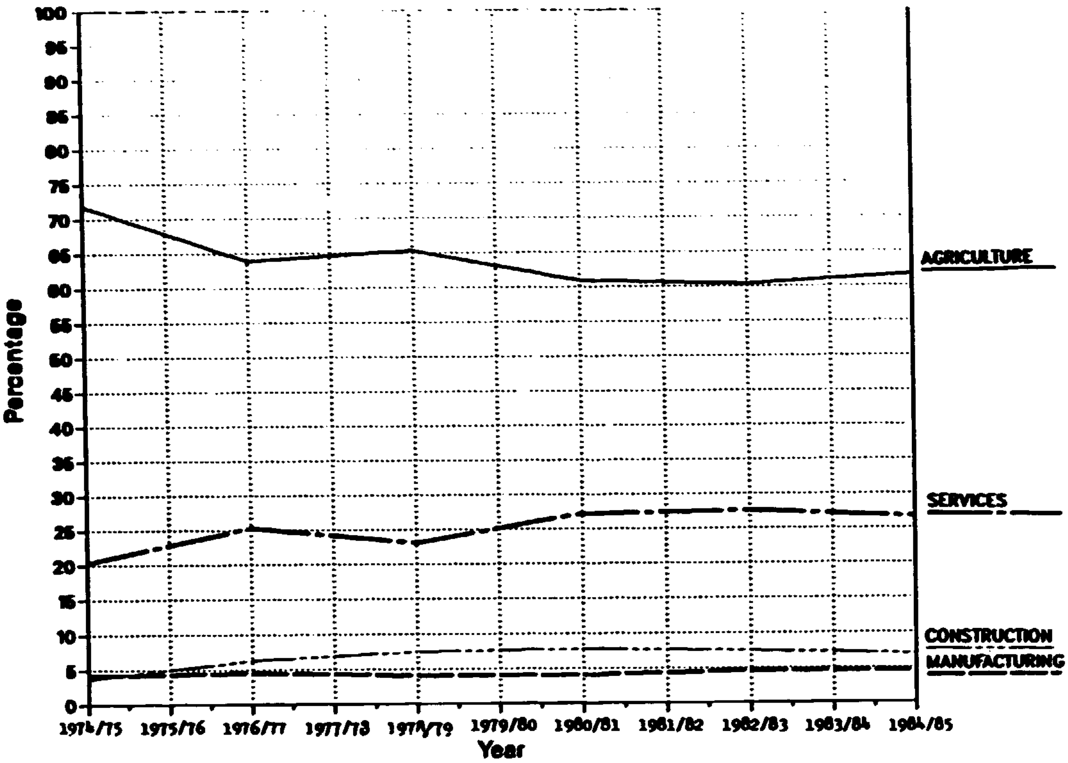
1/ The data on cottage industries presented in this study refer to industrial units with investments in machinery and equipment not exceeding NRs 200,000 and investments in fixed assets not exceeding NRs 500,000 in rural areas or NRs 800,000 in urban areas. Cottage industries have recently been redefined as manufacturing establishemnts with a fixed investment not exceeding NRs 500.000 and an annual turnover not exceeding NRs 2,000,000; in the case of units relying on imported raw material the turnover ceiling is NRs 1,000,000.

During the first nine months of the fiscal year 1986/87, the operation of new production units in sugar, cigarette and cement industries has been helpful in recording significant rates of expansion; production of sugar, cigarette and cement rose by 71.6 per cent, 24.9 per cent and 114 per cent, respectively, during the same period. A 12.2 per cent increase in output achieved by Nepal's jute industry during the first nine months of 1986/87 was largely due to favourable international market conditions. Changing market situation favoured beer and cotton industries. In contrast to the general trend of increasing manufacturing output during 1986/87 processed leather, soap, agricultural tools, stainless steel utensils and biscuits suffered declining trends in production levels.

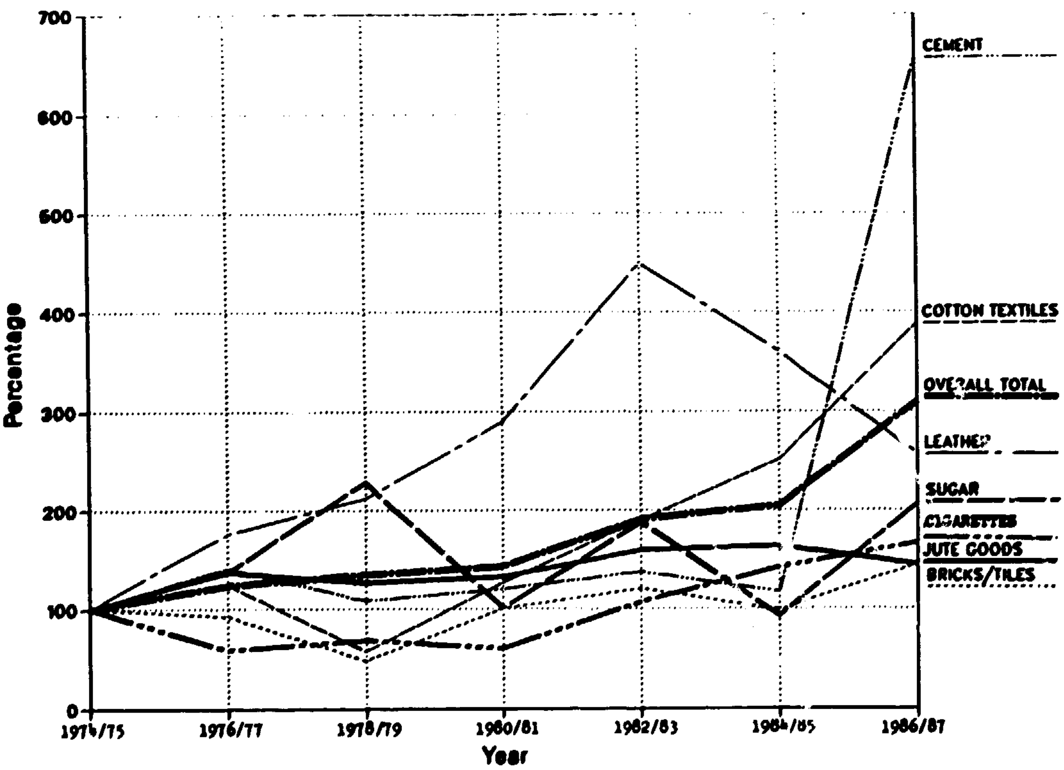
Following a review of the current industrial policy, the government of Nepal endeavours to simplify registration procedures, with a focus on efforts to invigorate manufacturing activities in domestic resoruce-based, export-oriented and other industries manufacturing essential goods for the people. The government also attempts to promote private sector participation and foreign collaboration in industrial ventures deemed necessary for the growth and structural transformation of the manufacturing sector in Nepal.

MANUFACTURING TRENDS

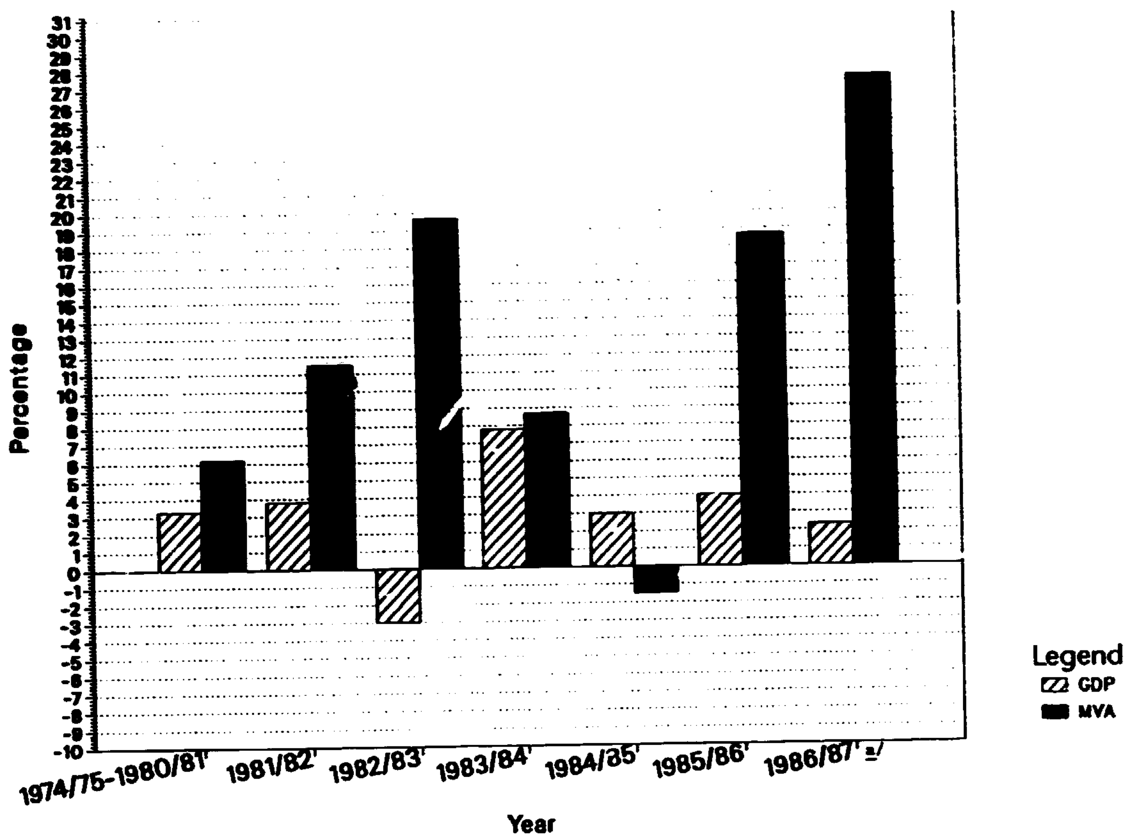
DISTRIBUTION OF GDP BY SECTOR OF ORIGIN, 1974/75-1984/85
(at current prices)



INDEX OF INDUSTRIAL OUTPUT, SELECTED PRODUCTS, 1974/75-1986/87
(1974/75=100)

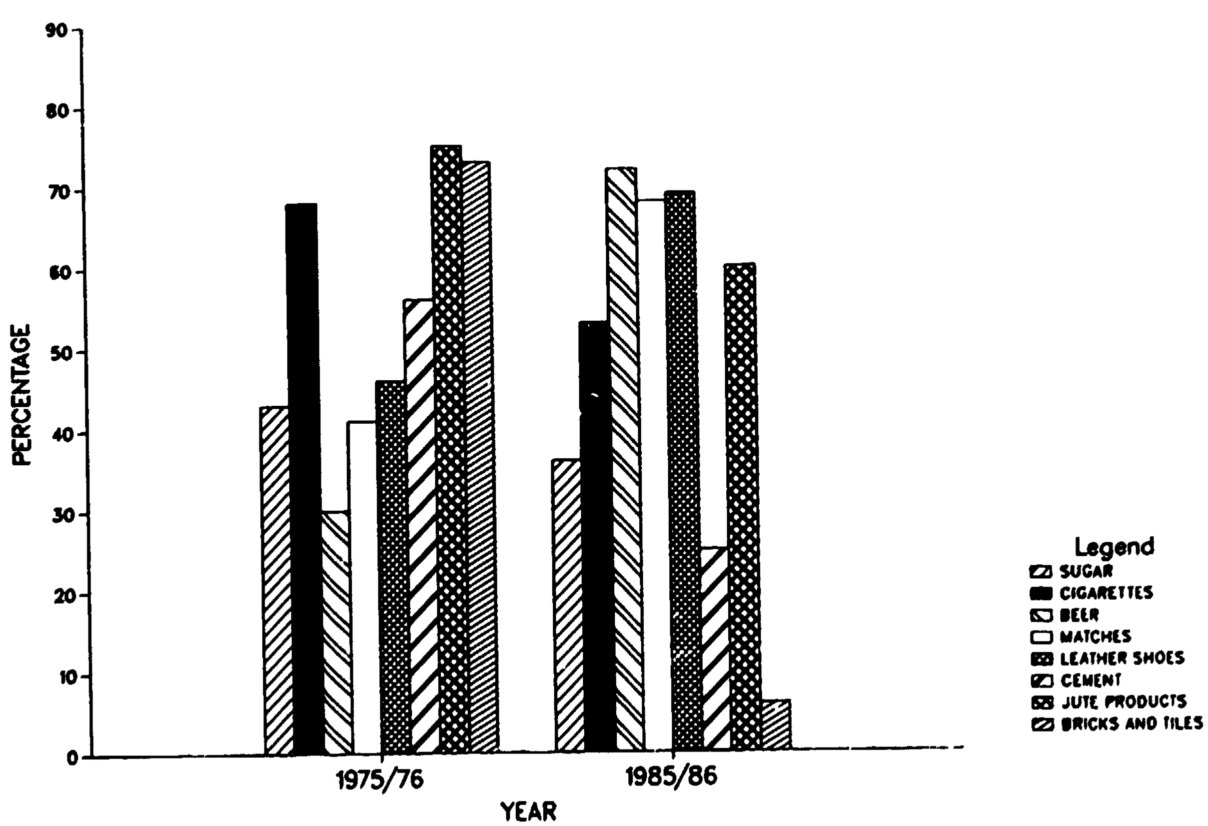


REAL GROWTH RATES OF GDP AND INDUSTRIAL OUTPUT, 1974/75-1986/87



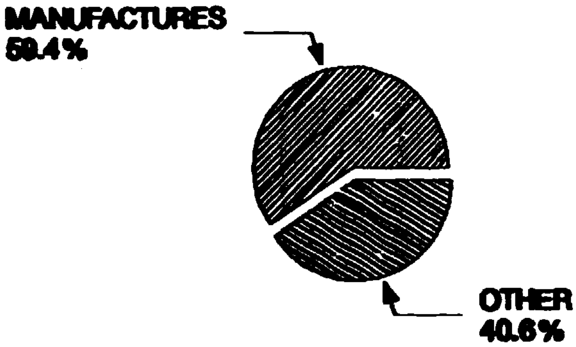
a/ Preliminary estimate.

CAPACITY UTILIZATION RATE, SELECTED INDUSTRIES, 1975/76 AND 1985/86

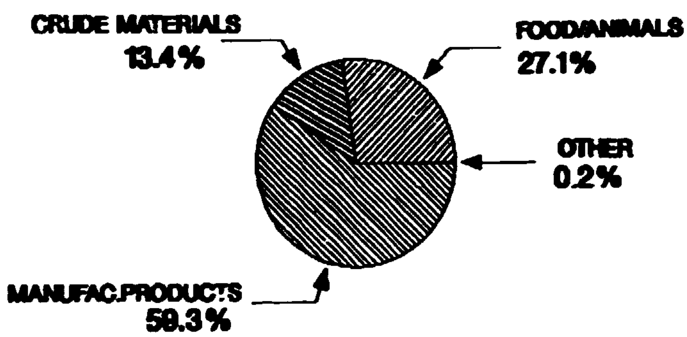


EXPORTS AND IMPORTS

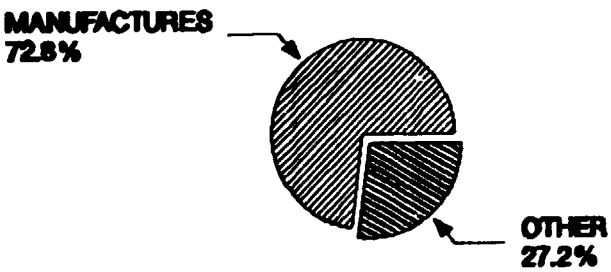
SHARE OF MANUFACTURES
IN TOTAL EXPORTS, 1985/86



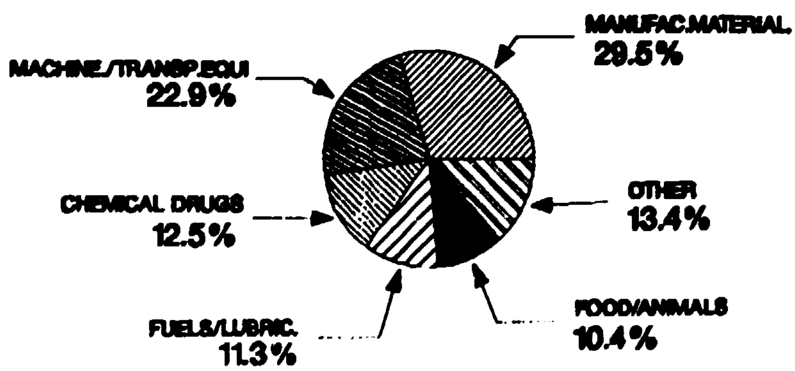
COMPOSITION OF EXPORTS, 1985/86



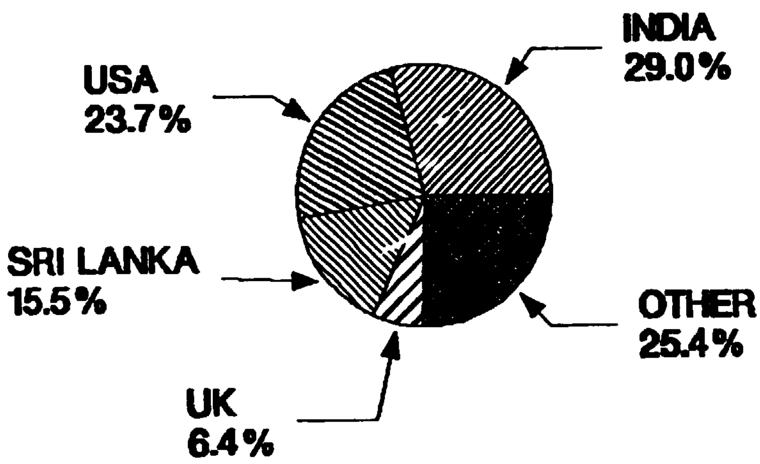
SHARE OF MANUFACTURES
IN TOTAL IMPORTS, 1985/86



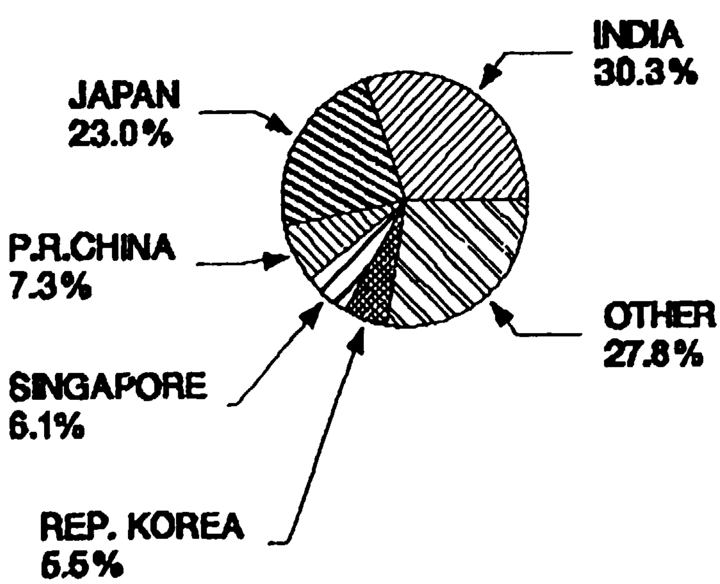
COMPOSITION OF IMPORTS, 1985/86



DESTINATION OF EXPORTS, 1986



ORIGIN OF IMPORTS, 1986



2. STRUCTURE AND PERFORMANCE OF THE MANUFACTURING SECTOR

2.1 Growth and structural change

In terms of growth the manufacturing sector has been the most dynamic sector in the Nepalese economy. Typically it has grown twice as fast as GDP and five times faster than the agricultural sector. Whereas income per capita has stagnated, MVA per capita has doubled over the 1970-1984 period. The manufacturing sector recorded an average annual of rate growth of 10 per cent during 1981-1987. Moreover, manufacturing growth has remained high in the 1986-87 period. During 1985/86-1986/87 manufacturing production is estimated to have grown at an annual average rate of 23 per cent[1/] while GDP growth has been about 3 per cent and agricultural production suffered a major set back in 1986/87.

Table 2.1 presents indices of industrial production[2/] for the major manufacturing branches over the period 1974/75 to 1986/87. The most rapidly growing branches are synthetic textiles, soap, cement, beer, liquor, tea and plywood. Most industrial branches registered a rate of growth that was significantly below the sectoral average. This indicates that the standard deviation of growth during most years was high. For the series as a whole the average value of the standard deviation coefficient was estimated to be significantly larger than the mean. Thus, although the manufacturing sector as a whole has grown at a rapid rate, growth has remained concentrated in a relatively small number of industries. Most of the rapidly growing industries have a relatively small weight in total industrial production. Thus the combined weight of the seven fastest growing branches listed above was only 14 per cent. Most of these branches were either producers or users of intermediate products such as soap and synthetic textiles. The older industries with a significantly higher weight in sectoral production tended to grow more slowly. Thus jute, sugar, cigarettes, shoes, leather and agricultural tools all had below average growth rates during this period. Together these branches account for over 60 per cent of aggregate manufacturing production.

Estimates of growth presented above relate to the registered large- and medium-scale manufacturing enterprises. Most of the cottage industries are unregistered. Statistical data on the cottage sector are scarce. A 1977/78 survey estimated that 1,215,000 people were employed in some 750,000 cottage-scale units. Employment in these is mostly part-time. Equipment is generally unsophisticated, and productivity per worker is low. The contribution of cottage industries to GDP has been estimated at 1.3 per cent in 1981/82, or less than half the GDP share of the registered manufacturing sector, the two combined contributing 4.2 per cent to GDP.

Absence of value added estimates makes it difficult to measure the rate and form of structural change within the manufacturing sector. Growth rates estimated on the basis of production value may reflect growth in input costs - particularly if a large proportion of these inputs are imported - and not in the contribution made by the branch to growth in GDP. Moreover, the time

---

1/ Based on industrial production index (1974/75 = 100).

2/ The manufacturing trends revealed by production indices are calculated by physical volume of output presented in Annex Table A-3.

Table 2.1: Index of industrial output, 1974/75-1986/87
(1974/75 -= 100)

Industrial product	Weight a/ %	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87b/
Jute goods	12.51	100.00	130.40	137.00	133.28	126.54	120.48	132.60	126.39	158.96	173.85	163.28	133.60	144.70
Sugar	16.39	100.00	89.15	137.10	222.22	228.07	118.72	100.79	174.11	187.46	146.70	92.56	127.40	206.20
Cigarettes	14.23	100.00	81.52	59.10	54.43	68.92	54.72	60.35	94.44	106.92	124.64	141.67	158.00	166.40
Matches	2.12	100.00	104.62	101.39	104.31	111.56	107.70	96.46	117.10	132.20	172.73	190.91	176.30	185.70
Liquor	2.10	100.00	258.93	237.95	306.70	203.13	311.61	351.79	159.82	149.11	359.82	458.48	564.30	609.40
Soap	1.20	100.00	108.87	208.19	147.81	125.81	131.70	295.29	342.31	572.39	627.83	861.50	1,030.50	1,022.50
Shoes	3.44	100.00	84.35	78.32	84.23	76.68	100.36	116.85	87.73	125.85	103.79	118.50	159.10	199.90
Leather	5.44	100.00	106.74	175.82	201.61	211.88	298.07	289.25	262.76	449.44	444.62	360.65	321.20	256.80
Agricultural tools	0.68	100.00	30.67	95.67	104.33	59.67	69.00	28.67	51.00	122.67	160.33	113.33	130.30	117.30
Tea	1.37	100.00	144.09	155.51	162.60	128.35	152.36	210.63	246.06	281.10	325.59	389.37	414.20	445.70
Stainless steel utensils	3.68	100.00	112.18	100.64	110.90	188.46	487.18	301.28	300.00	239.74	281.41	371.79	272.40	239.70
Bricks and tiles	4.49	100.00	129.30	92.81	80.34	48.50	132.13	100.26	81.66	120.00	116.36	98.74	111.00	144.70
Beer	1.82	100.00	118.60	91.57	114.53	171.66	190.41	212.06	185.47	289.53	454.22	331.10	438.40	581.40
Cotton textiles	8.80	100.00	100.26	124.40	92.60	57.83	83.07	126.60	163.38	189.67	243.81	250.79	336.10	388.20
Cement	7.36	100.00	158.52	141.39	78.61	108.28	108.28	120.02	112.79	137.23	145.64	116.88	356.60	657.30
Biscuits	2.14	100.00	106.99	120.30	199.17	338.94	318.14	278.70	377.20	379.20	605.32	721.96	781.70	782.00
Plywood	0.34	100.00	100.00	283.36	302.31	298.02	502.64	683.53	765.57	637.07	678.09	432.78	335.70	411.00
Synthetic textiles	2.89	100.00	100.00	100.00	152.22	157.36	194.15	206.47	237.32	268.00	318.35	292.55	569.50	1,303.20
Overall total	100.00	100.00	107.91	123.62	138.68	134.86	142.53	143.12	159.55	190.91	207.52	204.46	242.70	309.60

Source: Central Bureau of Statistics.

a/ In gross value of 18 commodities based on the census of 1974/75.
b/ Preliminary estimate.

series data in the Annual Economic Survey[1/] is in terms of quantities and not in values. It is, therefore, not possible to estimate the relative weight of different branches on a time series basis from this data.

Value added and employment estimates are presented in another government source for an earlier time period. These are summarized in Table 2.2. The dominant position of the food and allied industries is clear: it has accounted for the larger part of MVA and approximately 50 per cent of the manufacturing labour force since the early 1970s. Within this branch, grain and oil milling (often done by the same unit) are the most important activities, these accounted for almost half of MVA in 1972/73 and for more than one-third of MVA in 1981/82.

Although no comparison of structural change trends is possible, it is clear that at least until the early 1980s very little change had taken place in the structure of the manufacturing sector. The rapidly growing branches - producers or large users of intermediate products - continued to account for a small proportion of both MVA and manufacturing employment. Thus, the share of the intermediate branches (wood, paper, chemicals and non-metallic minerals) in MVA stood at 20 per cent in 1972/73. It declined significantly to 14.7 per cent in 1981/82 - with the fall being most marked in the case of the non-metallic mineral branch. The recent rapid growth of cement production may have changed this picture somewhat.

Table 2.2 also shows that the consumer goods industries continue to dominate the structure of manufacturing employment although their share of total manufacturing employment declined from 78.1 per cent to 65.7 per cent over the 1972/73-1981/82 period, as against a significant increase in their share of MVA. This, once again reflects the abnormally low share of the non-metallic mineral branches in MVA in 1981/82 - a trend likely to have been reversed in recent years. On the basis of the data presented in Table 2.2 it is not possible to discern a significant difference in the labour intensity of production of the consumer and intermediate goods branches.

Overall, there is a slow shift in shares of total manufacturing production from the cottage industry to the organized sector. In the organized sector, the food industry has retained its dominant position. Within the branch, cereal and oil milling have in recent years become less important. There were only a few of these mills in the large-scale category under construction by 1984/85. Bakery and sugar products plants, i.e. industries with a higher level of processing, predominated among the new projects in the branch. Scattered data show that among industries with equipment worth of NRs 200,000, the food industry has lost its first place to the textile industry, which produced approximately one-third of MVA in the larger scale category in 1983/84. A considerable number of textile plants was under construction in the mid-1980s; some of them, with a planned fixed capital investment of over NRs 100 million, are quite large by Nepalese standards.

Growth in the wood and paper industries appears to stagnate, and only small units, mainly paper mills, were under construction in recent years. The chemicals branch has slowly but continuously expanded its share in manufacturing; it includes such new Nepalese industries as polythene pipe and foam manufacturing. The non-metallic minerals branch has not done well, and

1/ See Ministry of Finance, Economic Survey, Fiscal Year 1986/87, 1987, Tables 3.1 and 3.2.

Table 2.2: Composition of manufacturing value added and employment, 1972/73-1981/82
(selected years)

	1972/73		1977/78		1981/82		
	Employment (per cent)	Value added (per cent)	Employment (per cent)	Value added (per cent)	Employment (number)	Employment (per cent)	Value added (per cent)
Food and allied	36.8	52.4	35.8	57.5	37,041	45.7	69.5
of which grain and oil smelting	27.1	47.8	24.2	44.3	16,188	20.0	37.1
Drink and tobacco	14.2	5.7	14.9	5.6	...	...	...
Textiles, leather and allied	17.4	2.9	16.7	12.3	14,290	17.6	9.6
Wood, paper, printing and allied	9.3	9.8	13.5	12.1	7,267	9.0	9.2
Chemicals, pharmaceuticals, plastics, rubber	0.3	0.1	1.4	2.1	832	1.0	3.1
Non-metallic mineral products	12.8	11.1	14.3	7.0	16,634	20.5	2.4
Metal goods	2.0	2.3	3.0	3.4	3,670	4.5	2.5
Jewellery, curios	0.5	0.5	0.3	0.0	173	0.2	0.0
Miscellaneous	6.2	14.2	0.1	0.1	1,143	1.4	1.8
Total	100.0	100.0	100.0	100.0	81,050	100.0	100.0

Sources: Industrial Services Centre, Industrial Sector Plan Study 1980/81-1990/91, January 1987; Central Bureau of Statistics, Census of Manufacturing 1981/82.

Note: Percentages may not add up to 100 due to rounding.

its share in MVA has declined rapidly. It does, however, dispose of a reasonably good resource base, and when planned cement and magnesite capacity becomes fully productive, the share of the branch in MVA could grow substantially. The metal goods industry, finally, does not show much sign of expansion, although output has grown modestly in recent years. This reflects a relatively low level of inter-industrial integration with a large proportion of capital equipment being imported. Increasing vertical integration within the industrial sector can have a significant positive impact on its performance in the medium run.

2.2 Performance and efficiency

Total manufacturing employment grew from 41,367 in 1972/73 to 81,050 in 1981/82 and 88,616 in 1982/82.[1/] Total formal sector manufacturing employment is projected at 180,000 for the year 1990. During 1971/72 to 1981/82 manufacturing employment grew faster than MVA indicating a decline in labour productivity for the manufacturing sector as a whole. Low productivity growth is also confirmed by the estimation of a standard constant elasticity of substitution production function for 9 industrial branches for which data was collected on a firm level basis for 1982/83 and 1983/84. Aggregate (cross section) estimates of the elasticity of substitution parameters were found to be very low indicating little capacity for substituting capital for labour and hence correspondingly low scope for productivity growth. Absence of time series data and of a sufficient number of observations made it difficult to extend this analysis to identify differences in labour productivity at the branch level.

While analyzing the performance of the various industries, a basic difference between the cottage-scale household units and the organized units (both cottage and larger-scale) should be kept in mind. In the cottage household units, manufacturing activities are generally a sideline occupation and their products are consumed by the household. In the household units, the yearly average time spent on manufacturing activities has been estimated at 84 days per person. Most of the organized cottage-scale units are estimated to be in operation for some 200 days a year (pottery: 180 days/year; furniture making: 190 days/year; weaving: 223 days/year). Compared to the organized sector, the household sector's productivity is low: the 1977/78 survey of the cottage industry put value added per worker at NRs 134; the fact that people are in most cases only part-time employed should of course be kept in mind. Value added per worker was NRs 4,689 in the organized cottage units, and NRs 10,627 in the larger-scale units.

High value-added per worker in the larger-scale units does not necessarily mean that they are more efficient. Although (according to the figures just mentioned) value added per worker in the larger-scale units was 2.5 times higher than in the organized cottage units, the larger-scale units needed almost 6 times the amount in capital goods (NRs 24,365 vs. NRs 4,122) to attain that value added figure. A somewhat similar picture emerges from the 1981/82 Central Bureau of Statistics Census of manufacturing establishments using electricity or employing more than 10 workers. With NRs 5,360 capital per worker on average, the smallest units in the sample (less than NRs 0.5 million in fixed assets) produced NRs 8,420 value added per worker; units with more than NRs 2 million in fixed assets needed NRs 52,227 to produce NRs 37,123 value added per worker.

1/ Indian migrant workers make up as significant part of the manufacturing labour force. A survey of industries in the larger-scale sector showed that over 16 per cent of the labour force was foreign; in the textiles branch was the highest (27 per cent).

The data in the Industrial Review Report, 1983/84, of the Industrial Services Centre which is based on a firm sample of 158 firms for 1982/83 and of 183 for 1983/84[1/] makes it possible to estimate gross output ratios for the nine sectors. These ratios are presented in Table 2.3. The gross profit to value added ratio in 1982/83 is high by international standards. The average value of this ratio for Indian manufacturing was 52.8 per cent in 1975 and 51 per cent in 1985.[2/] For a representative sample of 28 developing UNIDO estimated the value of the gross profit to value added to be 66 per cent in 1978.[3/] The gross profit to gross output ratio was estimated as 12.25 per cent in 1975 and 9.02 per cent in 1985 in Indian manufacturing.[2/] On the other hand the value of the gross profit to gross output in the Nepalese manufacturing sector is not significantly different from the average calculated by UNIDO for 28 developing countries in 1978.

Table 2.3: Profitability in large-scale manufacturing in Nepal, 1982/83 and 1983/84
(percentage)

Sector	Ratio of gross profit to value added		Ratio of gross profit to gross output	
	1982/83	1983/84	1982/83	1983/84
Food and allied	91.15	79.48	34.03	23.07
Drink and tobacco	71.79	21.44	12.91	4.31
Textiles	61.66	55.61	23.21	17.89
Non-metallic minerals	79.25	64.95	45.73	32.16
Chemicals and allied	74.93	82.60	18.11	27.46
Wood, paper and allied	57.86	6.95	20.28	1.82
Wood carving and crafts	31.05	...	15.39	...
Metal goods	70.42	71.30	21.42	25.33
Electrical goods	78.39	77.07	16.57	5.70
Average (weighted)[a/]	72.32	62.71	24.71	19.31

Source: Industrial Services Centre, Industrial Review Report, 1983/84, Kathmandu, 1985.

a/ By branch share in value added.

In 1983/84 there was a significant decline in both the gross profit to value added and the gross profit to gross output ratios. Both these ratios remain signficantly higher than the corresponding ratios estimated for India in the mid-1980s, but the gross profit to gross output ratio in Nepalese

1/ The representativeness of the sample is not discussed in the Report.

2/ UNIDO, Statistics and Survey Unit, India: A Statistical Review of Industrial Performances, 1987, Table 7.

3/ UNIDO, Industry in a Changing World, New York, 1983, p.242.

manufacturing in 1983/84 fell by over 20 per cent reflecting a slow growth rate of sales in that year, leading to a substantial fall in the index of manufacturing production in 1984/85.

The fall in the profit ratios during 1983/84 are mainly accounted for by large declines in the beverages and wood product industries - eliminating these two from the calculations yields a (weighted) average gross profits to value added ratio of 72 per cent and a gross profit to gross output ratio of 22 per cent - both not significantly different from the ratios calculated for the previous year. Both these are major manufacturing branches - with a value added share of about 20 per cent in the mid-1980s - and a decline in their performance is likely to have a serious impact upon aggregate manufacturing activity.

Despite the variation over years and on inter-branch basis it is clear that the rate of return on capital is positive. It is also clear that wages constitute a relatively small portion of total costs, their share in value added ranges, however, from 93 per cent in the case of wood, paper and allied industries in 1983/84 to only 9 per cent in the case of the food manufacturing group in 1981/82. This contradicts the earlier finding based on branch level data that capital intensity differentials are insignificant. The firm level data used in the Industrial Review Report show that the wood and textile branches are significantly more labour-intensive than food manufacturing, non-metallic minerals and chemicals. Wages as a proportion of value added are higher but wages per employee is lower in the former group than the latter.

For most industries high material costs are the principal constraint on profitability. Typical material input costs account for 7 per cent of the value of manufacturing output, while wages constitute only about 7 to 10 per cent. An improvement in infrastructure, particularly in the transportation network, is thus likely to have a much more pronounced impact on improving efficiency within the manufacturing sector than wage controls or a substitution of capital for labour.

Relatively low levels of output growth are only partly explained by rates of capacity utilization. Table 2.4 presents estimates of capacity utilization for selected industries over the 1975/76-1985/86 period. Some slow growing branches such as matches and bricks and tiles have below average capacity utilization rates, but this also applies to chemicals, a rapidly growing sub-sector.1/ In general the standard deviation of capacity utilization rates within the sector is low - although it is evident that capacity utilization within manufacturing decreased signficantly in the mid-1980s - 1985/86 being a particularly bad year with average capacity utilization in that year being about 25 per cent lower than average capacity utilization over the 1975-1986 period. Capacity utilization is likely to have increased significantly during 1986-1987 when aggregate production grew by over 20 per cent, but figures on this are not yet available on either the sectoral or branch level.

The government has in the Seventh Plan (1985-1990) committed itself to the achievement of a significant improvement in efficiency levels within the corporate sector. The fact that many of the larger-scale key manufacturing units are public enterprises warrants a closer look at their performance.

1/ This is however, explained by the construction of new units over 1984-1986 which came on stream later.

Table 2.4: Capacity utilization, selected industrial products, 1975/76-1985/86
(in percentage)

	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
Sugar	43	66	108	111	63	53	92	99	72	49	36
Cigarettes	68	50	46	58	46	50	68	77	103	118	53
Beer	30	25	29	31	109	122	106	74	74	39	72
Matches	41	40	41	44	52	46	56	64	83	91	68
Leather shoes	46	43	46	44	77	90	68	97	79	91	69
Cement	56	88	79	43	61	65	63	77	81	9 a/	25
Jute products	75	79	77	73	75	82	78	72	107	101	60
bricks and tiles	73	52	45	27	83	63	52	77	74	45	6

Source: Department of Industry.

a/ Capacity increased in 1985/86 with establishment of more units.

Table 2.5 gives an overview of capacity utilization in a selection of important government-owned units. This table shows that capacity utilization in the public sector industries selected has clearly been higher than in the larger-scale sector as a whole, and the capacity utilization rate has risen significantly during the Sixth Plan period (1979/80-1983/84). In a number of factories capacity utilization was close to maximum, but agricultural lime production (a key product for the improvement of acid soils) and the Birgunj Distillery registered low utilization rates; the Distillery did not operate during a number of years. It is hoped to raise overall capacity utilization to 70 per cent during the Seventh Plan (1985-1990). For this to come about, a series of bottlenecks will have to be cleared. Raw material shortages for example, are very frequently mentioned as one reason for low capacity utilization. This problem is closely related to the low productivity of the domestic agricultural sector; shortage of foreign exchange for imported inputs is another important factor. Electricity supply problems also occur very often, and the shortage of qualified manpower is felt at all levels in the sector. Finally, marketing problems and competing imports, especially from India, with its well-established manufacturing industry, stand as serious bottlenecks.

Appendix Tables A-4 and A-5 present data on public sector profitability and utilization of capital - it is unfortunately not possible to present a detailed branch wise breakdown of public manufacturing enterprises (PMEs). It is seen that gross profits of the PMEs have been positive, but very low, during the 1980s and there has been a decline in gross profit rates in comparison to gross profits earned until 1977/78.

Table A-5 shows that the level of capital. i.e., loan and equity capital, and subsidies, that had gone into the manufacturing public sector enterprises during 1976/77-1985/86 was nearly doubled. However, such an increase in the level of capital invested in the PMEs did not coincide with corresponding increase in the performance. The gross profit of public enterprises has not only decreased in recent years but also registered growing deficits inspite of the growth in net capital employed. Out of the total number of public enterprises the performance of the manufacturing public enterprises has been unsatisfactory. The cumulative deficit of public enterprises at the end of 1985/86 reached NRs 1.35 million which is tantamount to 30 per cent of the shares of public enterprises by the government. Thus, the financial performance of public enterprises reveal that these enterprises have been running in loss. Privatization and divestiture of shares of public enterprises are under way to steer the industrialization drive on efficient lines.

2.3 Ownership and investment patterns

Although the number of enterprises owned or partly-owned by the government and by foreign investors is small, their contribution to the sector is important. In 1982, government-owned manufacturing enterprises were estimated to account for 23 per cent of manufacturing employment, and approximately one-fifth of the sector's contribution to GDP. Many of the larger-scale establishments are joint ventures; partners in the largest ventures generally come from other Asian countries.

The government's attitude towards the creation of public enterprises has generally been one of restraint, and few public enterprises were registered during the 1970s and 1980s. It can be seen from Table A-6 that the government favours the progressive expansion of the private sector. It is felt that public enterprises should only be created where private enterprise cannot be relied upon to supply goods and services deemed essential. The Sixth Plan

Table 2.5: Capacity utilization in selected public enterprises, 1980/81-1986/87

Public sector enterprise	Annual production capacity	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87a/
Bansbari Leather and Shoes Factory	Shoes 90,000 pairs	98.76	86.30	88.40	74.08	78.00	90.02	84.00
	Processed leather 18 lac sq.ft.	96.85	84.93	84.77	107.86	90.00	69.15	77.77
Birgunj Sugar Factory	Sugar 13,500 mil. ton	44.89	85.45	95.49	79.15	56.00	81.93	109.23
Birgunj Distillery	Rectified spirit 4,500 litre per day	...	22.82	...	64.00	82.50	43.83	53.33
Janakpur Cigarette Factory	Cigarette 4.5 bil. sticks	39.00	58.00	68.00	78.00	92.00	89.50	95.24
Brick & Tile Factory Harisiddi	Brick 25 million	49.20	56.00	76.00	67.20	60.00	64.12	80.00
Bhaktapur Brick Factory	Brick 20 million	50.50	61.50	89.50	75.00	74.00	68.50	75.00
Heatuda Textile Industry	Cloth 110 lac metres	28.75	42.73	48.34	52.07	54.00	62.24	66.36
Himal Cement Company	Cement 120,000 MT	70.71	70.77	77.00	79.68	66.00	64.60	42.50
Agriculture Tools Factory	Tools 450 MT	19.11	34.00	81.78	110.00	99.00	90.00	88.90
Agro-Lime Industry	Agro-Lime 6,000 MT	...	6.22	8.69	9.00	19.83	8.72	8.33
	Chemical Lime 6,000 MT	[illegible].00	90.00	116.67	116.67	116.67	203.33	250.00
Hetauda Cement Factory	Cement 260,000 MT	...	...	...	...	...	48.00	52.00

Source: Corporation Co-ordination Division, Ministry of Finance, Government of Nepal, Economic Survey 1987, Kathmandu, 1987, p.20.

a/ Estimate.

foresaw the privatization of a number of public enterprises, but apparently few if any transfers took place durir. that period. In the Seventh Plan the government has reiterated its intenti . o privatize a number of enterprises as part of a broad policy of stimulati.. private industry. On the other hand, several government-owned plants will be expanded (mainly in the non-metallic minerals branch), and a number of others now under construction (which will produce paper, ore concentrate, sugar and cotton thread) are expected to come on stream.

Ownership in cottage and small-scale industry virtually always means private ownership in the form of either private firm/private limited or partnership (see Annex Table A-7). In the first nine months of 1986/87 2,268 cottage and small-scale industries were registered with the Department of Cottage Industry, with a total fixed capital of NRs 1,170 million. Of these 1,024 were private firms, 46 were private limited companies and 1,198 were partnership firms. These figures do not cover certain specified categories which need not be registered by the entrepreneurs. Among the main categories of cottage and small-scale industries registered with the Department in the first nine months of 1986/87 were polyester hosiery, woollen yarn, metallic utensils, food processing, cotton textiles, electrical appliances, stationaries, paints, bricks, tiles, stone and concrete, wax candles and synthetic footwear units. Among these units nylon and polyester hosiery, carpet making and units producing basic needs type commodities achieved prominence.

Although annual estimates of gross domestic capital formation within the manufacturing sector are not available it is clear that investment levels have not stagnated. Development expenditure by the government in the manufacturing and mining sub-sector under the Sixth Plan was estimated at NRs 1,765.6 million which represented 8 per cent of the total outlay. Total investment in the industry, mining and power sector is targeted at NRs 10,840 million (at constant 1984/85 prices). During the Seventh Plan period 65 per cent of this total is expected to be obtained from public sources.1/ It is thus clear that both public and private (and panchyat) sector investment in manufacturing is expected to grow rapidly.

Some estimates of investment growth are presented in Table 2.6. These are based on the sample surveys conducted by the Industrial Services Centre for the year 1982/83 and 1983/84. The figures are in current prices and a nominal growth in investment may reflect more a growth in the price of capital goods than an increase in their acquisition or use. Nevertheless even in the absence of the relevant price deflators it is probably fair to assume that investment was sustained at a high level during the two years for which data is available in Table 2.6. However, the increase in the investment to sales ratio is entirely due to the high value of this indicator for the non-metallic mineral branch - substracting this branch the average investment to sales ratio for 1983/84 equals 98.93 per cent. Nevertheless in money terms, the investment rate accelerated in the food, drink, non-metallic minerals and wood industries. It declined sharply in the electrical goods, chemicals and allied branches. Generally speaking these were the industries which had relatively high rates of profits in 1982/83.2/ The association between changes in

---

1/ Government of Nepal, Seventh Plan 1985-1990, Kathmandu, 1985.

2/ Except for food, other industries had a profit to investment ratio lower than the average value of this ratio for 1982/83, but this is explained by the exceptionally high profit rate of the food branch and its high weight in value added terms.

investment levels in 1983/84 and profit levels in 1982/83 is quite clear. The value of Spearman's rank correlation coefficient of branches ranked by growth in investment over 1983-1984 and profitability in 1982/83 is as high as 0.94.

Table 2.6: Investment, and financing in Nepalese large-scale manufacturing, 1982/83 and 1983/84
(percentage)

	Ratio of investment to sales		Ratio of equity to investment		Ratio of gross profit to investment	
Sector	1982/83	1983/84	1982/83	1983/84	1982/83	1983/84
Food and allied	51.36	82.59	53.14	22.40	67.95	30.71
Drink and tobacco	47.91	67.76	43.75	11.95	27.44	3.45
Textiles	126.89	85.84	65.91	28.32	21.60	21.73
Non-metallic minerals	191.67	279.13	43.43	8.26	27.74	8.15
Chemicals and allied	86.72	82.42	27.76	62.54	22.36	40.93
Wood, paper and allied	96.34	150.12	42.40	9.18	22.58	0.98
Wood carving and crafts	145.80	...	...	...	...	...
Metal goods	115.43	64.96	50.53	78.73	19.52	36.56
Electrical goods	94.35	45.28	11.68	33.37	17.56	15.33
Average (weighted)	106.27	107.26	42.32	31.84	28.34	19.73

Source: Industrial Services Centre. Industrial Review Report, 1982/83 and 1983/84.

Despite this close association between investment growth and profitability, the reinvestment of returned earnings is not the major source of corporate financing - loans and government subsidies constituted 58 per cent of total investment in 1982/83 and 68.2 per cent of investment in 1983/84. Equity financing has been important in the relatively newer industries such as metallic goods and chemicals. Government support has been particularly important in non-metallic minerals, wood products and the beverages branches.[1/] On the basis of the 1983/84 sample survey, the following ranking of the branches in which government and foreign investment (much of it Indian) played a significant role can be made:

Government investment share in branch total (per cent)		Foreign investment share in branch total (per cent)	
Non-metallic minerals	21	Textiles, etc.	28
Drinks and tobacco	20	Wood, etc.	20
Textiles, etc.	17	Non-metallic minerals	17
Food and allied	16		

1/ It is not possible to estimate relative weights of loans and government investment because of inconsistencies in data in the Industrial Review Report for 1982/83 and 1983/84.

The new industrial policy announced by the government of Nepal in October 1987 spells out that: licenses will be issued for the establishment of industries other than the defense industries in the private sector; public sector industries will be gradually handed over to the private sector; cottage and small industries will be reserved for Nepalese naturals; and foreign investment will be permitted in medium industries (with an equity participation of not more than 50 per cent), and large industries with an equity participation of 80 per cent or 100 per cent if at least 90 per cent of the inputs are imported.

2.4 Exports and imports of manufactures

The share of manufactures in total exports in Nepal is higher than would be expected given the country's level of development. In 1985 this share stood at 44 per cent on the basis of the SITC classification which defines manufacturers as SITC 5-8 less 68. India, Pakistan and Bangladesh, however, had higher ratios of manufactures to total export. Like Bangladesh, 80 per cent of Nepal's manufactured exports consist of textile products.

As Table 2.7 shows, the share of manufactured goods in total export has grown considerably since 1974/75. Most of the growth was a result of expanding textile exports. The respective values of carpets and jute goods exports have trebled and quadrupled, and there has been significant growth of leather exports as well. The value-added component of many manufactured exports is rather low, and it is the intention of the government to provide extra stimuli for exports with a higher value added component (e.g. ready-made garments) during the Seventh Plan.

Table 2.8 identifies the major export industries in terms of the export to production ratio for the years 1982/83-1983/84. Export ratios are highest in the handicraft branches (wood and metal carving) dominated by small-and cottage-scale establishments. Expansion of textile exports is, of course restricted by the operations of the multi-fibre agreement.[1/] Within the chemicals sector exports of pharmaceutical products, plastics, cellulose and and petroleum derivatives have also been increasing in recent years. Whereas a major portion of textile exports is destined to the developed market economies, a correspondingly large proportion of chemical exports are bought by developing countries. India's share in Nepal's manufactured exports, about 30 per cent in 1984 and 1985 is, however, significantly lower than its share in total Nepalese exports. Main manufactured goods purchased by India from Nepal consist of jute products, polished rice and timber (see Annex Table A-8).

India remains Nepal's main trading partner but a significantly larger proportion of Nepalese manufactured imports is obtained from India than the proportion of Nepalese exports to India. In fact Indian manufacturers in the neighbouring states of Uttar Pradesh and West Bengal have more successfully exploited the advantages of relatively free and Rupee denominated trade than their Nepalese counterparts. Diversification of trade is made difficult by Nepal's landlocked position. It has been estimated that direct and indirect transit costs were equal to 8 per cent of GDP in the early 1980s. Direct transit costs may account for over 60 per cent of the value of bulk goods; in the case of high-value/low-bulk commodities the share came down to 6-7 per cent. The government hopes that facilities at Calcutta harbour (through which

---

1/ The USA in 1986 decided to impose quota restrictions on textile imports from Nepal.

Table 2.7: Exports of major manufactures, 1974/75-1986/87
(NRs million)

Manufactured product	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	First nine months 1985/86	First nine months 1986/87
To India														
Jute cuttings	...	...	...	...	3.2	7.5	17.7	18.2	5.2	1.2	...	...	...	...
Jute goods	...	...	...	...	8.2	8.3	10.3	81.0	179.7	212.1	260.0	167.4	137.6	123.8
Hessian	...	...	...	...	6.2	6.5	3.6	27.1	79.1	91.7	117.1	78.2	61.2	68.0
Sacking	...	...	...	...	1.0	0.3	5.9	49.8	88.0	89.9	85.6	57.9	52.2	33.7
Twine	...	...	...	...	1.0	1.5	0.8	4.1	12.6	30.5	57.3	31.3	24.2	22.1
Timber	283.2	54.1	103.1	146.7	176.7	136.1	226.2	87.2	28.8	7.9	25.7	...	...	...
Rice (husked)	116.7	495.4	343.0	46.5	13.3	2.9	117.6	136.5	11.3	75.7	250.0	93.2	63.6	13.3
To other countries														
Jute goods	34.3	56.2	58.6	63.2	124.8	115.0	28.6	1.5	...	...	...	...	...	...
Oil cake		1.4	18.2	8.1	11.2	3.5	0.4	...	...	...	...	...	...	...
Rice brancake	-	2.4	3.1	7.1			1.2							
Bristle	2.3	3.1	3.2	2.2	1.6			0.1						
Woollen goods	6.7	2.8	3.9	5.0	5.5	6.7	10.2	5.1	4.8	3.9	4.6	3.8	3.1	4.2
Nepalese paper & paper products	2.9	2.3	1.2	4.5	5.4	2.5	46.2	0.4	0.7	1.2	0.9	0.2		0.8
Hides & skins	6.0	24.9	55.1	76.3	128.9	211.6	137.4	93.3	95.1	155.6	242.9	233.2	190.8	115.0
Carpets (hand knotted woollen	7.9	9.3	27.9	23.9	45.8	55.4	65.0	64.0	137.8	265.4	249.4	376.4	261.1	418.6
Readymade garments	1.3	2.0	4.0	5.7	8.5	7.8	13.0	13.8	10.0	20.5	470.9	803.7	683.2	434.6
Handicrafts	7.5	12.7	20.5	34.3	41.5	43.0	100.2	12.2	9.4	12.6	12.7	17.7	12.1	20.5
Miscellaneous	1.2	4.0	18.0	18.0	21.7	70.9	45.1	35.2	8.0	3.5	11.7	29.1	21.0	29.1

Source: Trade Promotion Centre.

most overseas trade passes) can be improved during the present Plan, and that improved containerization and improvements in railway transport between Calcutta and the Nepalese border will speed up transit. Expansion of the railway network in Nepal is also being discussed. Improved airport facilities may help increase low-bulk/high-value exports.

Table 2.8: Export orientedness of Nepalese manufacturing branches, 1982/83-1983/84

	Export in per cent of production	
	1982/83	1983/84
Food and allied	3.5	5.9
Drink and tobacco	0.0	0.0
Textiles and wearing apparel	36.4	46.0
Non-metallic minerals	5.1	0.0
Chemicals	20.0	36.6
Wood, paper etc.	9.0	4.2
Wood carving and crafts	84.9	—
Metallic goods	3.4	0.0
Electrical appliances	0.0	—

Source: Industrial Services Centre.

The information on import dependence summarized in Annex Table A-9 is incomplete as it excludes products in SITC category 38 (mainly capital goods and consumer durables in which Nepal is totally dependent upon imports). Nevertheless, it shows the very early stage of Nepal's industrial development. Around 86 per cent of the products for which data is available have import to apparent consumption ratios of one hundred per cent, revealing the fact that import substitution has proceeded at a relatively slow pace in Nepal. Table A-9 shows that except for a (very) small number of textiles and wood products, sugar and vegetable oil, significant scope exists for rapid import substitution through the manufacturing sector. Some progress has been made during the Sixth Plan Period in the cement and leather product areas, but there remain many products in the textiles, paper and chemical branches which could be domestically produced but are at present entirely imported from abroad.

Nepalese industrial policy has in the past fostered the development of import substituting industries, through the use of incentives and the erection of protectionist barriers in areas of interest to domestic producers, such as cigarettes, bidis[1/], matches and jute goods. But these barriers are nearly eroded by widespread smuggling along Nepal's lenthy and porous borders with India.

1/ Bidis are the poor man's cigarettes throughout South Asia.

Tables A-10 and 2.9 report the effective protection rate (EPR) on different manufacturing branches calculated by the Asian Development Bank for the years 1981/82 and 1983/84.[1] The average effective rate of protection on all activities reported in Table 2.9 works out at 35.8 per cent[2] which is relatively modest by developing country standards. It is significantly lower than the average EPR on manufacturing in India, Indonesia and the Philippines and roughly equivalent to that in Malaysia and Thailand. The EPR varies widely, however, the domestic production of yarn, refined sugar, polythene pipes, plastic, rubber and steel furniture is possible only because of the very high effective protection levels they enjoy. Effective protection is also very high for wooden furniture, milk and milk products, iron goods, footware, metallic vessels, paper manufactures and soft drinks. It is interesting to note that the share of these exports in aggregate value added reported in Table 2.9 is only about 19 per cent as against the product groups with below average EPRs account for over 75 per cent of the reported value added. This group includes bidi making, bricks and tiles, animal feeds, cement products, carpets and rugs caps, drugs, jute processing, jewellery and handicrafts; gram and oil products and metal repair activities. There is a negative value added on processed jute goods and manufactures of carpets, rugs, caps, drugs and medicine, jewellery, handicraft and gram.

It is clear therefore that much of Nepalese manufacturing has not enjoyed high protection rates. However, the relatively newer industries such as soap, metal products, plastic and rubber products, etc., have enjoyed significantly higher EPRs.

The EPRs have been estimated only with regard to import-competing and not export activities. To have computed EPRs for the latter, which are relatively unimportant in overall manufacturing, the effects of export subsidies and of export duties would also need been assessed. Thus while jute processing is both an import competing and an export activity the effect of export subsidies and duties would need to be taken into account in assessing the protection granted to the export part of production.

1/ Asian Development Bank, National Industrial Sector Study, Nepal, General Report, Manila 1985, pp.78-85.

2/ An EPR of 40 per cent means that domestic value added per unit of output exceeds world value added by 40 per cent. Generally, while very high positive EPRs indicate excessively high protection, their absolute values are unreliable because small changes in value added can materially affect the value of the EPR. An EPR whose value is negative but does not exceed minus 100 indicates an industry that is absolutely disadvantaged by the policies concerned. Jute processing is such an industry. In industries, where the EPR exceeds minus 100, a production activity is indicated in which, while domestic value added is positive and the industry probably makes profits because of high protection, net foreign exchange earned or saved by the activity is in fact negative (there is negative foreign value added or MVA). Typically, in such an industry, the foreign exchange value of the tradeable goods used in domestic production are worth more than the foreign exchange saved or earned by the production process. (See ADB, Ibid, p. 82).

Table 2.9: Comparison of EPRs by sector and enterprise levels,[a] Nepal 1983/84 (percentage)

Industry	Sectoral EPR	Enterprise EPR
Bakery products	48	28
Biris	7	-8
Bricks and tiles	32	33
Cigarettes	67	100
Carpets and rugs	0	0
Distilleries	57	16
Fruit canning/soft drinks	117	128/97[b]
Footwear and tanning	187	181
Wooden furniture	10,989	...
Steel furniture	...	...
Jute processing	-4	-4
Matches	61	29
Metallic vessels	174	45
Soap	4,633	NVA
Iron products	533	168

Source: Asian Development Bank, National Industrial Sector Study, Nepal, General Report, Manila, 1985, p. 85

Note: NVA = negative value added.

a/ Calculated using enterprise level data obtained from the Survey of Manufacturing, 1983/84, ISC.

b/ The first estimate refers to fruit canning, the second to soft drinks.

Export potential can be assessed by means of the Domestic Resource Cost (DRC) estimates for Nepalese manufacturing in 1981-82. Annex Table A-11 reports DRC cost estimates for industries in terms of their comparative advantage. The lower the absolute value of the DRC, the more efficient is Nepal in the activity concerned. Not surprisingly, there is a reasonably close correlation between the EPR and DRC estimates. It differs from EPRs in that it measures domestic factors of production at their opportunity cost and not in terms of market prices. Nepal appears to have a comparative advantage in activities such as bakery products, carpets and rugs, jute processing, bidis, and bricks and tiles.

A significant increase was recorded in the exports of carpets in 1987 as a result of sufficent supply of raw materials and other support services.

Several policy measures have been implemented in recent years to improve export trade and to substitute for imports through domestic production. In line with the overall objective of meeting the basic needs of the people, the export of certain items, which are currently in shortage relative to domestic demand, have been completely banned, and restrictions have been imposed on others. However, the rest of the exportable items are free of restrictions. Special emphasis has been given to the supply of raw materials; a bonded warehouse system has been introduced for ready-made garments to ensure regular supply of raw material inputs with rebates on the exports of finished products. These measures are being initiated in order to reduce their production costs, enabling them to sharpen the competitive edge of these products. The government is considering to extend the above incentives to other industries. Implementation of such a programme is expected to yield positive and quick results towards accelerating the pace of expansion in export-oriented manufacturing activities in the country.

2.5 Geographical distribution of manufacturing enterprises

The geographical distribution of the production units in the larger-scale, organized sector is spatially more restricted. The bulk of larger-scale enterprises is located in the eastern half of the country. The picture is reinforced by the locational pattern of manufacturing units disposing of more than NRs 200,000 worth of investment in machinery: 316 out of 422 operational units in 1984 were located in the Eastern and Central Development Regions. The great majority of these latter enterprises are located in the Kathmandu area and in the terai parts of Lumbini, Narayani and Koshi Zones, close to the Indian border. Proximity to major national and international markets and the relatively good quality of the domestic infrastructure in these areas were major locational determinants.

Information on geograhical distribution of number of establishments and persons engaged by districts, zones and development regions is presented in Annex Table A-12. Of 4,903 establishments, 2,495 establishments were concentrated in the Central Development Region whereas the smallest number of 192 establishments were located in Far Western Development Region in 1981/82. The Central Development Region alone accounted for close to 50 per cent of manufacturing value added generated by the manufacturing sector in Nepal in 1981/82 (see Annex Table A-13). As regards the districts seven of them were particularly significant for manufacturing. In descending order they were Kathmandu, Parsa, Chitawan, Jhapa, Morang, Rupandehi and Dhanusha, together accounting for 52.8 per cent of manufacturing employment and 47.2 per cent of MVA. On the basis of percentage increase in the number of establishments Mid Western Development Region recorded the highest increase in the early 1970s and 1980s. However, the greatest increase in MVA in 1981/82 occurred in the Far Western Development Region.

Given their particular characteristics, the location patterns of cottage and larger-scale industries are radically different. Cottage industries are dispersed all over the country's villages; only very few of them are dependent on national or international markets and hence on location linked to the country's limited modern infrastructure. There is a differentiation according to the local availability of inputs: in the mountain zones, processed food, woollen textiles, bamboo and stone products are practically the only products. In the hill zones, food products remain predominant, but furniture and paper, cotton fabrics, tools and utensils, bricks and slates are also important products. To the extent that national and international markets are served, the mountain areas are the main exporters of woollen and bamboo goods. The hill areas supply a variety of craft products.

Under the Seventh Plan, a more balanced industrial location pattern is expected to result from restrictions on location in border areas and measures encouraging decentralized development. At present, the Central Region shows the widest range of manufacturing branches, although food processing, textiles, furniture, metal products, bricks and tiles stand out; it is also by far the most important exporter of manufactured goods. The Eastern Region had a somewhat less diversified structure. Food processing dominates, although printing, textiles, bricks and tiles also make an important contribution. In the mid-1980s, virtually all large plants under construction (those with a projected fixed capital investment of more than NRs 10 million) were located in the Eastern and Central regions; no units with a projected fixed capital investment of more than NRs 10 million were under construction in the Mid- and Far-Western regions.

2.6 The challenge of meeting basic needs: role of selected sub-sectors of manufacturing

2.6.1 A basic needs strategy

The objective of the basic needs approach to development is to provide opportunities for the full physical, mental and social development of all individuals. The fulfilment of the minimum basic needs of the people assumes greater significance in view of the fact that around 42 per cent of the population lives below the poverty line.

The actual realization of objectives is to come through the provision of appropriate commodities and services as basic needs are interpreted in terms of food, shelter, clothing, medicine, education and security. The approach advocates the elimination of poverty through the provision of these "ends" of meeting at least the lowest level of basic needs for continued survival of all in the society.

The prime thrust of the government's endeavour is to meet the basic needs of the people by the end of this century. It is estimated that the population of Nepal would reach the size of 25 million by the year 2000. During the next 12 years this programme could be mounted on a massive scale with a focus on core areas having great potential for increasing basic needs-oriented production.

The United Nations Food and Agricultural Organization (FAO) estimated daily *per capita* requirements of 2,256 calories for human survival. The estimated requirement of edible cereals (with low degree of industrial processing) in Nepal is set at 5.3 million tons[1/] in the year 2000 in order to meet the basic need of food consumption. At the national level, while 93.1 per cent of the households in rural areas of Nepal reported as having their own houses, lot of improvements are required to make the housing conditions healthy and hygienic for human habitation. While it is not an easy task to estimate the housing requirements by the year 2000, the basic need of clothing could be estimated on the basis of *per capita* consumption. On the basis of high, medium and low *per capita* consumption of 15, 12 and 10 metres per annum the cotton textiles requirements in the year 2000 would be 360 million, 288 million and 240 million metres respectively.

1/ It is assumed that, of the total cereal production of 7.4 million tons in the year 2000, 40 per cent of gross production will be lost in seeds, cattle feed, dehusking, etc. leaving 60 per cent in edible form for human consumption.

Primary education seems to be within the reach for all by the year 2000. However, there remains the task of producing learning and teaching aid for over 7 million adults. In specific terms "health for all" includes adequate physical facilities, drugs, equipment supplies and improvements in sanitation. It is worth examining the role of selected sub-sectors of manufacturing in meeting the above basic needs, with a focus on their problems and prospects.

2.6.2 Food processing

Cereal processing is the single most important manufacturing activity within the food industry, with rice and oil mills dominating. To meet the basic needs cereal production is targeted at 5.3 million tons for human consumption in the year 2000. An increase in grain production necessitates a corresponding increase in the country's grain smelting capacity.

The rice process operations mainly include village, and household dehusking, polishing of rice and the preparation of whole meal flour by the farmer. Wheat is milled in a few commercial-scale operations to provide refined flour for the bakeries and noodle factories. It is estimated that they process 20 per cent of the total output of wheat, the remainder is processed by the housewife. Maize is also used in a subsistence manner and not milled on any commercial scale.

There are a number of products that can be derived from cereal processing. For the most usual and necessary primary operations Nepal has sufficient capacity to convert grain into human food. The efficiency with which these processes are carried out is a subject that should be carefully studied. Small rice mills, for instance, are based on old technology with much lower milling efficiency than modern rubber roller types. The prevention of wastage from harvest to consumer should be the subject of detailed study, since much of the country's production is lost in post-harvest storage or inefficient milling. Efforts to improve this efficiency could have a greater impact on production than research into improved varieties and cultivation practices.

Prospects for higher degree of processing of food grains on any large-scale may effectively remove the grain from immediate use by the majority of Nepalese which would adversely effect the food balance. The government should therefore actively discourage the growth of both domestic and foreign investment in product areas such as corn flakes, glucose starch or corn oil. Prohibitive tariffs on their imports may also be considered as a means for discouraging their consumption. In recent years, a food industry based on local production of noodles has sprung up. Policies affecting this industry must be based upon a consideration of the impact of its growth on the price of grain and the consumption levels of the landless rural poor and other vulnerable income groups.

Opportunities exist for the further processing of waste materials especially husks from rice, maize and wheat. Oil extraction processes already exist for rice brand. However, there is a shortage of husks for processing, largely due to high transport costs and competition between two mills which are situated close to each other.

Another important segment of the food manufacturing branch is the fruit processing industry. A wide variety of fruit is grown in Nepal and current research is actively promoting the cultivation of other fruits which are not traditionally grown in the country. The harvest periods for fruit show that raw materials could be available throughout the year. However, analysis of their location or growing area shows that they would be dispersed between the three climatic regions of the country. Although transport and communication could be possible between a terai and lower hills locations combining all three would prove too difficult due to the perishability of fruit after harvest.

Total fruit production at the end of the Sixth Plan period in 1985 was estimated at 343,204 tons, and is expected to rise to 461,743 tons by 1990. Priority areas are also shown in the Seventh Plan by region with the major emphasis being placed on the production of citrus. The aims of the Plan are:

1. to increase the consumption of fruit in order to improve nutritional standards;

2. to achieve self sufficiency in the production of apples, citrus fruits, bananas, pineapples, mangoes, pears and grapes; and

3. to increase fruit production from 343,000 tons to 462,000 tons by 1990.

Field reports indicate that there is sufficient capacity for processing of fruits into squash, juice, jelly, jams and slices. It is estimated that by 1990 the projected demand for processed fruits in Nepal will be 364.3 tons, while the present processing capacity is already 2,893 tons per annum. This capacity includes a new plant, Nepal Beverages and Food Products Ltd. which is a joint venture with the Kissan group in India - only 10 per cent of the output of this plant is destined for domestic consumption. The Sarlahi fruit processing plant commenced production in 1985. It has a capacity of 418 tons of processed fruit per year.

Scope also exists for the expansion of vegetable processing in Nepal. The Ministry of Agriculture has estimated that there are sufficient vegetables to supply 49 kg per head per year, i.e., an output of 741,600 tons of various vegetables but excluding potatoes. The Seventh Five-Year Plan proposed to increase the availability of vegetables to 970,000 tons, which is expected to be achieved by concentrating production along lines of communications and around urban areas. The proposed increase in output involves an increase in area from the present 138,000 hectares to 140,500 hectares; the average yield per hectare is expected to be 5.37 tons. Development of the vegetable processing industry relies on close collaboration with the grower, good technical management, a high degree of quality control and grading, entrepreneurial skills and a knowledge of export market opportunities. Co-ordination of these skills and factors are the main constraints on the expansion of vegetable processing in Nepal.

2.6.3 The construction industry

Around one-fourth of 93 per cent of Nepalese population who own houses had their houses with only up to 200 square feet plinth area in 1986. Almost half of the houses are of only one floor, 68 per cent with less than two rooms and 80 per cent of them were constructed with the aid of thatched and wooden roofs. Only 5.9 per cent of the houses had pipe water supply in 1986; 5.6 per cent had toilet facilities and 0.9 per cent electricity. Around 38.5 per cent of the households reported insufficiency of housing conditions. It implies that significant improvements are needed to provide proper accomodation as opposed to mere shelter. Rural housing improvement programme should focus largely on the provision of locally produced cheap construction materials.

Until recently housing was given a scant attention and always received a low priority in the investment plans and programmes of the government. With the promulgation of the basic needs strategy the situation is taking a more serious turn regarding housing. Although stones suitable for the building and construction industry are available in abundant quantitites in almost every part of the country, very little has been done to investigate the deposits from a qualitative point of view. Quartzite, granite, sandstone, limestone, dolomite and gravel are examples of the raw materials readily available. Boulders, stones and gravel are in sufficient quantity in the rivers to justify commercial exploitation. Roofing is still a problem in Nepal. Shingles are to be eliminated for ecological reasons. Slates are found to be very expensive. Straw and grass are suitable only in some areas and not very durable. Corrugated iron sheets are to be imported.

Although the local current tile factories and brick making units produce products of an acceptable quality and price, it is apparent that these industries need to undergo modernization in terms of equipments used for producing tiles and bricks. Improvement in technology is very much considered an important element of promotional activities of the local construction industry in Nepal.

2.6.4 Textiles

The current textile production1/ in Nepal meets only a small part of the total demand. The Seventh Plan envisages the establishment of textile mills in the private sector with a combined production capacity of 37.5 million metres per annum. If this target is achieved, total textile production in the organized sector will be a little over 51 million metres by 1990. If additional capacity for another 50 million metres could be added over a decade after 1990, the total production will exceed 100 million metres which will meet about 42 per cent of the requirement as per the low per capita annual consumption estimate of 10 metres.

With effective enterprise services, market organization and proper supply of inputs, a substantial increase in the production of cotton textiles could be achieved in the organized sector and in the small-scale units located in urban peripheries and rural areas. Cotton textile industries would have grown on a much larger scale if the raw cotton were available in sufficient quantity in the country. During the Seventh Plan only 10,000 hectares of land will be under cotton cultivation producing only 15,000 tons of raw cotton. Efforts will have to be made to expand cotton cultivation in potential areas of Mid and Far Western of Terai. Imports of selected items of textiles seem to be unavoidable to meet the minimum needs of the people.

2.6.5 The role of cottage and small industry2/

Production of goods and services to meet the basic needs must be accompanied by increasing the purchasing power to command goods and services necessary to meet their basic needs. Poverty is the result largely of widespread unemployment. The high incidence of underemployment in rural areas

---

1/ The present cotton textile production capacity is not known, as information on the installed capacity in the unorganized sector is not available.

2/ See Section 2.3 on ownership and investment patterns.

is due to the fact that labour remains underutilized during 62 per cent of the available working days. Employment generation must, therefore, be the overriding objective of economic policy and planning in Nepal in order to ensure a source of income and to raise the standard of living.

The development of cottage and small industry is essential to create gainful employment opportunities. At present cottage industry is a large sub-sector of manufacturing in terms of value of industrial production and employment. A vigorous and purposeful attempt to develop and expand cottage and village industry by utilizing traditional skills and local resources could create more employment opportunities and bring about a general rise in incomes. The contribution of particular industries to the basic needs will have to be assessed in order to determine which cottage industries should be promoted and expanded. The handloom industry will have to be given priority as it meets the clothing needs of the people and can be an increasingly important source of income to the rural families and landless labourers. Export-oriented industries, such as woollen products and metal curios sub-sectors could earn significant amount of foreign exchange besides providing widespread employment opportunities.

In a capital scarce economy like that of Nepal an important factor determining the employment potential of an activity is the capital requirement for setting up a new enterprise. The requirement of capital would of course differ vastly in household based units compared to more organized ones. While low capital requirement is an attractive feature of cottage industries, there are other factors which make them important in a strategy for the alleviation of poverty in a poor agrarian economy like that of Nepal. In a country with *per capita* cultivated land of only about 0.2 hectare, crop production (or for that matter agriculture) cannot be expected to provide full employment to the entire rural labour force. Cottage industries and other non-farm activities can play a very important role in supplementing the income from farming for the landless as well as the marginal farmers. While available surveys of cottage industries do not provide any information about the landholding of the owners of such enterprises, one survey[1/] shows that in the hills the contribution of 'non-agricultural household enterprises' in the total income of a household is much higher for the landless group compared to the other groups. In the *terai*, this was found to be the case not only for the landless but also for the marginal and small farmers. Another study reported that both in the hills and the *terai* the contribution of off-farm employment in total employment is much larger for the landless and small farmers compared to the medium and large ones. Thus the rural poor are likely to benefit more from promotional efforts aimed at higher growth of cottage industries, particularly the household-based ones. Assistance to the organized cottage units, if properly devised, can also help the rural poor by providing them access to such industries either through the capital market or the labour market. The possibility of the latter is clear from the fact that a substantial proportion of employment in organized cottage industries is accounted for by hired labour.[2/]

1/ ARTEP, *Nepal Rural Household Survey*, Bangkok, 1976.

2/ For details, see ILO, *Employment Expansion through Cottage Industries in Nepal: Potentials and Constraints*, March 1986.

3. INDUSTRIAL DEVELOPMENT PLANS, POLICIES AND INSTITUTIONS

3.1 Industrial policy environment

In pursuit of a balanced approach to industrial development, industrial policies are attuned to the twin objectives of import substitution and export promotion. However, the practical implementation of programmes and projects reveals the emphasis placed on import substitution. Realizing the limits of the domestic market, the New Industrial Policy, announced in October 1987, spells out special incentives for export-oriented industries and attempts to create a situation in which the private sector could play an increasingly important role. The evolution of industrial policy in Nepal during the planning era has undergone several changes,

In the first two development plans (1956-1961 and 1962-1965) no specific industrial policy was stated apart from the enactment of a few acts pertaining to the establishment of enterprises. The Third Plan (1965-1970) specifically mentioned the government policy to develop the public sector as well as the private sector, with a focus on the mobilization of idle installed capacities of different industries to expand industrial output. The Plan also listed priority areas for promoting new industrial units:

(a) saw mill, plywood, paper, sugar, cement, lime, mica, etc. using indigenous raw materials and substituting imports of such products;

(b) steel re-rolling, as the imports of such commodities were insufficient for the national requirement;

(c) cotton and woollen textile and edible oil which can be self-sustained within the country;

(d) export-oriented industries like jute and tea; and

(e) basic industries like fertilizer, agricultural tools, etc.

The Fourth Plan (1970-1975) specifically emphasized the role of private sector, with a new list of priorities assigned to private initiative:

(a) agro-based industries using indigenous raw materials and producing exportable goods, like jute and tea;

(b) forest-based industries using natural resources like the forest materials and herbs;

(c) mineral-based industries producing preferably basic and exportable products;

(d) import-substituting industries like cotton textile to fulfil the requirements of the country; and

(e) basic industries like fertilizer, agricultural tools, cement, etc.

The target set for the Fifth Plan (1975-1980) was to expand the output of industries already established and to set up some new industries. Inspite of persistent power shortages and labour strikes in the latter part of the period, the industries recorded an annual expansion of 6.7 per cent during the Plan period.

The objectives of the Sixth Plan (1980-1985) were set against the background of the principal economic problems prevailing in the country and in consideration of the earlier constraints in plan implementation. In order to make development objectives more realistic the following objectives were set for the Sixth Plan:

(a) to attain higher growth rate in production;

(b) to increase productive employment opportunity;

(c) to fulfil minimum basic needs of the people: the following were included for minimum basic needs;

- to make available more food-grains by increasing its production;
- to make available more fuelwood for domestic use by planned development of forests;
- to increase the supply of drinking water;
- to extend basic health facilities and sanitation services;
- to extend primary, vocational and adult education; and
- to extend minimum transport facilities by constructing mule trails, suspension bridges and wooden bridges.

A 10.3 percent growth of industrial output attained during the Plan period was encouraging. In order to achieve the aforementioned objectives emphasis was placed on the development of cottage and small-scale industries and upmost priority was accorded to the full utilization of the already created infrastructure. As the objectives set in the Sixth Plan are long-term ones, they are equally valid to day as then, and the broad objectives of the Seventh Plan (1985-1990) are identical with those of the preceding Plan.

The following objectives and policies have been identified in the industrial sector in pursuit of implementation during the Seventh Plan (1985-1990):[1/]

Objective

- to increase the contribution of the industrial sector to gross domestic production;

- to expand and develop industrial sector with the aim to meet the basic needs of the population;

- to emphasize the expansion and development of cottage industry as a means to increase productive employment opportunities; and

- to increase both the production and productivity of certain industrial products to promote exports and to substitute imports.

Policy

- Industries which have a direct linkage with domestically produced raw materials and which can contribute positively to the gross domestic product will be promoted and optimum utilization of production capacity of already established industries will be stressed.

1/ The objectives and policies announced in the beginning of the Seventh Plan have undergone several changes. These changes are presented in Section 3.2.

- System of incentives and other related provisions related to the increased participation of individual entrepreneurs and to attract foreign investments will be reviewed on a regular basis to incorporate necessary changes, if needed.

- Industrial estates presently run in the government sector will gradually be handed-over to the private sector.

- Priority will be accorded to promote industries, except for those related to defense production, in the private sector.

- Necessary protection, but no monopoly rights, will be granted to industries involved in production of goods substituting imports, used in daily consumption and of construction materials. However, due care will also be taken that protections do not result in adverse effects on the consumers.

Working policy

- A long-term plan for the development of industrial sector will be formulated and implemented in co-ordination with the sectoral needs and priorities of other sectors such as agriculture, forest and mining to mantain overall sectoral consistency and complementarity.

- Necessary improvements in areas such as management and financial resources will be undertaken to facilitate capacity utilization and to achieve greater productivity in industries both in the private and public sector.

- Efforts will be made to develop institutional mechanism in the private sector to mobilize and employ members of the national labour force in employment opportunities created in the private sector.

- One of the main reasons which has hindered operation of industries in their full capacity has been the erratic and inadequate supply of raw materials and semi-processed goods. Hence, efforts will be made to implement effective programmes to ensure regular and adequate supply of these inputs after an evaluation of present institutional and private arrangements.

- A detailed study on the capital base and resource needs of Nepal Industrial Development Corporation (NIDC) will be undertaken and appropriate steps, as suggested by the study, will be initiated.

- Special efforts will be made to expand the market and promote exports of industrial products like noodles, soap, vegetable ghee, cigarettes, plastic slippers, polythene pipe and plastic goods which already show signs of meeting total internal demands.

- Appropriate policy measures will be devised to protect domestic industries from external competition and to accelerate the pace of industrialization. However, protection measures will be devised taking into consideration the need to move towards self-sufficiency and the need to protect consumer interests.

- To further intensify efforts on different activities such as industrial planning, promotion, research, consultancy services, engineering services, entrepreneur development and increase in productivity, the Industrial Services Center will be strenghtened and transformed to a high-level National Productivity Council so that these activities are run in a campaign-like basis.

- The pace of implementation of the Small Industry Development Project presently operating in Bagmati amd Gandaki Zones will be further improved. Such programmes will be implemented in other districts as well in addition to intensifying the implementation efforts of such components under integrated rural development projects.

- To promote exports and to increase foreign-exchange earnings, productivity of following products of small and cottage industries will be raised in addition to their standardization:

  (1) Woollen carpets;
  (2) Paper and metal handicrafts;
  (3) Ready-made garments;
  (4) Leather and leather products.

- To promote the development of cottage and small-scale industries, a policy will be followed to discourage the establishment of certain industries except at the level of small and cottage industries.

- A system whereby information on licences provided for new industrial ventures and their salient features and an up-to-date registration data can be published and provided to the general public and potential investors will be developed.

- To further facilitate the process of handing-over the industries in the public sector to the private sector, a set of criteria guiding the handing-over process will be developed and on this basis, certain industries will be changed to private ownership.

- Shares and land-ownership of industrial estates presently operating will be sold to industries only. Participation of the private sector will be sought and encouraged in developing land and in construction of sheds in new industrial states. To this effect, a new system of management of industrial estates will be developed.

The programme of the large-scale industry will include:

- Completion of a number of public-sector plants established during the Sixth Plan;

- Expansion of several existing public enterprises;

- Feasibility studies and analyses of industrial performance problems;

- Expansion and improvement of facilities at existing industrial estates;

- Construction of several new estates;

- Improving the raw material supply to the cotton and tobacco industries;

- Simplification of administrative procedures for the registered industries;

- Improved availability of credit; and

- Manpower training.

Table 3.1 shows the allocation of funds under this programme. It is expected that by the end of the Plan period, some 95,000 persons will be employed in the manufacturing sector. Overall capacity utilization is to be raised to 70 per cent, and industrial production is expected to grow by a yearly average of 12.7 per cent (as against 4.5 per cent for GDP as a whole), resulting in a total production increase of NRs 6,980 million.

Table 3.1: Allocation of funds in the organized industries during the Seventh Plan, 1985-1990
(NRs million)

Programme	Expenditure
Public sector industries	1,452.6
Industrial estates	100.3
Finance and credit	252.0
Raw materials development	108.2
Surveys, studies, production	105.2
Total	2,018.3

Source: National Planing Commission, The Seventh Plan, 1985-1990, 1985.

The development programme listed in Table 3.2 will cover projects like the cottage and small scale industry project operated under World Bank assistance; and integrated rural development projects; industrial village projects; and the projects to be implemented under Swiss assistance in Dolakha and Sindhupalchowk districts. Under these projects 5,500 persons will be given motivational, entrepreneurship and management training and 9,600 persons will be given skill development training. In addition, raw materials and implements equivalent to an amount of NRs 15.2 million will be supplied. Measures to stimulate market-oriented production in the sector will include national and international sales promotion, government purchasing and the establishment of storage facilities. The implementation and supervision of the programme will to a large extent be in the hands of local branch offices which will select industries to be developed or established, and which will promote local participation in the programme, e.g., through the selection of trainees for skill development.

Table 3.2: Development expenditure on cottage and small-scale industry, 1985-1990
(NRs million)

Project	Expenditure
General programme (except projects)	110.0
Intensive programme	140.0
Sales promotion service	70.0
Ready-made garments and hand-made paper projects	9.0
Ceramics project	2.0
Entrepreneur development programme	1.5
Rural training project	1.0
District level programmes	6.6
Total	399.5

Source: National Planning Commission, The Seventh Plan, 1985-1990, June, 1985,

3.2 Recent trends in industrial policy

The government of Nepal completed a major review of industrial policy during 1986/87. It outlined a new policy package in pursuit of simplification of registration procedures, greater emphasis on domestic resource-based industries and extension of incentives to export-oriented industries. The government is particularly keen to promote foreign collaboration and has launched a major privatization initiative. Forty-nine per cent of the shares of 12 public enterprises were offered for sale during 1986/87. It is hoped that private sector participation in the management of public enterprises will increase managerial autonomy and contribute towards an improvement of the system of public accountability to which public enterprise management are subject. Up to the end of 1987 private purchase of the shares of the public enterprises selected for investment were very limited and the privatization initiative of the government appeared to have been stalled. This is partly due to the fact that despite substantial increments in capital employed profitability levels within public manufacturing enterprises have remained low during 1984-1987.

Direct foreign investment within Nepalese manufacturing has remained very limited. Nevertheless 1986/87 saw a significant expansion of Chinese participation. A rubber tyre project with Chinese finance worth $11.4 million was established. Substantial Chinese financial and technical assistance paved the way for the opening of Nepal's largest paper mill - the Brikuti Mill - which will meet 15 per cent of the domestic demand for paper. China also provided finance for the extension of the publicly owned Himal Cement plant during 1986/87. Liberalization of registration and taxation procedures will, it is hoped, increase the inflow of direct investment from India particularly in export-oriented industries.

Nepal has only recently opened her doors to private foreign investment. Foreign investment is welcome in practically every sector of economic activity with the exception of defence-related industries. Investments are encouraged, however, in the medium- and large-scale industries only. Annex B lists feasible project proposals with details pertaining to project description and capital cost. A list of projects suitable for foreign investment is presented in Annex C with observations on the market potential.

Following a major review of industrial policy during 1986/87 the New Industrial Policy was announced finally by the government in October 1987. The New Policy is aimed at achieving self reliance through the production of basic goods (relating to food, clothing, housing, education, medical care and security), promoting the contribution of the industrial sector to the national income, increasing employment opportunities, and improving the balance of trade through import substitution and export promotion. The following are the salient features of the 1987 Industrial Policy:

No licenses will be required for the establishment of cottage industries, that is, (a) traditional labour-intensive industries using local raw materials and resources, or (b) industries using imported raw materials with a fixed capital of not more than NRs 700,000 and an annual production of not more than NRs 1.5 million, and using not more than 10 h.p. of energy, or (c) industries using local raw materials with a fixed capital of not more than NRs 700,000 and an annual production of not more than NRs 2.5 million). Licenses will also not be required for small industries (with a fixed capital of not more than NRs 3 million and NRs 10 million), provided such industries do not need convertible foreign exchange for importing their main raw materials.

Licenses for the establishment of large industries (with a fixed capital of more than NRs 10 million), as well as other industries which have to import 40 percent or more of their annual raw material requirements, or materials worth not more than NRs 2 million a year, will be issued within 90 days according to the decision of an Industrial Promotion Board headed by the Minister of Industry subject to prescribed conditions.

A standard 30 per cent rate of protection will be allowed to import-substitution and export-promotion industries over a period of five years. Income tax, customs, sales tax, and other fiscal facilities, as well as foreign exchange facilities, will be made available under prescribed conditions. The facilities to which any industry is entitled will be specified in its license or certificate of registration.

Appropriate arrangements will be made for the supply of industrial credit. Industries will be allowed to obtain loans from external sources with the approval of the government. If so appropriate, this government, or an agency designated by it, will guarantee such loans.

No industry will be nationalized, except when so required for considerations of national interest or security. If any industry is nationalized, compensation will be paid within six months on the basis of an equitable evaluation of its assets. If any industry established with foreign investment is dissolved or nationalized, the investor will be allowed to repatriate his share in foreign exchange on a tax-free basis.

Realizing the limits of the domestic market the 1987 Industrial Policy announced some special incentives for export industries:

(i) To be entitled to government's incentives and facilities, the minimum value added required (fixed at 15 per cent for the import competing industries) is only 10 per cent in the case of industries exporting more than 50 per cent of their output;

(ii) Provision of pre-export loans to exporters;

(iii) Provision of duty draw-back (custom, excise and sales tax) to exporters and export-oriented industries, as well as ancillary industries to the extent of export;

(iv) Tax exemption (as in the 1981 Industry Policy);

(v) A National Award for successful exporters;

(vi) Bonded warehousing provision to assist the operation of export-oriented industries, including establishment of an EPZ and Industrial Villages.

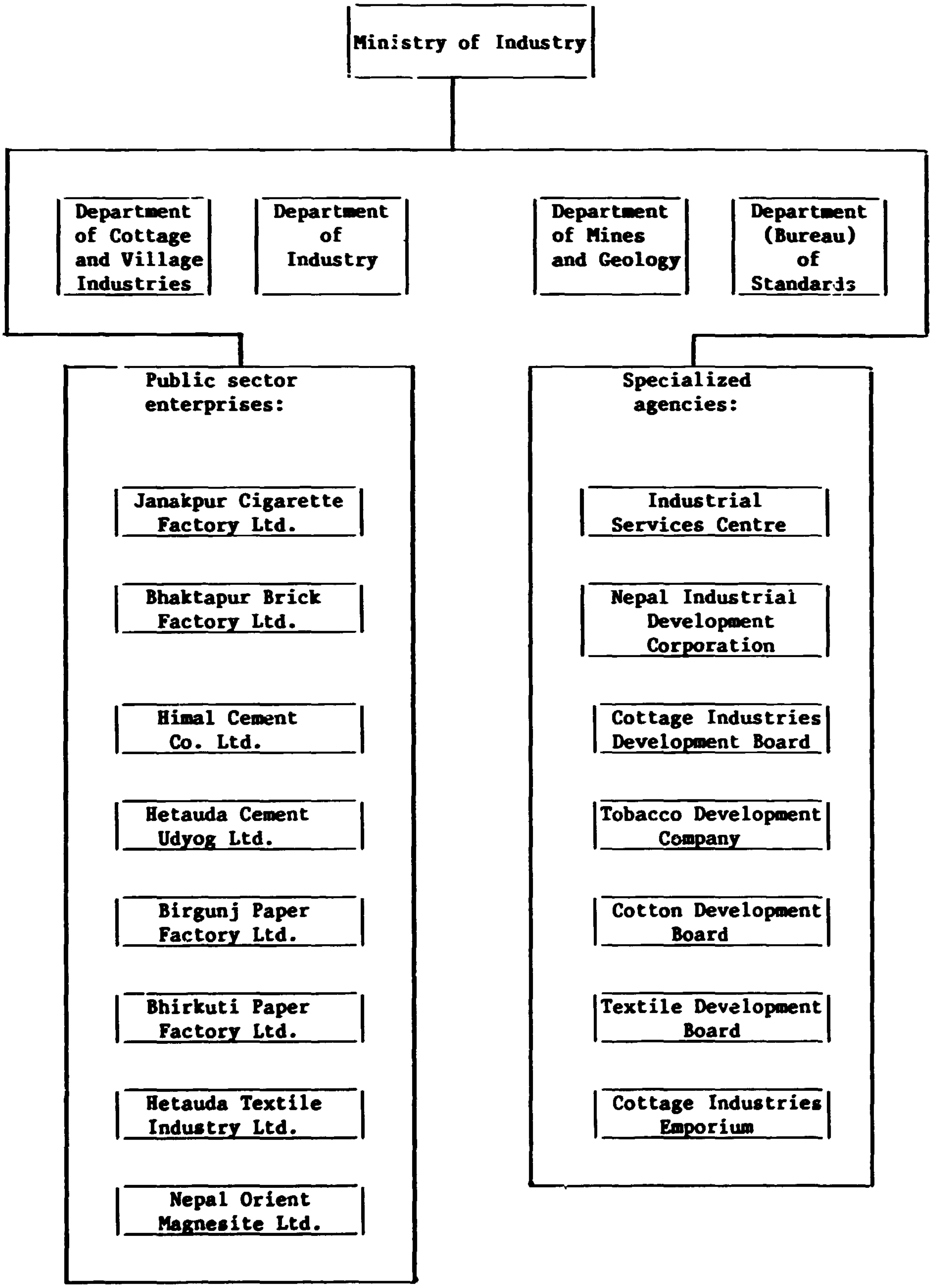
The 1987 Industrial Policy's main limitation might be the fact that it is related to short-term programme of industrial development. While most of the tax incentives provided under the policy are appropriate, some additional incentives, based on successful experience of other Asian countries (particularly for research/development, training grants to skill-intensive industries, promotional grants for sales promotion missions abroad based on actual orders received, special commodity rates for air freight, etc.) may be very pertinent. Progress in this direction requires that the major industrial policy making institutions formulate and implement a coherent package of industrial policies.

3.3 Institutions for industrial development

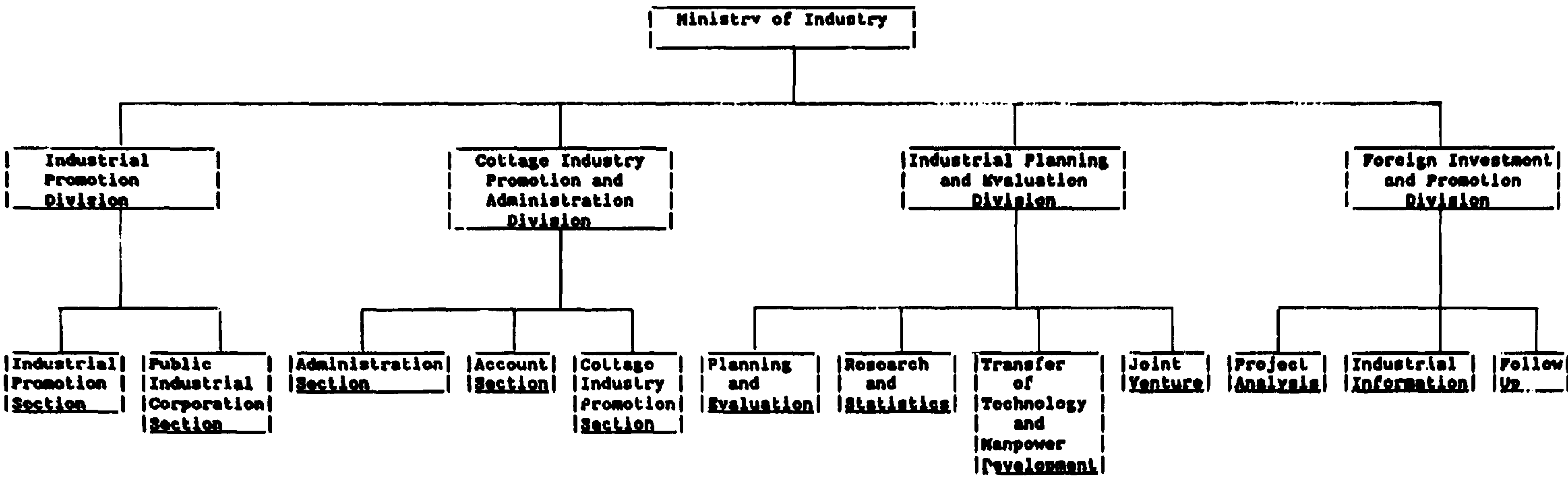
The Ministry of Industry is the main agency responsible for planning, monitoring, co-ordination and policy formulation pertaining to industrial development in Nepal. Industrial administration, policy execution and industrial operation are letf to Departments, specialized agencies, and public sector enterprises. The Ministry proper has four divisions: Industrial Promotion Division; Cottage Industry Promotion and Administration Division; Industrial Planning and Evaluation Division; and Foreign Investment Promotion Division. The internal organs of the Departments functioning under the Ministry of Industry and that of the Ministry proper are indicated in the illustrations.

The Industrial Promotion Division is principally concerned with policy matters relating to the development of small, medium and large industries. It also extends assistance to public sector enterprises in securing scarce inputs like foreign exchange and obtaining clearances from other Ministries as legally required under various statutory provisions.

The Cottage Industry Promotion and Administration Division is primarily responsible for policy formulation and co-ordination of the various programmes for the development of cottage industries. Thus it co-ordinates the activities of the Department of Cottage and Village Industries (DCVI), Cottage



Ministry of Industry
Department of Cottage and Village Industries
Department of Industry
Department of Mines and Geology
Department (Bureau) of Standards
Public sector enterprises:
Janakpur Cigarette Factory Ltd.
Bhaktapur Brick Factory Ltd.
Himal Cement Co. Ltd.
Hetauda Cement Udyog Ltd.
Birgunj Paper Factory Ltd.
Bhirkuti Paper Factory Ltd.
Hetauda Textile Industry Ltd.
Nepal Orient Magnesite Ltd.
Specialized agencies:
Industrial Services Centre
Nepal Industrial Development Corporation
Cottage Industries Development Board
Tobacco Development Company
Cotton Development Board
Textile Development Board
Cottage Industries Emporium


Ministry of Industry
Industrial Promotion Division
Cottage Industry Promotion and Administration Division
Industrial Planning and Evaluation Division
Foreign Investment and Promotion Division
Industrial Promotion Section
Public Industrial Corporation Section
Administration Section
Account Section
Cottage Industry Promotion Section
Planning and Evaluation
Research and Statistics
Transfer of Technology and Manpower Development
Joint Venture
Project Analysis
Industrial Information
Follow Up

Industries Development Board (CIDB), Cottage Industries Emporium and Export Service Centre, all of which have distinct functions in the promotion and development of cottage industries. Besides, it is responsible for the implementation of the IBRD assisted CSI (Cottage and Small Industry) Project.

The Foreign Investment Promotion Division is exclusively concerned with promoting foreign investment in the industrial sector. Apart from providing detailed information on prospects of industrial development to intending foreign entrepreneurs, identifying candidate industries and attracting foreign investment by bringing together the Nepalese and foreign entrepreneurs for joint ventures, this Division is intended to act as a single window for granting various approvals for starting industrial enterprises ionvolving foreign investment.

The Industrial Planning and Evaluation Division is the pivotal agency within the Ministry for industrial planning and monitoring, It has two branches: one for planning and evaluation (PE) and another concerned with technology transfer and manpower development (TTMD). The PE branch is responsible for co-ordinating the five year and annual plans for all agencies and public sector enterprises of the Ministry, for monitoring their performance and liaising with the National Planning Commission and the Finance Ministry on plan formulation. The TTMD branch has certain other planning functions. It arranges the training of manpower under external assistance programmes, identifies projects for bilateral and multilateral assistance, examines proposals for acquisition of foreign technology, and commissions various studies relevant to planning including selected sub-sectoral studies with the Industrial Services Centre.

The responsibilities and functions of the four Divisions represent the broad division of work within the Ministry as it exists now. There is however, no rigid compartmentalization.

The Department of Industry is charged with overall responsibility for the development and implementation of Nepalese industrial policy. It plans public enterprise activities and discusses the incorporation of these activities into the Plan with the Ministry of Finance and Commerce and the National Planning Commission (NPC). Further, the Department maintains statistics and monitors planning performance and renders statistical and other support to industry.

The Department of Industry is responsible for licensing, registration and recommendations for facilities and incentives for all other types of industries. It is authorized to issue licenses for small-scale industries which have investment in fixed assets below NRs 2 million, and has to refer the application for license for higher scale of industries to the recently constituted Industrial Promotion Board (IPB). The IPB is composed of representatives from the Ministry of Industry, the National Planning Commission, the Nepal Rastra Bank, the Ministry of Finance, the Ministry of Commerce, the Department of Industries and specialists. Besides granting licenses, the Board functions as a co-ordinating link between different agencies involved in industrial policy and administration and is empowered to review industrial policy every five years.

The Department of Cottage and Village Industries operates under the Ministry of Industry and is charged with developing handicraft, cottage and village industries. Specifically, the Department is to:

- improve product quality and quantity by support for modernization and expanded marketing efforts;

- increase production of goods using local raw materials; and

- train workers and artisans in these fields.

The Department also leases machinery to artisans and recommends loans for those enterprises to commercial banks.

In addition to marketing and promotion, financing, technical advice and training, the Department is involved in research, design and development of tools and techniques relevant to these small-scale industries. Feasibility studies and pilot projects are also undertaken.

The establishment, expansion and modernization of industries are regulated through licensing and registration. The licensing requirement has been waived for cottage industries where the investment in machinery and equipment is below NRs 200,000 and the investment in total fixed assets does not exceed NRs 500,000 in rural areas and NRs 800,000 in urban areas. Registration of cottage industries and recommendations for various financial incentives are handled by the Department of Cottage and Village Industries.

The Industrial Services Centre (ISC) provides non-banking services for local and foreign entrepreneurs by disseminating information on investment opportunities, policies and procedures for industrial investment and by conducting techno-economic feasibility studies on industrial ventures. Licensing requires submission of feasibility study reports to the Department of Industries and these are often carried out by ISC. The Centre also supervises the country's industrial estates and provides training programmes. In executing this wide range of tasks, the Centre is often hampered by staff and resource shortages.

Although it is part of the Ministry of Commerce, the Trade Promotion Centre plays an important role in the development of the manufacturing sector. It undertakes studies and disseminates information on export potential and also undertakes export promotion activities. It has organized Nepalese participation in international trade fairs and has a permanent office in New York; establishment of another office in Frankfurt is under consideration.

Nepal's leading financial institutions are the Central Bank, Nepal Rastra Bank (NRB), three commercial banks, two specialized financial institutions - the Agricultural Development Bank of Nepal (ADBN) and the Nepal Industrial Development Corporation (NIDC) - a provident fund corporation and an insurance company. The two commercial banks, Nepal Bank Ltd. and Rastriya Banijya Bank, dominate the financial sector, accounting for 75 per cent of total assets and virtually all deposits. The former bank is 51 per cent government-owned, the latter 100 per cent.

Commercial banks are obliged to provide 25 per cent of total loans and advances to the productive sector, including industry. The percentage is to be raised to 45. Within the productive sector, cottage and small industry are among the priority sectors. Industrial exporters can apply for export credit up to 80 per cent of the local price of a product. There has been a reluctance on the part of the commercial banks to supply the required funds to manufacturing establishments, commercial and real estate operations with faster and safer returns being preferred. The formation of consortiums to provide loans to manufacturers, reducing risks for individual banks, may be a solution.

In spite of its name, NIDC lends the larger part of its funds (mainly provided by the government and international donors) to projects outside the manufacturing sector; within the manufacturing sector, larger scale industries based on domestic natural resources have received priority. NIDC is authorized to participate in and establish new enterprises; it also undertakes project analyses. NIDC guarantees loans to industry provided by other banks and it is a major shareholder in the Securities Marketing Centre Ltd., established in 1976 to develop a stock exchange and a secondary market in securities; the Centre has, however, only done modest business so far.

During the Seventh Plan period, NRs 2,560 million in loans is to be made available to the industrial sector, most of it to be provided by commercial banks. An attempt will be made to render banking services more accessible and efficient; the number of bank branch offices is to be expanded from 387 to 634, and the training programme for bank staff is to be strongly expanded.

4. RESOURCES FOR INDUSTRIAL DEVELOPMENT

4.1 Human resources

Nepal's population was estimated at 18 million in 1988. A fifteen-year population target covering the period 1985-2000 is envisaged, with a view to reducing the annual population growth from 2.66 per cent to 1.20 per cent. Assuming that this target is fulfilled, the size of Nepal's population is projected at 25 million in the year 2000.

Table 4.1 presents the projected statistics pertaining to the structure of labour force in Nepal during 1985-1990. On the basis of the expected increase in the participation of the population age-group of 10 years and above, this category of population will increase from 11.62 million in 1985 to 13.20 million in 1990, implying an additional labour force of 1.58 million during 1985-1990. During these years it has not be possible to shift the high proportion of population dependent on agriculture to non-agricultural sectors. Only 3.30 per cent of the economically active population is engaged in industry and 3.8 per cent in services.

Table 4.1: Structure of labour force, 1985-1990

Population details	1981	1985	1986	1990	Estimated addition during 1985-1990
Total population ('000)	15,022	16,625	17,059	18,913	2,288
Population - 10 years and above ('000)	10,517	11,617	11,918	13,201	1,585
Economically active population ('000)	6,850	7,562	7,760	8,603	1,040
Percentage of population - 10 years and above to the total population	70.0	69.88	69.86	69.86	-0.14
Percentage of the economically active population to the total population	45.6	45.49	45.49	45.49	-0.11

Source: National Planning Commission, The Seventh Plan, 1985-1990, June 1985.

A major obstacle to the absorption of labour force in manufacturing industry is the low level of literacy and the shortage of qualified personnel. Although primary school enrollment in the 6-10 year age group had risen to 78 per cent by 1984, the overall literacy rate was only 29 per cent.

The demand for engineering personnel (all levels) during the Seventh Plan period (1985-1990) is expected to be 7,880 persons, of which the country will only be able to supply 4,800. While the Seventh Plan proposes recruitment of foreign experts to fill the high-level technician gap, unemployment among university graduates is well over 10 per cent. In 1983, only some 6 per cent of university students followed courses in agriculture or engineering-related subjects. There is also a serious shortage of facilities for medium- and basic-level vocational training. Some Nepalese industries, especially the garment industry, have to rely on skilled immigrant labour from India.

The Seventh Plan proposes to improve the supply of qualified labour through, among other things, the following measures:

- on-site training in a wide variety of skills to be carried out by Labour Supply Centres located in major industrial locations (these centres will also undertake skill surveys);

- a one-year training programme for 300 persons in such skills as lathe-operation, welding, machine repair and electric installation (Vocational Training Centre, Rani, Biratnagar);

- intensification of the activities of the Employment Research and Development Centre;

- expansion of labour exchange services; and

- the establishment of a National Training Centre for vocational training.

Tentative projections made for the main sub-sectors of manufacturing indicate a total formal sector manufacturing employment of about 180,000 persons in 1990, representing a 20 per cent increase in employment opportunities. By 1995 the manufacturing employment might be of the order of 250,000 persons. Concentration of manufacturing activities on satisfying basic needs - food, clothing and shelter - would suggest particular expansion of light industry.

Integration of women in manufacturing activities[1/]

The national's policy on women's participation in the development process has been adopted from the Sixth Plan period, with a view to eliminating the obstacles apparent in the process of all-round development of the Nepalese society. The thinking is that in all the development projects scheduled for implementation during the Seventh Plan the role of women will be expanded.

Female employment in the manufacturing sector is predominantly found in the textile and food industries. Even in these industries, however, women are underrepresented when compared to other countries. It is clear that the majority of women only do unskilled work despite faster growth rates recorded by female participation in manufacturing and education than men in recent years.

1/ For an assessment of women's participation in manufacturing activities in Nepal, see UNIDO, The Current and Prospective Contribution of Women to Nepal's Industrial Development (forthcoming, 1988).

It is expected that, inter alia, in the light of the envisaged growth of basic needs-linked light industries, such as textiles and food, the proportion of women in industrial labour force would increase from the current level of 12 per cent to 18 per cent by the year 1995. In absolute figures, this would mean an increase of the women's labour force in the formal sector from 13,200 in 1985 to more than 45,000 persons in 1995.

In the informal sector women play a much more conspicuous role. In such activities as food processing and textiles production, women not only dominate the labour force, but are also involved in entrepreneurial and management activities as well. Many of the activities are directly geared to household consumption, but among the more developed cottage industries, such as the export-oriented industries, carpet industry, higher percentage of women's participation is found.

Overall improvements in the performance of the manufacturing sector would be esssential to create more opportunities for women. Sustained effort will also have to be made to improve women's general educational levels. Special programmes designed for women could be linked more intensively to the needs of the industrial sector. Effective enforcement of equal opportunity legislation could also lead to a high percentage of women's participation in manufacturing activities.

4.2 Natural resources[1/]

(i) Agricultural and forestry resources

The Nepalese economy is basically agrarian, contributing over 50 per cent of GDP. Growth in the sector has been slow and fluctuating. During the Fifth Plan period (1975-1980) the sector actually registered a negative growth rate of 2.0 per cent. Although *per capita* food production during the Sixth Plan grew slightly (1.7 per cent) *per capita* calorie intake is clearly below health requirements. Two-thirds of the population is thought to suffer from malnutrition-related physical defects and diseases.

The agricultural sector faces a number of serious problems:

- Although the rural population (to which a large number of Indian immigrants must be added) keeps growing, there are virtually no reserves of virgin arable land. Only 18 per cent of the total land area is cultivatable; the high mountain region offers only very limited opportunities for agriculture, and rural population densities of over 300/sq.km. now occur;

- Both the pressure on land and the demand for firewood have led to massive deforestation, followed by widespread erosion;

- Production methods have not kept pace with the growing rural population pressure and the demand for agricultural products in urban areas - irrigated agriculture, e.g., is still very uncommon, and severe droughts have in recent years repeatedly caused acute food shortages in many areas;

1/ A more extensive survey of the potential of natural resources in the Nepalese economy is to be found in *The Potential for Resource-Based Industrial Development in the Least Developed Countries, No.7: Nepal*, (UNIDO/IS.465), Vienna, 1984.

Table 4.2: Production of principal cash crops, 1974/75-1986/87
(area: in '000 metre, production: in '000 tonnes, yield: tonnes/per hectare)

Cash crops	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87a/	% change in 1986/87 over 1985/86
Sugarcane														
Area	15	15	18	23	22	22	24	25	25	23	17	23	24	4.35
Production	251	253	311	387	370	385	480	590	616	509	408	558	586	5.02
Yield	16.54	16.78	17.31	16.92	16.82	17.18	20.02	23.44	24.25	22.39	23.36	24.27	24.8	2.18
Oil seeds														
Area	112	113	108	133	144	118	122	114	110	111	128	138	138	0.00
Production	66	68	61	78	93	62	77	79	70	73	84	79	79	0.00
Yield	0.58	0.61	0.57	0.59	0.64	0.52	0.63	0.7	0.63	0.66	0.66	0.57	0.57	0.00
Tobacco														
Area	7	7	7	8	8	8	7	7	9	9	9	9	9	0.00
Production	5	5	5	6	5	6	5	5	7	7	6	5	5	0.00
Yield	0.71	0.72	0.74	0.76	0.72	0.73	0.71	0.71	0.78	0.78	0.75	0.54	0.56	3.70
Jute														
Area	33	34	33	40	47	57	52	35	30	24	27	47	20	-57.45
Production	41	41	45	56	66	68	59	43	39	25	33	61	23	-62.30
Yield	1.23	1.21	1.36	1.4	1.4	1.19	1.14	1.21	1.28	1.06	1.22	1.29	1.18	-8.53
Potato														
Area	54	53	52	51	51	51	50	52	59	59	66	70	74	5.71
Production	307	314	270	272	279	278	281	321	373	383	420	357	391	9.52
Yield	5.72	5.88	5.16	5.37	5.5	5.42	5.66	6.17	6.30	6.51	6.41	5.1	5.28	3.53
Index of cash crops (1974/75 = 100)														
Area	100.00	100.45	98.64	115.38	123.08	115.84	115.38	105.43	105.43	102.26	111.76	129.86	119.91	-7.66
Production	100.00	101.64	103.28	119.25	121.34	119.25	134.63	115.07	164.93	148.81	141.94	158.21	161.79	2.26
Yield	100.00	101.85	104.7	103.35	108.59	102.94	116.68	109.14	156.44	145.52	127.00	121.83	134.93	10.75

Source: Department of Food and Agricultural Marketing Services and Jute Development Corporation.

a/ Preliminary.

To improve the productivity of the agricultural sector and the general availability of agricultural products, the Seventh Plan proposes a wide range of measures, including erosion control and reafforestation, expanding irrigated areas in the terai and hill regions, improvements in rural infrastructure, marketing facilities, extension services and input supplies, promotion of diversification and industrial crops and expanded agricultural research. Given the overall situation, both the targetted production levels and the range of programmes to be undertaken may seem unrealistic; they do, however, indicate that the present crop production levels and agricultural programmes fall far short of actual needs.

While raising agricultural productivity should be a major priority, expanding and improving agricultural processing can help use the country's scarce resources more efficiently and raise domestic value added. The following examples give an indication of the potential for expanded processing:

- the diffusion of improved rice milling technology could raise the recovery rate by 5 per cent;

- in the absence of a domestic mill within economic distance, part of the sugarcane output in the Central Development Region is exported to mills in India;

- excellent quality fruit is grown in the country, but part of it goes waste as a consequence of the poor performance of the fruit processing industry (low manufacturing standards, marketing and transport problems);

- in the absence of sufficient domestic milling capacity, some 30,000 tons of raw jute are exported every year.

- the potential demand for meatmeal, bonemeal and tallow (which can be used, among other, as animal feed and fertilizer) far exceeds present production capacity;

- most tanned hides are exported, while at the same time much footwear is imported and domestic shoe production capacity is underutilized;

In the case of fruit processing, meatmeal, bonemeal and tallow, leather products and medicinal herbs steps are being undertaken to improve or expand processing. Even though the scarcity of wood resources inhibits further growth of the wood products industry, an expansion of parquet blocks production for export appears feasible.

(ii) Mineral resources and energy

Geological surveys and mineral exploration efforts made so far have indicated the presence of few exploitable mineral resources apart from stone (especially limestone). Large deposits of cement- and chemical-grade limestone (roughly 100 million tonnes) have been identified in the Kathmandu Valley and the Beri, Narayani and Sagarmatha zones in the Far Western, Central and Eastern Regions, respectively. These have only been marginally expolited, so far, but cement-making capacity is being expanded. Both the building materials and the fertilizer industries would be important users. Most of the building and construction stone is quarried (or collected) by hand. It has been suggested that the industry could expand by exporting to India.

Extensive silica and clay deposits exist. Sand is used in the construction industry and in foundries, but its properties preclude its use for high-quality iron moulds or high-quality glass. Clay is mainly used by traditional, local brickmakers; modern kilns can produce a superior product, but more intensive exploitation needs to be accompanied by quality analysis of the raw material.

Commercially exploitable deposits of magnesite and talc, lead, zinc and iron ore exist in the Bhagmati zone; magnesite and talc are being exported. A lead/zinc mine and concentration plant has recently started producing. The concentrate will be exported. The iron ore deposit near Kathmandu (10 million tonnes with a 54-58 per cent iron content) has not been exploited so far, the energy requirements for the planned mini-steel plant being too high.

(iii) Energy resources

The country's energy needs are largely covered by wood, even in the industrial sector. Demand for firewood far outstrips wood growth, and if the already disastrous erosion levels are to be brought down, the introduction of alternative energy sources will have to be speeded up (Table 4.3). Petroleum accounts for less than 5 per cent of the energy consumed. Petroleum imports constitute a significant drain on foreign exchange, accounting for 20 per cent of export earnings. There are no known oil deposits, but exploration is to be carried out in the southeast of the country. The country disposes of natural gas, coal and lignite reserves, but known deposits of the latter two are small. A model gas plant with a daily capacity of 500 cu.m. is now operating in the Kathmandu Valley.

With regard to renewable energy sources, the situation is potentially better. In recent years, over 1,600 small biogas plants, utilizing animal dung, have been installed. An additional 4,000 plants are to be constructed during the Seventh Plan. These plants, which meet the energy needs of one to five rural families, at the same time produce a high-quality fertilizer. Although these biogas plants are provided at a subsidized price, the majority of Nepalese farmers are unlikely to be able to afford either the investment or the number of animals needed for dung production. Improved wood stoves are also being introduced under the Seventh Plan. If the targetted number of 160,000 is attained, this would mean an annual saving of 40,000 ha. of forest.

Nepal disposes of a huge water power potential (well over 80,000 MW) which has only been exploited marginally so far. By the late 1980's, large hydro-electric power plants with a total capacity of approximately 100 MW should be operational. Preliminary studies have identified locations for power plants with a total capacity of some 5,000 MW. The country's resources far exceed potential domestic demand, and it does not seem far-fetched to envisage future energy exports to India. The implementation of these large projects would, however, depend on external financial and technical resources; the power transmission infrastructure needed exceeds domestic financial and technical resources as well. As it is, leakage on existing transmission lines causes energy losses of 30-35 per cent. Medium-and small-scale hydro-power products are therefore better suited to the needs of the many remote rural areas. Technical improvements to traditional water wheels and the installation of small multi-purpose modern water turbines could in many cases solve the energy problems of rural enterprises or even villages. Some 1,000 5-20 hp. turbines are to be installed in rural areas under the present Plan. The expansion of hydroelectric capacity will have to go hand-in-hand with reafforestation to prevent silting of reservoirs. Solar and wind energy have

Table 4.3: Structure of energy consumption, 1979/80-1986/87

Energy form	Unit a/	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87 b/
1. Traditional									
Fuelwood	'000 tce	4,340.8	4,476.4	4,595.5	4,717.7	4,946.0	5,075.0	6,248.0	6,415.0
Agri. waste	'000 tce	77.1	79.2	81.3	83.4	550.0	565.0	893.0	920.0
Animal dung	'000 tce	29.2	30.0	30.8	31.2	95.0	98.0	696.0	715.0
2. Commercial									
Petroleum	'000 tce	157.9	174.4	164.5	176.7	210.5	229.9	268.0	302.0
Coal	'000 tce	31.4	32.3	35.3	36.3	86.4	69.1	46.0	46.0
Electricity	'000 tce	19.9	20.2	22.7	27.3	30.3	35.5	39.0	45.0
Total		4,656.3	4,812.5	4,930.1	5,073.0	5,918.2	6,072.5	8,190.0	8,443.0

Source: Water and Energy Commission.

a/ Ton of coal equivalent.
b/ Estimated.

not been exploited on a wide scale yet, although simple solar water heaters and driers are now being produced; there is potentially a large market for such simple, low-cost energy converters.

Energy policies formulated in the Sixth Plan (1980-1985) and Seventh Plan (1985-1990) intend to minimize the reliance on traditional fuel wood, and create a broad, flexible base for future energy supplies. The strategy aims not only at increasing the supply of fuelwood through various types of afforestation schemes but also at reducing its consumption through conservation measures.

Among the renewable energy resources, the highest priority has been accorded to the generation of hydro-electricity. The Seventh Plan (1985-1990) lays special emphasis on the development of power as a multi-purpose scheme together with an integrated transmission system and extensive electrification programmes.

The Seventh Plan has also, for the first time, formulated a policy on alternate energy and allocated resources separately for this purpose. The policy encourages the research and development of various alternate energy resources such as small hydro, bio-gas, solar energy, wind power, etc. Simultaneously, it advocates the wide scale dissemination of some proven technologies with appropriate encouragement of the private sector. Notable among them are the improved cooking stoves for conservation of fuel wood and small water turbines/improved water mills for the development of agriculture and cottage industries. Despite the present high cost of bio-gas plants, the dissemination of this technology has been encouraged with subsidy due to its potential earnings and positive contribution to the environment. The policy also recognizes the need for the resource inventory of solar energy and wind power and the exploitation of these resources are also considered on an experimental basis.

Energy targets stipulated in the Seventh Plan are ambitious (Table 4.4). Nevertheless a rapid development of energy resources is an essential pre-requisite for expanding manufacturing production in Nepal.

4.3 Financial resources

Almost 58 per cent of industrial credit was provided by commercial banks in July 1985 (Table 4.5). Nepal Industrial Development Corporation (NIDC) accounted for around 34 per cent of industrial loans sanctioned in 1985. During the Seventh Plan period (1985-1990) a target is set to distribute additional net loan of NRs 2,560 million to the industrial sector, including cottage and small-scale industries, through commercial banks and financial institutions. Of this NRs 370 million will be distributed by Nepal Industrial Development Corporation (NIDC).

Investment policy of Nepal Industrial Development Corporation will be amended to make following arrangements:

(1) to arrange for co-financing by adopting the second mortgage system;

(2) to meet only 20 per cent of the cost (by the entrepreneur) while applying for financial assistance;

(3) to make the operating capital available as needed;

Table 4.4: Some major physical targets of Sixth (1980-1985) and Seventh Plan (1985-1990)

	Sixth Plan Target	Sixth Plan Achievement	Seventh Plan target
A. Power			
Medium hydro (kW)	124,100	74,100	103,100
Small hydro (kW)	5,823	2,821	3,529
Diesel (kW)	15,000	10,674	-
Total (kW)	144,923	87,595 (60.4%)	106,629
Transmission lines (km)	1,324	238 (18.0%)	1,339
B. Afforestation and conservation			
Afforestation (ha)	42,872	37,000 (86.3%)	175,000
Conservation/Improvements (ha)	82,189		
C. Improved stoves (nos)	15,000	12,000 (80.0%)	160,000
D. Biogas plants (nos)			4,000
E. Improved water mill (nos)			640
F. Cross-flow turbine (nos)			320

Source: K.N. Rana, "Energy Syndrome vs. Energy Policy", Nepal Industrial Digest, Vol.12, 1985/86, p.71.

(4) to promote priority industries by the corporation itself or in participation with private sectors;

(5) to invest in the shares of those industries in which the entrepreneur cannot invest initial capital;

(6) to provide necessary guarantee for the purchase of machinery by the industry on instalment basis;

(7) to initiate project management service; and

(8) to invest on the construction companies also on the basis of feasibility study.

Table 4.5: Institutional credit for industries, 1985-1990
(NRs million)

Institutions	Mid-July 1985	Seventh Plan Loan dis-bursement	Loan collection	Net dis-bursement	Mid-July 1990
1. Cottage and small scale industry	276.1	1155.1	495.8	659.3	935.4
(a) Commercial banks	216.8	952.6	414.8	537.8	754.6
(b) Agricultural Development Bank	59.3	202.5	81.0	121.5	180.8
2. Other industries	1121.8	...	...	1902.0	3023.8
(a) Commercial banks	586.2	...	...	1395.5	1981.7
(b) Nepal Industrial Development Corporation[a/]	476.8	700.0	331.5	368.5	845.3
(c) Agricultural Development Bank	58.8	230.0	92.0	138.0	196.8
Total industrial loans	1397.9	...	...	2561.3	3959.2

Source: National Planning Commision.

a/ Including share investment.

Table 4.6 reports the distribution of industrial loans among industries. The share of manufacturing in industrial loans increased from 47.4 per cent in 1978 to 81.3 per cent in 1985. The year 1986 is marked by a marginal decline in the share of manufacturing in industrial loans. Food industries (mostly rice mills) experienced a sharp and steady fall in their share of industrial loan from 34 per cent in 1978 to 11.6 per cent in 1986. In striking contrast textiles increased its share of industrial loans from 1 per cent to 26.5 per cent during 1978-1986, with more than 278 per cent increase recorded in 1986.

4.4 The role of technical co-operation in industrial development

External assistance is an important contributor to the development of Nepalese industry. Capital assistance, both in grants and loans, amounted on average to $185 million annually over the last five years. Technical assistance amounted to about $72 million in 1984. The major bilateral aid donors are Australia, Canada, the People's Republic of China, the Federal Republic of Germany, India, Japan, Kuwait, Saudi Arabia, Switzerland, the United Kingdom and the United States of America. The principal multilateral sources include the World Bank, the Asian Development Bank (ADB), the European Community (EC), the International Fund for Agricultural Development (IFAD) and the Organization of Petroleum Exporting Countries (OPEC) Fund, as well as a number of UN organizations. In addition, some 40 other donors provide assistance. Technical assistance by the UN system was valued at $28 million in 1984; the agricultural sector is the main recipient of such technical assistance.

Table 4.6: Distribution of NIDC loans by type of industry, 1979-1986
(percentage)

Type of industry	1978	1979	1980	1981	1982	1983	1984	1985	1986
Hotels and tourism	52.6	63.6	47.7	54.1	53.9	51.8	50.9	16.5	23.0
Transportation	-	-	2.2	-	0.7	0.4	-	-	-
Power	-	0.2a/	0.8	0.2	0.2	0.3	0.6	2.2	0.4b/
Manufacturing	47.4	36.2	45.1	42.2	38.8	37.6	38.0	81.3	76.6
Cement	2.9	4.0c/	4.0	-	...	1.7	1.9	8.8	4.7
Food d/	34.0	18.1	33.5	28.1	27.6	20.8	21.0	11.2	11.6
of which sugar	-	-	1.5	1.4	1.5	2.0	1.8	-	-
Beverages and cold drinks	-	-	0.4	1.6	2.8	8.0	8.0	14.6	0.2
Textiles (including jute)	1.0e/	6.5e/	3.6	3.8	3.8	3.2	3.1	7.0	26.5f/
Saw milling and wood products	0.5	0.7	0.4	0.4	0.4	0.3	0.2	0.4	1.7
Printing and publishing	0.1	0.1	0.4	0.5	0.6	0.4	0.5	13.0	8.4
Chemicals	2.6g/	5.0g/	1.4	4.8	0.5	0.7	0.8	11.2	10.3
Stone products (clay, brick)	5.6	0.4	0.8	2.4	2.4	2.2	2.1	4.6	3.8
Light machinery	-	-	0.6	0.6	0.7	0.3	0.4	2.5	1.7
Ice making and cold storage	-	0.5	...	...	...	...	...	1.9	0.1
Miscellaneous	0.7	0.9	4.2	3.5	6.4	9.9	10.1	6.1	7.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Loan distribution total (NRs million)	41.7	21.5	21.5	45.8	30.8	53.4	41.4	80.0	117.0

Sources: Ministry of Finance and Nepal Industrial Development Corporation.

a/ Including cables.
b/ Including cables and dry cell battery.
c/ Including rods.
d/ Mostly rice mills.
e/ Including woollens.
f/ Including leather, shoes.
g/ Including menthol ginger oil.

An assessment of technical co-operation activities up to 1985 showed that programmes had contributed to progress in forestry, labour-intensive public works and cottage industries. The linkages of such projects with broader development objectives, however, were unsatisfactory. The fourth (1986-1990) UNDP country programme seeks to improve this through a co-ordinated strategy at the central, sectoral, regional and local level. The programme focusses on: strengthening the development of administrative capacities, manpower planning and human resources development; labour-intensive development of productive infrastructure through local participation; community forestry and soil and water conservation; local-level human, financial and natural resources development and mobilization; and the stimulation of domestic and foreign private investment in productive endeavours.

In manufacturing, the emphasis will be on developing the capabilities of public and private institutions responsible for small-scale industries development, particularly in rural areas; upgrading the quality of industrial products; providing industrial support and information services; improving credit facilities and incentives; and to promote import substitution and export opportunities. In support of these and other development activities, particularly in the hills, the programmes provide for the consolidation of past investments in transport and communications, with the aim of integrating isolated regions through the further development of the rail and road networks and the extension of air transport operations.

A list of UNIDO technical co-operation projects is presented in Annex F. The major recently completed or presently operational projects of UNIDO aim at the strengthening of the domestic production capacity for pharmaceuticals and iron and steel. Support is also given to the Nepal Bureau of Standards, in order to improve the quality of industrial products through standardization, quality control and certification.

The role of technical co-operation in industrial development is to be stretched over the entire spectrum of support deemed essential for fostering the process of industrialization.

(i) Institutional support. The emphasis the government has placed on privatization requires significant institutional initiatives. It is clear that there are very few foreign or domestic private entrepreneurs willing to simply take over existing public sector enterprises. The privatization initiatives need not be stalled, however, if new institutional mechanisms for linking public and private management structures are developed. There is a particular need for the State to play a more active role in the development of technological collaboration arrangements linking foreign and public sector enterprises. There is also a need to examine more closely the experience of other Asian countries in increasing the public sectors capacity to utilize foreign assistance (this is currently low in Nepal) to distribute credit and technical assistance to private enterprises and ensure enterprise compliance with government regulations.

(ii) Industrial policy formulation. It is clear that at least in the medium-run efficient import substitution could constitute the core of Nepal's industrialization strategy. This requires the development of a coherent and flexible policy package embracing investment, employment, trade and credit allocation issues aiming at sharpening the competitive edge of locally produced products. Such a package must be capable of providing correct investment and pricing signals to private manufacturing enterprise. Its formulation and operation requires significant upgrading in the existing managerial and administrative quality of the major decision making bodies. It also requires the rapid development of a statistical system capable of monitoring the changes that are taking place, detecting non-compliance with government directives and identifying crucial bottlenecks. The existing industrial statistical system needs considerable elaboration, extension and strengthening. The provision of multilateral technical assistance for this purpose may be given high priority.

(iii) Skill upgrading. The diffusion of product specific technological know-how and general engineering skills is also required. Equally urgent is the need to provide management and accountancy training. The improvement of marketing skills and the creation of infrastructural links between scattered population centres is a precondition for the promotion of small-scale and cottage industries.

(iv) The development of the cottage and small industry (CSI) sector requires diffusion of technological know-how, marketing facilities, improved access to credit and to transportation networks. Technical assistance can play a useful role if it facilitates the development of an ancillarization framework and enhance subcontracting links between CSI and major manufacturing firms. India provides rich experience in this respect and multilateral technical co-operation can allow Nepal to draw fruitfully upon this experience.

(v) The cottage and small industry sector has in recent years become an important source for generating foreign exchange earnings. Nepal needs to rapidly increase its exports including those to neighbouring countries. Progress within SAARC has been slow however. The poorer South Asian States - Nepal, Bhutan, Bangladesh and the Maldives - have suffered because of this limited advance. Efforts could be speeded up to facilitate the expansion of SAARC to cover industrial issues. The sharpening of the competitive edge of the import-substituting industries should be accompanied by an export drive also to overseas markets focusing on product areas, such as carpets and certain high value added light manufacturing items, that have already made a promising beginning. Furthermore, particular attention may be given to the promotion of industrial activities supporting the development of the major foreign exchange earner, tourism. Multilateral assistance can also provide a basis for enhancing industrial investment and trade co-operation between Nepal and India on the one hand and Nepal and People's Republic of China on the other.

(vi) It is widely recognized that the most important constraint on the industrial development of Nepal is the weak transport system and the underutilization of the country's hydroelectricity resources. The development of the industrial infrastructure should be a primary aim of multilateral assistance. Moreover, it is appropriate that in industrial assistance packages to Nepal more emphasis be laid on programme aid rather than on project specific assistance. This will enable the country to address the problem of infrastructural development more effectively.

Nepal's development efforts are strongly supported by the international community. A substantial increase in aid commitments to Nepal in recent years lends credence to a strong measure of donor's confidence bestowed on the development efforts pursued in Nepal.

ANNEX A

STATISTICAL TABLES

Table A-1: Summary of budgetary income and expenditure 1985/86, 1986/87 and 1987/88 (NRs thousands)

Summary	1985/86[a]	1986/87[b]	1987/88[c]
Total expenditure	9,797,105	11,872,661	15,187,740
Regular	3,584,009	4,133,669	4,961,727
Development	6,213,096	7,558,992	10,226,013
Sources of financing revenue	4,644,522	5,815,000	7,355,750
Existing sources			6,851,406
Tax proposals			504,500
Foreign aid (grants)	1,172,879	1,489,150	2,492,240
Bilateral	1,034,439	1,272,491	2,061,406
Multilateral	138,440	216,659	430,834
Surplus (+) deficit (-) other sources	-3,979,704	-4,568,511	-5,339,750
Foreign aid (loan)	2,501,103	2,847,051	4,109,750
Bilateral	498,920	298,372	432,500
Multilateral	2,002,183	2,551,679	3,677,250
Internal loan	1,403,400	1,721,460	1,230,000
From banking sector	903,400	1,281,460	800,000
From non-banking sector	500,000	440,000	430,000

Source: Ministry of Finance.

a/ Actual.
b/ Revised estimate.
c/ Estimate.

Table A-2: Gross domestic product by sector of origin, 1974/75-1984/85
(NRs million at current price)

Sector	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83 a/	1983/84 a/	1984/85 b/
Agriculture, fisheries & forestry	11,435	11,495	10,389	11,616	13,565	13,520	15,510	17,715	19,082	22,087	23,988
Mining & quarrying	22	23	26	25	34	42	58	66	85	96	104
Manufacturing	664	690	736	794	848	936	1,049	1,243	1,460	1,650	1,792
- Modern	440	459	499	531	559	618	712	851	1,021	1,154	1,253
- Cottage	224	231	237	263	289	318	337	392	439	496	539
Electricity, gas & water	34	38	39	42	48	60	67	82	127	140	152
Construction	583	718	1,020	1,338	1,559	1,570	1,974	2,342	2,377	2,502	2,717
Trade, restaurants & hotels	540	603	636	707	724	889	953	1,068	1,199	1,355	1,472
- Trade						786	832	950	1,069	1,208	1,312
- Restaurants & hotels						103	121	118	130	147	160
Transport, communications & storage	690	805	852	1,093	1,248	1,541	1,889	1,992	2,129	2,306	2,505
Financial & real estate	1,095	1,171	1,412	1,534	1,613	1,833	2,077	2,366	2,594	2,832	3,076
Community & social services	873	1,046	1,145	1,277	1,340	1,495	1,889	2,167	2,591	2,801	3,042
- Public	648	811	884	989	1,090	1,211	1,574	1,747	2,116	2,287	2,484
- Extra territorial						25	31	35	39	42	46
- Private services	255	235	261	299	250	259	384	381	436	472	512
- GDP at factor cost	15,936	16,589	16,255	18,426	20,779	21,886	25,466	29,037	31,646	35,769	38,848
- GDP at market price	16,571	17,394	17,280	19,732	22,215	23,351	27,307	30,988	33,763	33,761	41,738

Source: Central Bureau of Statistics.

a/ Revised estimate.
b/ Provisional estimate.

Table A-3: Production of principal industrial products, 1974/75 - 1986/87

Industrial product	Unit	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	First nine months 1985/86	First nine months 1986/87[a]
Jute goods	M. Ton	12265	15994	16803	16347	15520	14777	16264	15502	19619	21323	20026	16389	11775	13214
Sugar	M. Ton	11926	10632	16351	26502	27200	14158	12020	20764	22357	17496	11039	15190	13424	23040
Cigarettes	In Lakh Sticks	30013	24468	17737	16337	20686	16424	18113	28345	32090	37407	42520	47410	31906	39855
Matches	Th. Gross	649	679	658	677	724	699	626	760	858	1121	1239	1144	821	894
Liquor[b]	Th. Litre	224	580	533	687	455	698	788	477	334	358	1057	1264	844	916
Soap	M. Ton	891	970	1855	1317	1121	1174	2631	3050	5100	5594	7676	9182	6538	5718
Shoes	Pairs	70044	59079	54855	59031	55779	70299	81845	61450	88148	72697	83000	112000	71000	91000
Leather	Th. Pieces	623	665	1096	1256	1320	1857	1802	1637	2800	2770	2247	2001	1445	1151
Agricultural-tools	M. Ton	300	92	287	313	179	207	86	153	368	481	340	391	271	246
Tea	M. Ton	254	36[illegible]	395	413	326	387	535	625	714	827	989	1052	734	767
Stainless steel utensils	M. Ton	156	175	157	173	294	760	470	468	374	439	580	425	326	282
Bricks & tiles	Th. Pieces	25575	33069	23737	20546	12403	33791	25642	20884	30689	29760	25254	28451	17300	24400
Beer	Th. Litre	688	816	630	788	1181	1310	1459	1276	1992	3125	2278	3016	1915	2800
Cotton textiles	Th. Metres	4200	4211	5225	3889	2429	3489	5317	6862	7966	10240	10533	14118	10173	11990
Cement	M. Ton	26933	26933	42694	38080	21019	29163	32326	30378	36959	39225	31479	96043	57157	122324
Biscuits	M. Ton	601	643	723	1197	2037	1912	1675	2267	2279	3638	4339	4698	3476	3182
Plywood	Th. Sq. ft.	607	607	1720	1835	1809	3051	4149	4647	3867	4116	2627	2038	1286	1612
Synth. textiles	Th. metres	1128	1128	1128	1717	1775	2190	2329	2677	3023	3591	3300	6424	3644	8093

Source: Department of Industries and Nepal Rastra Bank.

a/ Preliminary.
b/ Excluding country liquor.

Table A-4: Gross profits earned by public enterprises by sector, 1976/77-1983/84 (selected years)
(NRs million)

Sector	Gross profits					
	1976/77	1977/78	1978/79	1980/81	1982/83	1983/84
Manufacturing	37	28	17	19	3	23.0
Public utilities	20	36	42	23	87	173.0
Trade	-2	-18	-3	-264	-134	-130.0
Social services	-1	-1	1	3	1	1.0
Total (non-financial)	54	45	57	-219	043	67.0
Financial	28	23	23	63	82	89.0
Total (all sectors)	82	68	80	-156	39	156.0

Source: Ministry of Finance, Economic Survey 1984/85, 1985/86; Ministry of Finance, Performance Review of Public Enterprises in Nepal: Progress Report and Target Description of Government Corporation, 1974/75-1986/87.

Note: Data for 1979/80 and 1981/82 are not available.

Table A-5: Capital employed in public enterprises by sector, 1976/77-1985/86
(NRs million)

Sector	Capital employed									
	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86 a/
Manufacturing	419	397	545	584	636	...	679	684	759	804
Public utilities	699	820	807	826	998	...	1694	1545	958	3957
Trade	99	114	15	15	-310	...	-354	-276	576	477
Social services	18	19	65	73	76	...	81	83	83	86
Total (non-financial)	1235	1350	1432	1498	1400	...	2100	2036	2376	5324
Financial	958	1140	1387	1569	1927	...	2853	3409	1454	2020
Total (all sectors)	2193	2490	2819	3067	3327	...	4953	5445	3830	7344

Sources: Ministry of Finance, Economic Survey, (1984/85; 1985/86).
Ministry of Finance, Performance Review of Public Enterprises in Nepal; Progress Report and Target Description of Government Corporation, 1984/85-1986/87.

a/ Estimate.

Table A-6: Number of new licenses issued and new industries registered, 1974/75-1986/87

Fiscal year	Number of licenses issued				Number of industries registered: Public limited				Number of industries registered: Private limited				Partnership	Proprietorship	Total number of industries registered
	Total	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large			
1974/75	88	75	8	5	3	-	-	3	99	92	3	4	22	89	213
1975/76	124	107	9	8	6	-	1	5	87	76	8	3	47	218	358
1976/77	132	116	13	3	5	-	2	3	108	92	13	3	71	816	1000
1977/78	142	122	17	3	4	2	-	2	117	109	7	1	65	641	827
1978/79	48	37	9	2	2	-	1	1	109	97	10	2	63	420	594
1979/80	32	28	3	1	2	-	1	1	63	57	5	1	48	302	415
1980/81	38	28	5	5	2	-	-	2	99	82	7	10	68	467	636
1981/82	93	63	22	8	6	-	-	6	156	124	30	2	73	564	799
1982/83	139	108	17	14	5	-	-	5	179	127	42	10	74	628	886
1983/84	125	92	26	7	8	1	1	6	142	92	52	8	49	418	617
1984/85	287	247	23	17	8	2	1	5	229	133	82	14	106	409	752
1985/86	225	179	30	16	9	-	-	9	274	219	33	22	56	441	780
1985/86 a/	182	144	26	12	9	-	-	9	206	109	78	19	50	384	649
1986/87 a/	181	148	20	13	10	1	-	9	257	193	35	29	61	406	734

Source: Department of Industry.

a/ First nine months.

Table A-7: Number of registered cottage and small-scale industries, 1974/75-1986/87

	Number of industries registered				Fixed capital investment (NRs million)			
Year	Private firm	Private Ltd.	Partnership	Total	Private firm	Private Ltd.	Partnership	Total
1974/75		16	54	70	-	4.2	5.4	9.6
1975/76	321	19	66	406	30.9	7.4	3.8	42.1
1976/77	330	21	68	419	31.4	5.8	4.2	41.4
1977/78	367	40	54	461	32.0	4.1	10.4	46.5
1978/79	318	30	118	466	33.8	7.9	7.4	49.1
1979/80	338	25	38	401	55.6	7.7	5.3	68.6
1980/81	307	20	35	362	44.6	7.2	6.0	57.8
1981/82	364	35	81	480	62.5	20.0	31.3	113.8
1982/83	1169	82	310	1561	167.4	49.1	132.4	348.9
1983/84	1145	46	164	1355	172.6	27.1	55.9	255.6
1984/85	788	49	275	1112	210.9	140.5	18.1	369.5
1985/86	683	32	195	910	290.0	42.3	168.0	500.3
1985/86a/	547	26	144	717	268.0	47.0	152.0	467.0
1986/87a/	1024	46	1198	2268	447.0	37.0	686.0	1170.0

Source: Department of Cottage Industry.

a/ First nine months.

Table A-8: Exports of major commodities to India, 1974/75-1986/87
(NRs million)

	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1985/86	1986/87
Exports to India	512.5	668.1	548.3	258.2	273.5	213.7	524.0	440.3	372.8	500.2	722.1	414.9	318.9	228.5
Timber	283.2	54.1	103.1	146.7	176.7	136.1	226.2	87.2	28.8	7.9	25.7	...	...	...
Rice (husked)	115.7	495.4	343.0	46.5	13.3	2.9	117.6	136.5	11.3	75.7	250.0	93.2	53.5	13.3
Maize	N.A.	-	1.4	4.7	4.9	2.7	24.5	26.1	0.3	0.4	10.9	-	-	-
Mustard and linseeds	29.4	40.3	31.1	4.5	-	-	-	-	-	75.5	25.6	58.1	54.6	36.6
Herbs	2.2	2.8	6.3	6.5	5.2	13.5	16.5	6.4	5.9	8.0	27.9	16.6	13.5	5.8
Ghee	52.0	60.5	35.8	33.2	46.0	21.2	54.0	26.2	36.8	45.8	39.4	47.0	32.5	23.8
Dried ginger	29.0	15.0	27.3	16.1	14.2	8.6	10.8	15.3	19.3	37.1	38.7	30.3	25.0	22.4
Raw jute	...	...	...	...	2.1	12.9	46.4	43.4	85.5	36.5	43.9	2.3	2.2	3.3
Jute cuttings	...	...	...	...	3.2	7.5	17.7	18.2	5.2	1.2	...	...	...	...
Jute goods	...	...	...	...	8.2	8.3	10.3	81.0	170.7	212.1	260.0	167.4	137.6	123.8
Hessian	(-)	(-)	(-)	(-)	(6.2)	(6.5)	(3.6)	(27.1)	(79.1)	(91.7)	(117.1)	(78.2)	(61.2)	(68.0)
Sacking	(-)	(-)	(-)	(-)	(1.0)	(0.3)	(5.9)	(49.8)	(88.0)	(89.9)	(85.6)	(57.9)	(52.2)	(33.7)
Twine	(-)	(-)	(-)	(-)	(1.0)	(1.5)	(0.8)	(4.1)	(12.6)	(30.5)	(57.3)	(31.8)	(24.2)	(22.1)

Source: Nepal Rastra Bank.

a/ First nine months.

Table A-9: Import dependence in manufacturing product area, 1981-1983

Imports as per cent of apparent consumption				
0% - 20%	21% - 70%	71% - 99%	100%	
Pulp of fibres	Vegetable oils	Footwear	Cotton yarn	Angles, shapes and sections
Other paper		Cement	News print	Plates (large and medium)
Raw sugar			Other printing paper	Sheets
Refined sugar			Kraft paper	Tinplate
Cotton woven fabric			Methanol	Railway track material
			Glycerine	Plan wire
			Sulphuric acid	Tubes, welded and reamless
			Titanium oxide	Copper
			Caustic soda	Copper bars
			Soda ash	Copper plates
			Dyestuffs	Aluminium bars
			Nitrogeneous fertilizers	Aluminium plates
			Phosphatic fertilizers	Lead refined
			Potassic fertilizers	Zinc
			Insecticides	Zinc plates
			Rubber	Tin
			Non-cellulosic staple	
			Regenerated cellulose	
			Gasoline	
			Kerosene	
			Distillate fuel oils	
			Residual fuel oils	
			Lubricating oils	
			Pig iron	
			Iron	

Source: UNIDO Data base.

Table A-10: The structure of protection in Nepal, 1981/82
(Rs million)

Industry a/	Value added	Nominal tariff	Nominal protection rate (%)	Effective protection rate (%)
Animal feeds	74.4	3	3	il
Bakery products	15.8	26	10	48
Biri making	260.8	15	10	7
Bricks and tiles	54.9	4	17	32
Cigarettes	222.0	221	30	67
Cement/cement products	8.8	11	3	11
Carpets and rugs	72.0	40	0	0
Caps	1.1	0	0	0
Destilleries	9.4	200	10	57
Drugs and medicines	4.0	0	0	0
Fruit canning/soft drinks	15.4	30	41	117
Footwear and tanning	51.0	13	38	187
Furniture, wooden	99.8	52	96	10,989
Furniture, steel	6.0	55	92	NVA
Ice and ice cream	0.4	4	4	33
Jute processing	73.4	2	-2	-4
Jewellery and curios	0.4	50	1	0
Knitting mills	16.3	45	10	54
Watches	12.1	21	27	61
Metallic vessels	18.6	13	32	174
Grain and oil products	843.0	0	0	0
Paper manufacture	1.6	7	22	129
Printing	34.7	0	13	33
Plastic/rubber products	4.4	40	82	NVA
Polethine pipes	39.6	30	69	NVA
Repairing works	2.9	0	0	0
Sugar refining	85.8	11	20	NVA
Saw milling	60.1	13	7	45
Soap	14.2	33	50	4,633
Tea processing	1.2	25	10	NVA
Yarn textiles	48.5	136	206	NVA
Iron products	20.9	10	25	533
Milk and milk products	16.4	5	20	257

Source: Asian Development Bank, National Industrial Sector Study, Nepal, General Report, Manila, 1985, p.79.

Note: NVA - negative value added.

a/ Industries as defined in the Census of Manufacturing Industries, 1981-82.

Table A-11: <u>Domestic resource costs in Nepal, 1981/82</u>

Industry	DRC
Bakery products	0.56
Bidis	0.95
Bricks and tiles	1.03
Cigarettes	1.44
Cement	1.35
Carpets and rugs	0.72
Distilleries	2.50
Fruit canning/soft drinks	4.16
Footwear and tanning	2.18
Wooden furniture	21.20
Jute processing	0.98
Matches	1.61
Metallic vessels	18.50
Paper	4.43
Saw milling	0.16
Soap	20.00
Iron products	17.18

<u>Source</u>: Asian Development Bank, <u>National Industrial Sector Study, Nepal</u>, General Report, Manila, 1985, p.89.

Table A-12: Number of establishments and persons engaged by districts, zones and development regions, 1964/65 to 1981/82 (selected years)
(value NRs '000)

Area	No. of establishments				No. of persons engaged			
	1964/65	1972/73	1976/77	1981/82	1964/65	1972/73	1976/77	1981/82
Nepal	1,260	2,434	3,528	4,903	18,701	47,638	50,120	81,050
East. Dev. Region	278	507	745	977	8,543	15,538	15,561	27,631
Machi Zone	59	121	210	247	710	3,641	5,819	7,153
Pachthar	-	-	-	1	-	-	-	-
Illam	-	2	3	8	-	-	487	344
Jhapa	59	119	207	238	710	3,641	5,332	6,809
Koshi Zone	120	207	263	407	7,013	9,846	6,685	15,552
Morang	83	124	154	232	6,686	8,923	5,684	12,511
Sunsari	37	80	86	149	327	910	753	2,847
Dhankuta	-	3	4	9	-	13	78	59
Terhathum	-	-	2	7	-	-	-	70
Bhojpur	-	-	17	10	-	-	170	65
Sagarmatha Zone	99	179	272	323	820	2,051	3,057	4,926
Solukhumbu	-	5	4	8	-	264	215	330
Okhaldhunga	-	-	3	4	-	-	69	47
Khotang	-	-	-	1	-	-	-	-
Udayapur	-	4	12	9	-	13	35	30

Table A-12 (continued)

Area	No. of establishments				No. of persons engaged			
	1964/65	1972/73	1976/77	1981/82	1964/65	1972/73	1976/77	1981/82
Saptari	65	94	124	142	622	976	1,674	2,010
Siraha	34	76	129	159	198	798	1,064	2,509
Cen. Dev. Region	693	1,319	1,787	2,495	7,972	24,871	22,134	38,686
Janakpur Zone	194	341	476	629	1,748	11,209	5,292	4,559
Dhanusa	89	119	160	213	1,046	1,973	2,693	1,854
Mahottari	54	115	137	184	208	8,531	1,327	1,064
Sarlahi	51	96	165	194	494	591	1,095	1,431
Sindhuli	-	4	7	28	-	19	35	85
Ramechhap	-	-	-	8	-	-	-	125
Dolakha	-	7	7	2	-	95	142	-
Bagmati Zone	290	495	708	928	3,014	6,870	8,605	16,998
Sindhupalchowk	-	10	18	1	-	21	104	-
Kavrepalanchowk	-	41	50	71	-	169	213	481
Lalitpur	62	95	141	148	585	2,039	2,508	3,476
Bhaktapur	32	39	99	129	184	226	1,064	2,257
Kathmandu	196	307	368	521	2,245	4,403	4,506	10,582
Nuwakot	-	3	32	48	-	12	210	152
Dhading	-	-	-	10	-	-	-	50
Narayani Zone	209	483	603	938	3,210	6,792	8,237	17,129

Table A-12 (continued)

Area	No. of establishments				No. of persons engaged			
	1964/65	1972/73	1976/77	1981/82	1964/65	1972/73	1976/77	1981/82
Makwanpur	7	34	48	77	67	697	796	2,824
Rautahat	37	108	100	176	178	387	327	2,549
Bara	60	89	117	172	516	1,534	1,302	2,682
Parsa	85	153	198	266	2,263	3,518	4,696	5,925
Chitwan	20	99	140	247	186	656	1,116	3,149
West. Dev. Reg.	195	382	665	974	1,282	4,682	7,864	8,238
Gandaki Zone	-	86	158	305	-	841	2,230	2,565
Gorkha	-	-	-	15	-	-	-	256
Lamjung	-	-	-	21	-	-	-	157
Tanahu	-	21	25	43	-	148	333	508
Syangja	-	5	11	43	-	16	29	179
Kaski	-	60	122	181	-	677	1,868	1,465
Manang	-	-	-	2	-	-	-	-
Dhawalagiri Zone	-	-	27	43	-	-	147	200
Myagdi	-	-	-	7	-	-	-	51
Parbat	-	-	15	24	-	-	83	87
Baglung	-	-	12	12	-	-	64	62
Lumbini Zone	195	296	480	626	1,282	3,841	5,487	5,473
Gulmi	-	3	-	40	-	17	-	437

Table A-12 (continued)

Area	No. of establishments				No. of persons engaged			
	1964/65	1972/73	1976/77	1981/82	1964/65	1972/73	1976/77	1981/82
Palpa	-	19	36	34	-	116	437	489
Nawalparasi	29	52	77	173	164	206	596	1,358
Rupandehi	76	135	241	227	604	2,123	2,863	1,962
Kapilvastu	90	87	126	131	514	1,379	1,591	1,155
Arghakhanchi	-	-	-	21	-	-	-	72
Mi-We.Dev. Reg.	52	142	180	265	613	1,897	3,186	3,659
Rapti Zone	-	46	60	79	-	176	403	904
Rolpa	-	-	3	5	-	-	39	15
Pyuthan	-	-	-	3	-	-	-	35
Salyan	-	-	-	4	-	-	-	18
Dang Deokhuri	-	46	57	67	-	176	364	836
Bheri Zone	52	96	120	186	613	1,721	2,783	2,755
Banke	41	68	70	119	525	1,411	1,381	2,103
Bardiya	11	28	36	48	88	310	260	528
Surkhet	-	-	14	19	-	-	1,142	124
Fa.We.Dev.Reg.	42	84	151	192	291	650	1,375	2,836
Seti Zone	32	56	91	116	206	391	653	1,772
Doti	-	-	6	-	-	-	77	-
Kailali	32	56	85	116	206	391	576	1,772

Table A-12 (continued)

Area	No. of establishments				No. of persons engaged			
	1964/65	1972/73	1976/77	1981/82	1964/65	1972/73	1976/77	1981/82
Mahakali Zone	10	28	60	76	85	259	722	1,064
Kanchanpur	10	28	37	66	85	259	309	995
Dadeldhura	-	-	-	3	-	-	-	7
Darchula	-	-	22	7	-	-	413	62
Baitadi	-	-	1	-	-	-	-	-

Source: Central Bureau of Statistics, Census of manufacturing establishments, 1964/65, 1972/73, 1976/77, 1981/82.

Table A-13: Geographical distribution of industrial inputs and value added, 1964/65-1981/82 (selected years)
(value NRs '000)

Area	Gross input				Value added			
	1964/65	1972/73	1976/77	1981/82	1964/65	1972/73	1976/77	1981/82
Nepal	417,602	1,457,205	3,398,793	4,736,877	89,644	311,794	531,162	2,361,292
East. Dev. Reg.	221,141	520,606	1,225,065	1,354,721	24,846	88,452	142,490	616,645
Mechi Zone	70,612	107,091	186,476	489,708	3,117	20,922	43,249	226,197
Pachthar	-	-	-	-	-	-	-	-
Illam	-	-	1,554	863	-	-	312	3,142
Jhapa	70,612	107,091	184,922	488,845	3,117	20,922	42,937	223,055
Koshi Zone	122,339	326,606	657,614	643,727	18,520	27,706	34,034	236,845
Morang	107,144	288,030	600,707	556,468	16,870	19,327	21,134	199,709
Sunsari	15,195	37,533	55,928	80,927	1,650	7,258	12,534	34,253
Dhankuta	-	1,043	252	1,066	-	1,121	72	242
Terhathum	-	-	-	358	-	-	-	223
Bhojpur	-	-	727	4,908	-	-	294	2,418
Sagarmatha Zone	28,190	86,909	380,975	221,286	3,209	39,824	65,207	153,603
Solukhumbu	-	460	817	10,901	-	252	329	5,392
Okhaldhunga	-	-	107	421	-	-	95	186
Khotang	-	-	-	-	-	-	-	-

Table A-13 (continued)

Area	Gross input				Value added			
	1964/65	1972/73	1976/77	1981/82	1964/65	1972/73	1976/77	1981/82
Udayapur	-	1,638	4,685	793	-	311	1,400	758
Saptari	20,566	49,853	309,781	82,155	2,547	31,424	46,486	52,843
Siraha	7,624	34,958	65,585	127,016	662	7,837	16,897	94,424
Cen.Dev.Reg.	142,529	685,516	1,522,580	2,195,345	35,579	150,494	247,379	1,164,480
Janakpur Zone	48,917	224,119	201,327	569,904	7,213	64,232	70,571	292,982
Dhanusa	29,483	119,586	109,252	225,198	4,585	55,450	36,593	109,812
Mohattari	9,927	42,104	29,970	246,638	913	3,958	10,425	133,254
Sarlahi	9,507	61,927	60,110	91,242	1,715	4,556	21,955	46,372
Sindhuli	-	369	1,567	3,497	-	24	918	1,904
Ramechhap	-	-	-	3,329	-	-	-	1,640
Dolakha	-	133	428	-	-	244	680	-
Bagmati Zone	27,821	188,201	405,563	814,661	13,404	63,562	73,551	421,113
Sindhupalchok	-	26,519	1,913	-	-	5,111	528	-
Kevre palenchok	-	10,093	14,949	38,676	-	1,287	4,677	17,387
Lalitpur	4,972	43,417	39,784	88,807	5,150	5,083	13,704	53,232
Bhaktapur	5,074	12,950	26,883	198,745	832	1,145	8,791	83,052
Kathmandu	17,775	94,188	313,589	466,166	7,422	50,729	43,629	258,176
Nuwakot	-	1,034	8,445	4,456	-	207	2,222	2,501

Table A-13 (continued)

Area	Gross input				Value added			
	1964/65	1972/73	1976/77	1981/82	1964/65	1972/73	1976/77	1981/82
Dhading	-	-	-	17,811	-	-	-	6,765
Narayani Zone	65,791	273,196	915,690	810,780	14,962	22,700	103,257	450,385
Makwanpur	3,670	31,930	31,894	241,386	1,919	3,823	10,966	109,904
Rautahat	7,755	63,978	633,831	52,686	1,831	3,428	10,452	46,558
Bara	16,848	33,387	49,539	129,823	3,062	6,322	13,171	62,714
Parsa	29,288	99,135	151,770	214,621	6,699	3,432	42,506	165,140
Chitwan	8,230	44,766	48,656	172,264	1,451	5,695	26,162	66,069
West. Dev. Reg.	30,123	124,657	473,859	804,642	10,107	57,832	81,957	386,874
Gandaki zone	-	27,539	233,489	119,855	-	5,317	12,328	51,573
Gorkha	-	-	-	17,678	-	-	-	3,588
Lamjung	-	-	-	38,966	-	-	-	14,141
Tanuhu	-	11,123	5,866	13,595	-	1,056	1,260	9,163
Syangja	-	350	1,913	4,846	-	45	485	2,657
Kaski	-	16,066	225,710	44,770	-	4,216	10,583	22,024
Manang	-	-	-	-	-	-	-	-
Dhawalagiri Zone	-	-	2,680	10,831	-	-	762	7,779
Myagdi	-	-	-	1,061	-	-	-	952

Table A-13 (continued)

Area	Gross input				Value added			
	1964/65	1972/73	1976/77	1981/82	1964/65	1972/73	1976/77	1981/82
Parbat	-	-	1,231	6,545	-	-	342	4,821
Baglung	-	-	1,449	3,225	-	-	420	2,006
Lumbini Zone	30,123	97,118	237,690	673,956	10,107	52,515	68,867	327,522
Gulmi	-	3,132	-	32,956	-	1,408	-	25,217
Palpa	-	3,602	3 658	11,409	-	24	1,655	6,287
Nawalparasi	4,632	9,174	34,950	89,652	670	3,186	3,221	56,116
Rupandehi	13,479	61,631	132,435	182,135	4,099	46,171	45,317	92,001
Kapilvastu	12,012	19,579	66,647	346,874	5,338	1,726	18,674	144,930
Arghakhanchi	-	-	-	10,930	-	-	-	2,971
Mid-West. Dev. Reg.	19,839	81,125	106,885	212,121	17,504	6,325	48,938	89,119
Rapti Zone	-	14,429	16,114	59,074	-	1,249	3,649	10,486
Rolpa	-	-	55	2,134	-	-	48	545
Pyuthan	-	-	-	466	-	-	-	209
Salyan	-	-	-	151	-	-	-	84
Dang Deokhuri	-	14,429	16,059	56,323	-	1,249	3,601	9,648
Bheri Zone	19,839	66,696	90,771	153,047	17,504	5,076	45,289	78,633
Banke	15,424	53,026	55,395	108,415	13,405	4,932	35,234	53,422
Bardiya	4,415	13,670	32,347	39,494	4,099	144	7,975	23,884

Table A-13 (continued)

Area	Gross input				Value added			
	1964/65	1972/73	1976/77	1981/82	1964/65	1972/73	1976/77	1981/82
Surkhet	-	-	3029	5138	-	-	2080	1327
Far-West. Dev. Reg.	3,970	45,301	70,404	170,048	1,608	8,691	10,398	104,174
Seti Zone	3,096	23,157	41,379	107,187	1,344	4,092	4,906	59,458
Doti	-	-	1,962	-	-	-	193	-
Kailali	3,096	23,157	39,417	107,187	1,344	4,092	4,713	59,458
Mahakali Zone	874	22,144	29,025	62,861	264	4,599	5,492	44,716
Kanchanpur	874	22,144	27,640	57,072	264	4,599	3,429	42,344
Dadeldhura	-	-	-	885	-	-	-	410
Darchula	-	-	1,385	4,904	-	-	2,063	1,962
Baitadi	-	-	-	-	-	-	-	-

Source: Central Bureau of Statistics, Census of manufacturing establishments, 1964/65, 1972/73, 1976/77, 1981/82.

ANNEX B

FEASIBLE INDUSTRIAL PROJECT PROPOSALS

BY THE FOREIGN INVESTMENT PROMOTION DIVISION, 1987

Annex B. FEASIBLE INDUSTRIAL PROJECT PROPOSALS BY THE FOREIGN INVESTMENT PROMOTION DIVISION, 1987

Project	Project description	Capital cost
Dairy project	Production of dairy products such as milk, butter, cheese and yoghurt with a plant capacity of 2,000 litres of milk per day. The main market would be in Nepal with some export potential to neighbouring towns in India. Location of the project would be in the Terai region where livestock farming is widespread in rural households.	Total project cost would be approximately NRs 5.2 million of which NRs 3.8 million would be in machinery and equipment. It is envisaged to finance project with 40 per cent equity capital and 60 per cent loan capital.
Pharmaceutical project	Manufacture of 20 million tablets, 8,000 litres of liquid preparation, 1 million capsules and 0.1 million sachets of powders. The main market for these products would be in Nepal. At present over NRs 100 million worth of pharmaceutical products are imported each year. This project proposal would serve as an import substitution industry.	Total project cost is estimated at NRs 4.4 million of which NRs 1.9 million would be in plant and machinery. The financing of the project would be with 40 per cent equity capital and 60 per cent loan capital.
Laminated jute goods	Hessian cloth a product of the jute industry to be laminated with a low density polyethylene to make laminated jute bags suitable for a wide range of uses, especially for wheat flour and rice.	Total project cost would be NRs 9.5 million.
Packaging industry	Production of 2.3 ply 248 tonnes corrugated box and 40 tonnes of duplex board box. A high demand exists for packaging material in Nepal. Raw materials required for this project could be obtained locally.	Total investment in project is estimated to be around NRs 2 million. The project would be encouraged with a higher level of investment and catering to export and domestic markets.

Annex B (continued)

Project	Project description	Capital cost
Manufacture of trekking and hiking equipment	Production of sleeping bags, heavy down jackets, tents, rucksacks, ponchos and wind gloves. There is a growing demand for these products in Nepal to serve the needs of tourists.	The total investment in the project is estimated at NRs 2 million. The project could be financed on a 30:70 equity/loan basis.
Manufacture of syringes	Manufacture of 18,000 pcs of non-disposable syringes and 6 million pcs of disposable syringes. Market in Nepal.	NRs 2.9 million.
Manufacture of dyes	Establishment of dye making plant with capacity to produce 40 tonnes of disperse dye and 49 tonnes of naphthol dye. The dyes are used mainly in the textile industry. At present all the dyes are imported.	Total investment in the project is NRs 12.3 million of which NRs 3.9 million will be in plant and machinery.The capital is to be raised on 40:60 equity/debt ration.
Processing of synthetic fabric	The project envisages the dyeing and printing of synthetic fabric. The annual production capacity is for 1.7 million metres dyeing and 0.5 million metres for printing. The entire market would be in Nepal.	The total investment in the project is NRs 15.2 million.
Production of sized and dyed yarn	The project envisages the production of 186 tonnes of sized yarn, 214 tonnes of pirned yarn and 30 tonnes of dyed yarn and finished yarn per annum. The entire market for the products would be in Nepal.	The total investment in the project is NRs 8.8 million.
Production of surgical cotton goods	Production of absorbent surgical cotton to meet the demand in hospital polyclinics and pharmacies. The plant capacity would be 156 tonnes of surgical cotton per annum on single shift 8 hour working day. All surgical cotton required by Nepal is currently imported. The project will therefore be an import substitution industry.	The total investment in the project is estimated at NRs 4.1 million.

Annex B (continued)

Project	Project description	Capital cost
Production of paint, varnishes	The project envisages the production of 150 tonnes of paints and varnishes per annum to meet the demands of the construction sector in Nepal.	The total investment in the project is estimated at NTs 4.3 million.
Manufacture of brushes	The project envisages the production of brushes for various uses including painting, shaving, use in toilets, shoe brushes, etc. The capacity would be to produce 500,000 pieces per annum. The market for the brushes would be in Nepal.	Total investment in the project is NRs 3.2 million.
Manufacture of nuts, bolts and wood screws	The project envisages the production of 900 tonnes of nuts and bolts and 125 tonnes of wood screws per annum. The entire market for the products would be in Nepal.	The total investment in the project is NRs 8.8 million.
Production of sport goods	Production of sport goods such as footballs, volleyballs, badminton rackets, table tennis rackets, rings, carrom boards, etc. The main market for the products is in Nepal.	Approximately NRs 2 million. The project would be encouraged with higher level of investment and catering to both domestic and foreign markets.
Production of starch and glucose	The proposal envisages the production of starch and glucose utilizing maize which is available in abundance in the country. The plant capacity of one unit would produce 3,300 tonnes of starch and 1,480 tonnes of glucose. The main markets for starch would be in the paper and textile industries whilst glucose would be an input to the biscuit, confectionery and pharmaceutical industries. By products of the plant such as gluten, maize oil, and steep liquor would also have a market in Nepal.	The total investment in the project is estimated at NRs 8.3 million of which NRs 5.5 million would be for machinery and equipment.

Annex B (continued)

Project	Project description	Capital cost
Production of malt	The project plans to establish a plant with a capacity to produce 4,000 tonnes of malt per annum. The domestic market would take up 25 per cent of production for the beer, biscuit and baby food industries. The balance 75 per cent would have to be esported to Asian countries . The main raw material for the production of malt, barley, would be available within Nepal.	The total investment in the project is estimated to be NRs 35 million, of which NRs 21.5 million would be for machinery and equipment.
Textile industry	The textile industry has been identifiedas a basic needs industry and high priority is attached to investments in this subsector. The The demand for cotton textiles is estimated to increase from 224.7 milion metres in 1985/86 to 269.2 million by the year 2000. The present production capacity of cotton textiles is only 53,800 metres. Much of the existing demand is met by imports. It is envisaged that during the period 1989/90 to 1994/95 7 textile units should be established, of which 4 are integrated textile mills and 3 small units. The 4 integrated textile mills would have capacity to produce 60 million metres and 3,200 mt. of cotton yarn each whilst of the 3 units, 2 would produce 10 million metres each whilst the third would produce 2.25 million metres.	

Source: Ministry of Industry, Foreign Investment Promotion Division, Nepal, Foreign Investment Opportunities, October 1987.

ANNEX C

INDUSTRIAL PROJECTS SUITABLE FOR FOREIGN INVESTMENT

AS IDENTIFIED BY THE FOREIGN INVESTMENT PROMOTION DIVISION, 1987

Annex C. INDUSTRIAL PROJECTS SUITABLE FOR FOREIGN INVESTMENT AS IDENTIFIED BY THE FOREIGN INVESTMENT PROMOTION DIVISION, 1987

Serial number	Manufacturing industry	Type of market potential
1.	Integrated textile mill	Domestic market
2.	Textile processing - dyeing and finishing	Domestic market
3.	Woollen manufacture - blankets	Domestic market
4.	Manufacture of acrylic and polyester	Domestic market
	- Knitwear, jersey	
	Fabric, blankets, hand knitting yarn	
5.	Manufacture of dhoti and saree	Domestic market
6.	Terry towels	Export and domestic markets
7.	Bed linen	Export market
8.	Readymade garments	Export market - EEC, Nordic, Middle East
9.	Spinning mill	Domestic market
10.	Grey cloth	Export and domestic markets
11.	Industrial gloves and aprons	Export market
12.	Leather shoes	Export and domestic markets
13.	Canvas shoes	Export and domestic markets
14.	Sericulture and silk production	Export market
15.	Laminated jute goods	Export market
16.	Light engineering industries	Domestic market
17.	Electric arc furnace	Domestic market
18.	Leather products	Domestic market
19.	Pharmaceutical products	Domestic market
20.	Ceramics	Domestic market
21.	Paper industry	Domestic market
22.	Organic fertilizer	Domestic market
23.	Saline and dextrose	Domestic market
24.	Surgical cotton and bandaging industry	Domestic market
25.	Chemical fertilizers	Domestic market
26.	Pesticides, insecticides	Domestic market
27.	Industrial chemicals	Domestic market
28.	Glass bottles, containers	Domestic market
29.	Domestic electrical appliances	Domestic market
30.	Electric meters	Domestic market
31.	Electric power capacitors and condensers	Domestic market
32.	Irrigation pumps	
33.	Manufacture of bycicles	Domestic market
34.	Bleaching powder	Domestic market
35.	Agricultural lime	Domestic market
36.	Manufacture of chalk	Domestic market
37.	Manufacture of yeast	Domestic market
38.	Production of malt	Domestic and export markets
39.	Assembly of electronic components	Export market
40.	Manufacture of dry cell battery	Domestic market

Annex C (continued)

Serial number	Manufacturing industry	Type of market potential
41.	Manufacture of starch and glucose	Domestic market
42.	Cane furniture industry	Export market
43.	Builders hardware	Domestic market
44.	Stone industry - cutting and polishing	Export and domestic markets
45.	Stone - aggregates	Export and domestic markets
46.	Bricks (dry press)	Domestic market
47.	Plywood	Domestic market
48.	Cement - large plants	Domestic market
49.	Cement - mini plants	Domestic market
50.	Wall tiles	Domestic and export markets
51.	Hand tools	Domestic market
52.	Parquet flooring	Export and domestic markets
53.	Housing and apartment buildings	Domestic market
54.	Varnishes, paints and allied products	Domestic market
55.	PVC pipes and allied products	Domestic market
56.	Jewellery manufacture with precious and semi-precious stones	Export market
57.	Exploration and processing of quartz	Export market
58.	Processing mica	Export and domestic markets
59.	Magnesite brick	Export and domestic markets

Source: Ministry of Industry, Foreign Investment Promotion Division, Nepal, Foreign Investment Opportunities, October 19:7.

ANNEX D

BASIC NEEDS AND NATIONAL PRIORITY INDUSTRIES

LISTED IN THE NEW INDUSTRIAL POLICY, 1987

Annex D. BASIC NEEDS AND NATIONAL PRIORITY INDUSTRIES LISTED IN THE NEW INDUSTRIAL POLICY, 1987

(a) Foodgrains

(1) Modern sugar mill
(2) Integrated oilseed processing industry (including oilseed cultivation)
(3) Integrated tea processing industry (including tea cultivation)
(4) Integrated dairy industry (including livestock farming)
(5) Fruit processing industry
(6) Baby food and nutritious foods

(b) Clothing

(1) Yarn industry: pure cotton or cotton, synthetic yarn and mixed yarn (at least 40 per cent cotton yarn must be produced or mixed)
(2) Textiles (including weaving and processing), pure cotton, or cotton, synthetic yarn or mixed textiles (at least 40 per cent cotton or cotton mixed textiles must be produced)
(3) Integrated textile industry (at least 40 per cent cotton textieles must be produced
(4) Pure woollen or woollen synthetic yarn and mixed yarn (at least 40 per cent woollen yarn must be produced or mixed)
(5) Pure woollen or woollen, synthetic yarn and mixed blankets (at least 40 per cent woollen or wool mixed blankets must be produced)
(6) Sarees (cotton or cotton and synthetic yarn mixed) industry
(7) Uniforms for the army and the police (hosiery and ready-made garments)
(8) Leather, cloth, or canvas shoes
(9) Ginning and baling

(c) Housing

(1) Tile industry, (2) modern bricks industry, (3) occupational tools industry, (4) construction materials made of iron, steel, aluminium, copper and brass, (5) slate, stone blocks, and (6) cement block industry.

(d) Education

(1) Educational materials
(2) Offset press
(3) Printing, writing and duplicating ink
(4) Paper and stationery
(5) Lead pencils

(e) Health

(1) Pharmaceuticals industry
(2) Medicinal herbs processing industry
(3) Saline, dextrose water industry
(4) Surgical cotton and bandage industry
(5) Medical instruments and tools

Annex D (continued)

(f) Security

(1) Industries producing goods require for security in accordance with lists prepared by the army

(g)

(1) Engineering industry
(2) Industrial chemicals
(3) Fertilizer
(4) Pesticides
(5) Sheep and goat farming
(6) Agricultural tools
(7) Seed processing
(8) Starch and glucose
(9) Improved stoves
(10) Briquettes

Source: Government of Nepal, Industrial Policy of His Majesty's Government of Nepal, January 1988.

ANNEX E

LEGAL FRAMEWORK GOVERNING PROTECTION, INCENTIVES AND FACILITIES, 1987

Annex E. LEGAL FRAMEWORK GOVERNING PROTECTION, INCENTIVES AND FACILITIES, 1987

Protection

For the purpose of making uniform the unequal level of protection being received by industries at the moment, the protection level will be fixed ordinarily at 30 per cent of the addition in value made by import substitution and export promotion industries within the next five years in a gradual manner. More protection may, however, be granted to those industries which have been given priority by the government.

(a) Protection will be granted to industries primarily through the medium of import duties. For this purpose import duties will be imposed on the basis of a limited classification as far as possible, keeping in view the standard and type of processing of goods to be imported into Nepal.

(b) The prescribed level of protection given to any industry will be maintained while imposing excise duties, sales tax, and other taxes.

(c) In the case of goods which may be brought into Nepal for the purpose of dumping from any other country, or which may be imported at cheaper prices owing to subsidy, import duties will be imposed so as to ensure that the level of protection granted to local industries is maintained.

(d) The amounts of premium, customs duty, excise duty, and sales tax on production materials which have already been paid by any industry or exporter will be refunded in proportion to the volume of goods exported. Procedural arrangements in this regard shall be streamlined.

(e) Industries which produce intermediate goods to be used in exportable industrial goods will receive refund of the amounts of premium, customs duty, and sales tax charged on production materials, as well as excise duty, sales tax, etc., charged on production, in proportion to the volume of exports.

(f) Provisions will be made requiring the payment of a minimum import duty on production materials. In this process, industries established in export promotion areas will not be required to pay duties on production materials brought into the area, and production materials will be supplied free of duties by operating bonded warehouses under the supervision of customs officials.

(g) Ordinarily, customs duty will not be charged at more than one per cent on goods to be exported from Nepal.

(h) The export of industrial products will be fully exempted from sales tax and excise duty.

Annex E (continued)

Incentives and facilities

The following facilities will be provided to industries in the form of additional incentives:

Income tax facilities

(a) Income tax will be remitted to the extent of 100 per cent in the case of manufacturing cottage industries for a period of five years from the date of commencement of production. But no such income tax remission will be granted to notified industries. The Federation of Nepalese Chambers of Commerce and Industries will be consulted while preparing such notification.

(b) Small-scale manufacturing industries requiring convertible foreign exchange of not more than 10 per cent of the value of raw materials will be granted income tax remission to the extent of 100 per cent for a period of five years from the date of commencement of production. But that no such income tax remission will be granted to notified industries. The Federation of Nepalese Chambers of Commerce and Industries will be consulted while notifying such industries.

(c) Income tax will be remitted to the extent of 100 per cent in the case of industries prescribed by the government as those receiving national priority, energy-based industries, and mineral-based industries, which have been certified by the government after undertaking exploration operations and which also undertake extraction operations, for a period of five years from the date of commencement of production. Income tax will be remitted to the extent of 100 per cent for a period of eight years in the case of mineral industries which also undertake extraction operations after undertaking exploration operations themselves.

(d) Not more than 5 per cent of the gross income which is spent for advertisements for the purpose of increasing the distribution of products or promoting services, for hospitality, and for other contingency expenses for which receipts need not be submitted, may be deducted while assessing the net income.

(e) While deducting depreciation of fixed assets, industries shall be allowed to add 25 per cent to the rate of depreciation prescribed in the current income tax rules. While deducting depreciation of fixed assets, industries may follow the equal instalment system or the system of maximum rate permissible. Provided that once a particular system is followed, it will not be replaced by another.

(f) In case an industrial enterprise is established as a public limited company, a corporate income tax will be imposed in such a way that the rate is five per cent less than the corporate income tax payable according to current law. In the case of other industries, income tax shall be imposed in such a way that the rate is five per cent less than the rate of income tax prescribed in each slab. But the concerned companies must submit statements of their income and expenditure in order to enjoy such concessions.

Annex E (continued)

(g) In the case of a public limited company which has sold to the public at least 15 per cent of its shares by listing them at the stock exchange, the rate of income tax payable shall be further lowered by five per cent.

(h) Industries established in semi-developed areas and undeveloped areas will be granted an income tax rebate amounting to 15 per cent and 30 per cent respectively.

(i) In case any operating industry diversifies itself through reinvestment, or expands its installed capacity by 25 per cent or more, it may deduct 25 per cent of the new additional fixed assets from the income tax payable by it. Such remission may be deducted in a lump sum or in instalments within a period of three years.

(j) The amount spent by any industry for manpower training before the commencement of its production will be allowed to be capitalized. A specified percentage of the gross income may be deducted from the net income for amounts spent for the development of technology and products, as well as for productivity improvement.

(k) Industries providing employment to disabled persons may list as additional expenses in the net income up to 25 per cent of the amount paid by them to such persons as salaries or wages.

(l) No income tax will be imposed on dividends received from investments made in any industry operated as public limited company.

(m) In case prescribed industries export more than 25 per cent of their total annual production, income tax payable by them during that year will be remitted to the extent of 15 per cent; it will be remitted to the extent of 25 per cent if more than 50 per cent of the production is exported.

<u>Excise and sales tax facilities</u>

(a) No excise or sales tax will be imposed on the products of cottage industries.

(b) Industrial units which produce goods that had never been produced in Nepal before will be fully exempted from excise duty for a period of three years from the date of commencement of production.

(c) Industries using local raw materials subject to excise duty or sales tax or both will be exempted from excise duty or sales tax or both in proportion to the volume of their production. Procedural arrangements in this regard will be strenghtened.

<u>Convertible foreign exchange facility</u>

(a) Convertible foreign exchange will be provided as deemed necessary to import machinery, spare parts, tools, instruments and other capital goods to be directly used in industries, buses, minibuses, and motor cars required by industries related to the tourism industry, and capital goods required by hotels of specified standards.

Annex E (continued)

(b) Convertible foreign exchange will be made available to import raw materials and auxiliary raw materials on the basis of the approved capacity of an industry. The Pass Book system currently used for this purpose shall be reviewed every six months.

(c) Convertible foreign exchange up to the percentage prescribed by the government will be made available to export industries out of their export earnings for the purpose of importing raw materials required for their production. The government will make available raw materials and auxiliary raw materials in kind through an approved body to cottage industries.

(d) Convertible foreign exchange will be made available as deemed appropriate for payment of such service charges as technical consultation charges, technical assistance fees, services charges, management fees, patent fees, and industrial promotion, market studies, and sales promotion service charges.

Other incentives and facilities

(a) Electricity charges

(1) Industries will be given priority in the supply of power. In addition, special electricity charges shall be fixed in respect to energy-intensive industries which are important from the national viewpoint.

(2) In case any industry generates electricity for its own use, no royalty will be charged. In case the electricity so generated is supplied to the public, royalty will be charged only on the basis of the actual units supplied.

(b) Facilities equivalent to exports

(1) In case any industry sells its products or services by competing in international tenders, it will be provided with facilities due to the exports of export-oriented industries in proportion to the volume of such sale.

(2) In case any industry sells its products inside the country against payments in convertible foreign exchange, the amount of excise duty paid on the volume of products sold against payment in foreign currency, and the premium. customs duty, excise duty, and sales tax collected on the raw materials used for such products, will be refunded.

(c) Raw materials

Provisions will be made to allow traders to import raw materials on the condition that these are sold to industries alone, and not to subject to double taxation in consideration thereof.

(d) Machinery

Industrial machinery and other capital goods will be divided into the following categories, and customs duty shall be charged at the minimum rate on the import of goods belonging to the second category:

Annex E (continued)

(1) Industrial machinery and other capital goods which have been produced or which can be produced in the near future inside the country.

(2) Industrial machinery and other capital goods which cannot be produced inside the nation in the near future.

(e) Special facilities

Industries which utilize modern technology and produce high quality goods which can render contribution to exports may be granted special protection, facilities, and concessions.

(f) Industries not to be nationalized

In case any industry is nationalized in the light of national interests or security, compensation will be paid within a period of six months on the basis of an equitable evaluation. In case an industry in which foreign investment has been made is dissolved or nationalized, the concerned foreign investor may repatriat his proportionate share in convertible foreign exchange according to the Nepal Company Act and such amount will not be subjected to any tax.

(g) National recognition and awards

(1) One industrial unit in each group of industrial products will be granted a national award every year for having exported the largest quantity.

(2) National awards will be granted every year to the industrial unit which stands first in terms of productivity in the group of prescribed industries.

(h) Availability of facilities

The Government of Nepal will explicitly mention in the license or registration certificate the facilities to which the concerned industry is entitled, and make such facilities available accordingly. For the purpose of resolving the grievances of any industrialist who has not received facilities which have been specifically mentioned in the license or the registration certificate, the Industrial Promotion Board shall form a sub-committee consisting of the concerned applicant and representative of the Federation of Nepalese Chambers of Commerce and Industries.

(i) Provisions regarding industries previously established

(1) Industries which have been established under the previous policy will be automatically registered according to the classification made under this policy.

(2) In the case of industries which have already received or are receiving facilities for a prescribed period according to the previous policy, facilities will be provided accordingly, and facilities for which no specific time-limit has been prescribed shall be provided according to this policy.

Annex E (continued)

(3) In case industries which were registered under the previous provisions but which did not commence production within the prescribed time-limit, if any, and within a period of three years from the date of commencement of this policy if no time-limit had been prescribed; they will be provided with facilities for which a time-limit has been prescribed according to previous provisions, as well as the facilities for which no time-limit has been prescribed according to this policy.

Source: Government of Nepal, Industrial Policy and Act of the Government of Nepal, January 1988, pp. 17-25.

ANNEX F

THE COMPLETED AND APPROVED OPERATIONAL TECHNICAL CO-OPERATION PROJECTS OF UNIDO

Annex F. THE COMPLETED PROJECTS

Kingdom of NEPAL
(1)
since 1972

Backstopping Responsibility	Spec.Act.Code/ All.Acc.Code	Project Number	Project Title
IO/IIS/INFR	00.0	RP/NEP/72/003	Industrial legislation
IO/IIS/INFR	00.0	RP/NEP/72/005	Industrial export promotion
IO/IIS/INFR	31.3.04	TS/NEP/75/001	Exploratory mission on industrial administration
IO/IIS/INFR	32.3.02	RP/NEP/73/004	Free port and free zones organization
IO/IIS/INFR	31.3.A	SM/NEP/76/001	Institute of Standardization
IO/IIS/INFR	31.3.C	SM/NEP/75/038	Operational strengthening of Department of Industry
IO/IIS/INFR	J12102	DP/NEP/77/001	Assistance to the Nepal Institute of Standards (phase II)
IO/IIS/INFR	J12101	DP/NEP/80/026	Strengthening the industrial statistics and information unit of the Department of Industry
IO/IIS/INFR	J12101	SM/NEP/79/023	Strengthening industrial information and documentation system of the Industrial Services Centre (ISC)
IO/IIS/IMR	31.3.01	RP/NEP/73/001	Industrial management techniques
IO/SD/TRNG	31.5.A	SI/NEP/81/801	Preparatory phase programme on industrial manpower development
IO/SD/TRNG	31.5.B	DP/NEP/75/007	Pharmaceutical training
IO/SD/TRNG	31.5.B	RP/NEP/77/003	Fourth general course on development banking
IO/SD/TRNG	31.5.B	RP/NEP/77/004	Metrology and legal metrology (weight and measures)
IO/SD/TRNG	31.5.B	RP/NEP/78/001	Study tour on the industrial development policy planning and implementation
IO/SD/TRNG	31.5.B	RP/NEP/78/002	Training of four Nepalese experts in improvement of rice milling operations in Thailand
IO/SD/TRNG	31.5.B	VC/NEP/73/040	Assistance to Birganj agricultural tools factory

Annex F (continued)

Kingdom of NEPAL
(2)

Backstopping Responsibility	Spec.Act.Code/ All.Acc.Code	Project Number	Project Title
IO/IIS/PLAN	31.2.A	RP/NEP/80/001	Review of the sixth five-year development plan, industry sector
IO/SD/FEAS	00.0	RP/NEP/72/004	Project preparation and evaluation
IO/SD/FEAS	32.1.02	SM/NEP/73/002	Elaboration of a technical project for the establishment of a modern vegetable oil ghee factory
IO/SD/FEAS	32.1.02	RP/NEP/73/002	Project preparation and evaluation
IO/SD/FEAS	31.6.A	DP/NEP/72/007	Industrial Services Centre
IO/SD/FEAS	31.6.A	SI/NEP/82/801	Assistance to the Ministry of Commerce and Industry in the promotion of industrial investments and exports
IO/SD/FEAS	J12516	SI/NEP/86/862	Revitalization of the Hetauda Leather Industries (HLI)
IO/T/AGRO	00.0	IS/NEP/71/801	Analysis of the existing technical and economic situation in the vegetable oil and feed stuff industry resulting in specific project proposals
IO/T/AGRO	00.0	TS/NEP/72/001	Alcohol distillery expert
IO/T/AGRO	30.6.01	DP/NEP/70/006	Industrial advisory mission
IO/T/AGRO	30.6.02	RP/NEP/74/002	Food processing
IO/T/AGRO	30.6.02	RP/NEP/76/002	Food processing
IO/T/AGRO	31.7.A	RP/NEP/77/001	Assistance to the match industry
IO/T/AGRO	31.7.A	SI/NEP/79/801	Assistance to the Bhairahawa match factory
IO/T/AGRO	31.7.A	TS/NEP/76/001	Exploratory mission to advise on wood drying and secondary wood processing including the possibility of establishing a plant for drying and preservation

Annex F (continued)

Kingdom of NEPAL
(3)

Backstopping Responsibility	Spec.Act.Code/ All.Acc.Code	Project Number	Project Title
IO/T/AGRO	31.7.B	SI/NEP/77/802	Assistance in the development of the textile industry
IO/T/AGRO	31.7.C	DP/NEP/74/007	Assistance to the vegetable oil and vegetable ghee industry
IO/T/AGRO	31.7.C	RP/NEP/78/003	Rehabilitation of the cane sugar industry
IO/T/AGRO	31.7.C	SI/NEP/77/801	Assistance in the establishment of a pilot community food processing centre
IO/T/AGRO	31.7.D	SI/NEP/78/801	Assistance to the leather industry
IO/T/AGRO	31.7.D	UC/NEP/81/036	Preparatory mission: development of leather and leather products industry
IO/T/AGRO	J13103	DG/NEP/80/002	Fruit processing in Mustang
IO/T/MET	00.0	RP/NEP/72/002	Ore dressing and beneficiation
IO/T/MET	31.8.D	IS/NEP/75/005	Development of a foundry industry
IO/T/MET	31.8.D	SI/NEP/75/805	Development of a foundry industry
IO/T/MET	J13209	SM/NEP/79/001	Establishment of a pilot and demonstration foundry (multifund to DP/NEP/79/001)
IO/T/ENG	00.0	TS/NEP/71/806	Assistance in production of agricultural machinery and implements
IO/T/ENG	30.1.05	RP/NEP/74/001	Maintenance and repair
IO/T/ENG	31.9.A	RP/NEP/80/004	Request for engineering services to the Industrial Services Centre
IO/T/ENG	31.9.A	UC/NEP/78/108	Assessment of the present mechanical workshop capacity in Nepal and projection to expand this sector
IO/T/ENG	31.9.B	SI/NEP/83/801	Strengthening the production capacity of the agricultural tools factory
IO/T/ENG	31.9.B	UC/NEP/82/159	Assistance in upgrading of rural blacksmithy

Annex F (continued)

Kingdom of NEPAL
(4)

Backstopping Responsibility	Spec.Act.Code/ All.Acc.Code	Project Number	Project Title
IO/T/CHEM	30.5.01	TS/NEP/74/001	Assistance in planning fertilizers and pesticides
IO/T/CHEM	32.1.A	SI/NEP/77/803	Assistance to improve and expand the Himal Cement Plant
IO/T/CHEM	32.1.D	SI/NEP/78/802	Economic mapping of spontaneous flora
IO/T/CHEM	32.1.D	SM/NEP/75/003	Pharmaceutical adviser
IO/T/CHEM	32.1.D	SM/NEP/76/005	Pharmaceutical adviser
IO/T/CHEM	32.1.D	TF/NEP/82/001	Strengthening the Royal Drugs Research Laboratory (multifund to DP/NEP/80/003
IO/T/CHEM	32.1.F	RP/NEP/80/003	Pre-investment study for a fertilizer bulk blending bagging plant
IO/T/CHEM	32.1.H	TS/NEP/79/001	Techno-economic study on the establishment of a petroleum refinery
IO/T/CHEM/PH	J13422	TF/NEP/85/001	Associate expert
PPD/SPA/ECDC	30.9.Z	RP/NEP/81/001	Mission to discuss substantive and logistic preparations for the solidarity ministerial meeting to be organized in co-operation with the Royal Government of Nepal during first quarter of 1982
PPD/SPA/ECDC	30.9.Z	RP/NEP/82/002	Mission to discuss the participation and contribution of visited countries to the Nepal solidarity meeting
PPD/SPA/ECDC	30.9.Z	RP/NEP/83/001	Solidarity ministerial meeting for co-operation in industrial development of the Kingdom of Nepal
PPD/SPA/ECDC	E04100	UC/NEP/81/204	Solidarity ministerial meeting for co-operation in the industrial development of the Kingdom of Nepal (followed up by UC/NEP/87/039)
PPD/SPA/ECDC	E04100	UD/NEP/85/072	TCDC observation study tour for Nepalese personnel to China in the field of agricultural machinery and tools (multifund to US/NEP/85/072)

Annex F (continued)

Kingdom of NEPAL
(5)

Backstopping Responsibility	Spec.Act.Code/ All.Acc.Code	Project Number	Project Title
PPD/SPA/ECDC	E04100	US/NEP/85/072	TCDC observation study tour for Nepalese personnel to China in the field of agricultural machinery and tools (multifund to UD/NEP/85/072)
IPCT/II	31.1.B	RP/NEP/82/001	Investment promotion meeting for Nepal (continued under RP/NEP/84/001)
IPCT/II	31.1.B	RP/NEP/84/001	Investment promotion meeting for Nepal

Annex F (continued)

THE APPROVED OPERATIONAL PROJECTS

Kingdom of NEPAL

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR	J12102	DP/NEP/84/031**	Assistance to the Nepal Bureau of Standards
IO/IIS/PLAN	J12413	DP/NEP/86/005*	Assistance in industrial planning and monitoring
IO/T/MET	J13209	DP/NEP/79/001**	Establishment of a pilot and demonstration foundry (multifund to SM/NEP/79/001)
IO/T/CHEM/PH	J13422	DU/NEP/78/009*	Primary health support services programme
IO/T/CHEM/PH	J13422	DP/NEP/80/003**	Strengthening the Royal Drugs Research Laboratory
IO/T/CHEM/PH	J13422	DP/NEP/80/044*	Processing of medicinal plants cultivated and collected in Nepal
IO/SD/FEAS	J14102	DP/NEP/86/006*	Assistance to the Foreign Investment Promotion Division, Ministry of Industry
IO/IIP	J19201	US/NEP/87/052	Environmental impact and risk (hazard) assessment guidelines: the case of Nepal
PPD/SPA/ECDC	E04101	UC/NEP/87/039	Follow-up to solidarity ministerial meeting for co-operation in the industrial development of the Kingdom of Nepal (follow-up to UC/NEP/81/204)

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

SELECTED REFERENCES

ARTEP, Nepal Rural Household Survey, Bangkok, 1976.

Asian Development Bank, National Industrial Sector Study, Nepal, General Report, Manila, 1985.

Central Bureau of Statistics, Census of Manufacturing 1981/82, January 1983.

Central Bureau of Statistics, Statistical Year Book of Nepal, 1987.

Government of Nepal, Seventh Plan 1985-1990, Kathmandu, 1985.

Government of Nepal, Industrial Enterprises Act, 1987.

Government of Nepal, Industrial Policy Act 1987, Kathmandu, 1987.

ILO, Employment Expansion through Cottage Industries in Nepal: Potentials and Constraints, March, 1986.

Industrial Services Centre, Industrial Review Report, 1983/84, Kathmandu, July 1985.

Industrial Services Centre, Industrial Sector Plan Study 1980/81-1990/91, January 1979.

Ministry of Finance, Economic Survey, various issues.

Ministry of Finance, Performance Review of Public Enterprises in Nepal: Progress Report and Target Description of Government Corporation, 1984/75-1986/87.

Ministry of Industry, Foreign Investment Promotion Division, Nepal, Foreign Investment Opportunities, October 1987.

Rana, K.N., "Energy Syndrome vs. Energy Policy", Nepal Industrial Digest, 1985/86.

Satyapal, M, (UNIDO TA), Ministry of Industry, Organizational Structure for Planning, Policy Formulation and Monitoring (draft), Kathmandu, September 1987.

UNIDO, The Current and Prospective Contribution of Women to Nepal's Industrial Development, (forthcoming, 1988).

UNIDO, Industry in a Changing World, New York, 1983.

UNIDO, The Potential for Resource-Based Industrial Development in the Least Developed Countries, No. 7: Nepal, UNIDO/IS.465, Vienna 1984.

UNIDO, Statistics and Survey Unit, India: A Statistical Review of Industrial Performances, 1987

World Bank, World Development Report, 1987.

Previously issued in the Industrial Development Review Series:

Indonesia	UNIDO/IS.458	1984
Kenya	UNIDO/IS.459	1984
Argentina	UNIDO/IS.460	1984
Paraguay	UN!DO/IS.461	1984
Uruguay	UNIDO/IS.462	1984
Bangladesh	UNIDO/IS.510	1985
Swaziland	UNIDO/IS.516	1985
Zambia	UNIDO/IS.520	1985
The Philippines	UNIDO/IS.527	1985
Pakistan	UNIDO/IS.535	1985
The Sudan	UNIDO/IS.541	1985
Malaysia	UNIDO/IS.545	1985
India	UNIDO/IS.547	1985
Thailand	UNIDO/IS.548	1985
Peru	UNIDO/IS.552	1985
Nigeria	UNIDO/IS.557	1985
Bolivia	UNIDO/IS.564	1985
Chile	UNIDO/IS.579	1985
The People's Republic of China	UNIDO/IS.582	1985
Bahrain	UNIDO/IS.592	1985
Sri Lanka	UNIDO/IS.613	1986
Cuba	UNIDO/IS.615	1986
Tanzania	UNIDO/IS.628	1986
Egypt	UNIDO/IS.637	1986
Mali*	UNIDO/IS.640	1986
Zaire*	UNIDO/IS.644	1986

(Continued)

Previously issued in the Industrial Development Review Series:

(Continued)

Pacific Island States: Papua New Guinea, Fiji, Solomon Islands, Western Somoa, Vanuatu, Tonga Kiribati, The Federated States of Micronesia and Micro States	UNIDO/IS.645	1986
Côte d'Ivoire*	PPD.6	1986
Saudi Arabia	PPD.7	1986
Congo*	PPD.10	1986
Central African Republic*	PPD.11	1986
Colombia	PPD.16	1986
Ghana	PPD.18	1986
The Republic of Korea	PPD.29	1987
Botswana	PPD.37	1987
The Caribbean Region: Jamaica, Trinidad and Tobago, Guyana, Barbados, The Netherlands Antilles, The Bahamas, Belize, Bermuda, St. Lucia, St. Vincent & The Grenadines, Grenada, Antigua and Barbuda, Dominica, St. Christopher-Nevis, Cayman Islands, British Virgin Islands, Montserrat, Turks and Caicos Islands, and Anguilla	PPD.51	1987
Malawi	PPD.58	1987
Indonesia: "Changing Industrial Priorities"	PPD.60	1987
Zimbabwe	PPD.63	1987
Burma: "Transition to agro-based industrial economy"	PPD.65	1987
Jordan: "Stimulating manufacturing employment and exports"	PPD.67	1987

Previously issued in the Industrial Development Review Series:

(Continued)

Liberia:	"Resource-based industrialization and rehabilitation"	PPD.74	1988
Qatar:	"Towards industrial diversification of an oil-based economy"	PPD.75	1988

* Also available in French.