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**STATISTICAL
YEARBOOK
OF
BHUTAN**

1987



**CENTRAL STATISTICAL OFFICE
PLANNING COMMISSION
ROYAL GOVERNMENT OF BHUTAN
THIMPHU, DECEMBER**

Catalogue No. 101

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VII
GENERAL INFORMATION

EXPLANATION OF SYMBOLS

na not available
 .. not applicable
 - nil or rounded to zero
 * sampling error too high for accurate estimation
 () brackets signify negative numbers

METRIC EQUIVALENTS

1 kilometre	=	0.62 miles
1 hectare	=	2.47 acres
1 square kilometre	=	0.386 square miles
1 litre	=	0.220 imperial gallons
1 kilogram	=	2.20 pounds
1 metric tonne	=	0.984 imperial tons

EXPLANATORY NOTES

1. In some cases, minor discrepancies may occur between sums of component items and totals because of rounding.

2. Dzongkhags given in some tables differ from those given in Annex I. This is because of recent changes in the Dzongkhags following the creation of Punakha and Chhukha Dzongkhags and the abolition of Gasa Dzongkhag.

PREFACE

This publication is the sixth in the series of annual statistical publications issued by the Central Statistical Office (CSO). Previous issues were titled 'Statistical Handbook', but from this year the publication will be called the 'Statistical Yearbook of Bhutan'.

The purpose of the publication is to provide a summary of the more important statistics in Bhutan. Statistics have been presented under a number of subject headings corresponding to the major areas of statistical interest. For each subject a short introductory text has been given providing a brief description of the statistics, how they were obtained and any existing shortcomings. Some of the more interesting features of the statistics have also been highlighted.

Much of the existing statistics in Bhutan are not considered to be fully reliable. In preparing the publication, attempts have been made to assess the quality of each data source and where appropriate, tables have been footnoted to highlight any shortcomings in the data. Some data published previously have also been revised. In cases where it is considered the publication might mislead, data have been omitted altogether leaving some apparent gaps in the statistical presentation.

Every effort has been made to ensure that the statistics given in the publication meet with acceptable statistical standards. However, it has been necessary to place reliance on existing data collections and it was not always possible to undertake as detailed an assessment of data sources as would have been preferred. This was due to the wide range of data sources used and because detailed background information on many data collections was not always available. Consequently some shortcomings in the data presented are inevitable, though it is considered that these have been kept to a minimum. Throughout the compilation of the publication, the CSO has maintained close contact with all sectors.

The Central Statistical Office has embarked on a program to upgrade the statistical service in Bhutan. Over the next few years a number of new statistical collections will be introduced to fill existing statistical gaps. At the same time existing statistical systems will be reviewed and improvements made as necessary. As a result, the range and quality of statistics available in Bhutan should improve over the next few years, and this will be reflected in further upgradings of this publication in the future.

C. Dorji
Secretary, Planning Commission
Royal Government of Bhutan
Tashichhodzong
December 1987.

BHUTAN AT A GLANCE

POPULATION		
Population (1986)	'000	1,312.7
Area of Bhutan	sq. km.	46,500
Population density (1986)	persons per sq.km	28.2
Birth rate (1984)		39.1
Death rate (1984)		19.3
Infant mortality (1984)		142.0
Life Expectancy (1984)		
males	years	45.8
females	years	49.1
Population growth rate	% per year	2.0
HEALTH (1986)		
Population per doctor		9,800
Population per hospital bed		1,400
EDUCATION (1986)		
Number of schools		177
Number of students		52,452
Number of teachers		1,934
AGRICULTURE AND FORESTRY (1983)		
Agricultural land	000 hectares	355.9
Forested land	000 hectares	2,839.9
TRANSPORT AND COMMUNICATION		
Road lengths (1987)	km	2,165
ENERGY (1986/87)		
Electricity generation	MU	364.2
Electricity sales	MU	60.1
Per capita consumption	Units	46
BALANCE OF PAYMENTS (1986/87)		
Value of exports	Nu millions	323.0
Value of imports	Nu millions	1,125.5
Trade balance	Nu millions	-802.5
Current account balance	Nu millions	-1,211.6
Overall balance	Nu millions	185.6
International reserves		
Rupees	Rupees million	446.9
Convertible currency	US \$ millions	28.1
GROSS DOMESTIC PRODUCT		
GDP per capita (1986)	Nu	2,040
Agricultural sector (1986)	% of total	41
Real growth (1985 to 1986)	%	9.2
CONSUMER PRICE INDEX		
Change (June 1986 to June 1987)	%	4.8
Average change (1980 to 1987)	%	8.6

INTRODUCTION

GENERAL DESCRIPTION OF BHUTAN

Position and area - Bhutan comprises a land area of 46,500 square kilometres. The land lies between latitudes 26 45`N and 28 10`N and between longitudes 88 45`E and 92 10`E. The country is relatively compact with a maximum latitudinal distance of 170 kilometres and the maximum longitudinal distance of 300 kilometres.

Bhutan is landlocked. It is bordered by India in the south, and by the Tibetan Autonomous Region of China in the north and north-west.

Bhutan's borders are largely natural ones. The border with Tibet is traditional following the watershed of the Chumbi Valley in the north-west and the crest of the Himalayas in the north. The southern border with India was established by treaty with the British in the nineteenth century and basically follows the line made by the Himalayan foothills with the plains.

Landforms - Bhutan is almost entirely mountainous with flat land limited to the broader river valleys. The land rises from approximately 300 metres above sea level in the south to the towering Himalayan mountains in the north of over 7,000 metres high. The densely populated central valleys are separated from the south by a 2,000 metre high chain of mountains.

Bhutan has three major landform features: the southern foothills, the inner Himalayas and the higher Himalayas. The southern foothills rise from the plains to heights of about 1,500 metres extending to the north by about 20 kilometres. Southern Bhutan consists of a heavy network of steep hills covered with large tracts of dense forest and jungles.

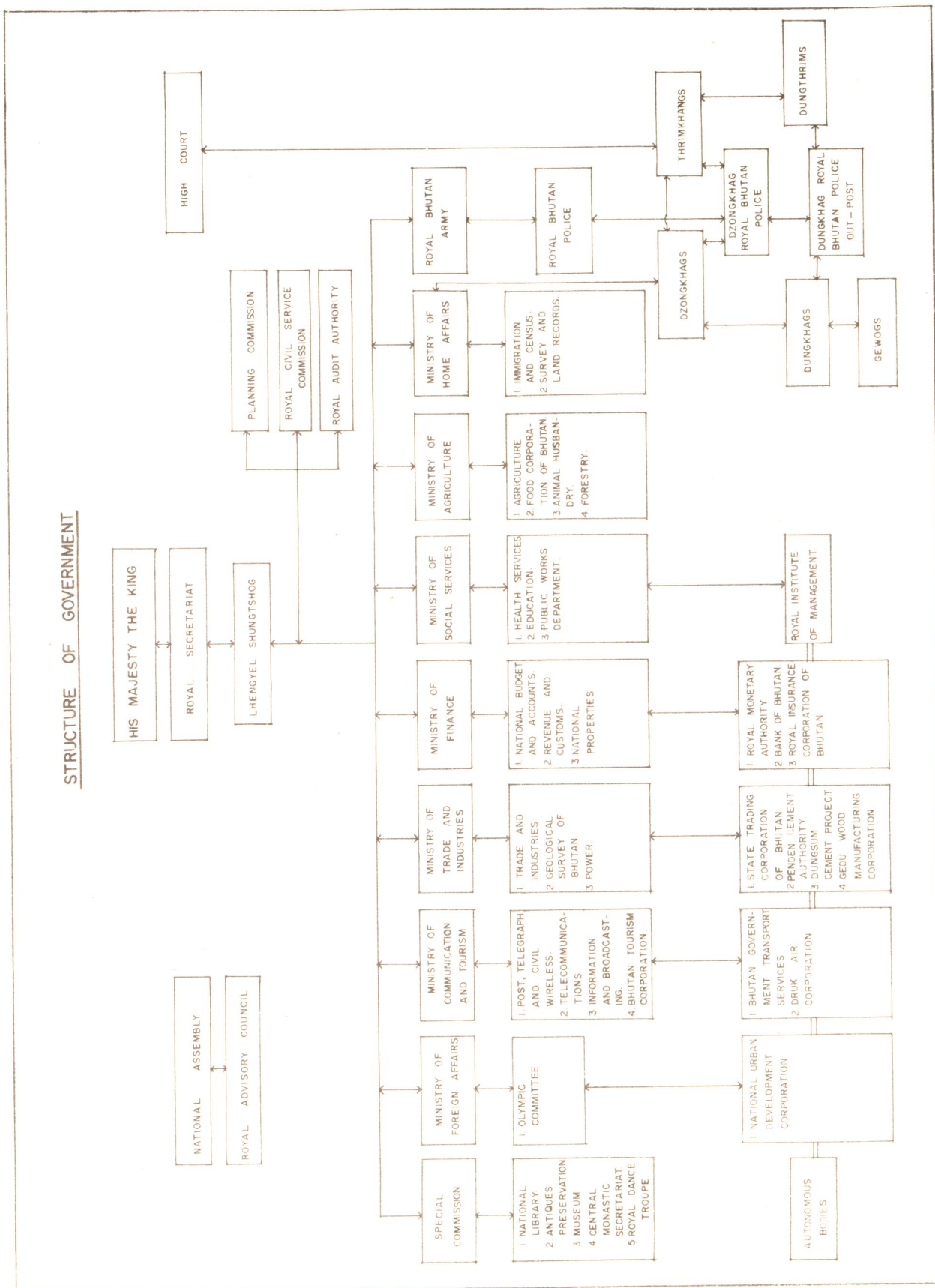
Central Bhutan consisting of the inner Himalayas rises gradually to about 3,000 metres. This region contains the broader river valleys - Paro, Thimphu, Punakha, Wangdiphodrang, Bumthang and Tashigang which comprise the economic and cultural heartland of the country. An infinite variety of plants, flowers and trees including apples, peaches and plums grow in the fertile valleys. Rice is the principal crop and large tracts of forest including birch, pine, chestnut and oak cover Central Bhutan.

The northern region comprises the main Himalayan range of high snow-capped mountains which separate Bhutan from Tibet. The Kula Gangri and the Gangkar Punsum (both over 7,500 metres) and the Jomolhari (7316 metres) are the highest peaks in the Bhutan Himalaya. The slopes of the mountains are covered with birch, magnolia and rhododendron while for many months of the year the summits are decked with snow. Population in this zone is sparse.

Rivers - All but two of Bhutan's rivers rise in the higher Himalayas and journey south to join the Brahmaputra in India. Almost all the valleys have a swiftly flowing rivers or streams which merge ultimately into four major river systems as they flow south - the Ammochu, the Wongchu, the Sankosh and the Manas. The flows of the rivers are fed by the perennial snows or the summer monsoons and are highest in the monsoon months (June to September) and lowest in winter (December to March).

Climate - The country can be divided into three district climatic zones corresponding broadly to the three main geographical

STRUCTURE OF GOVERNMENT



divisions. The southern belt has a hot humid climate with temperatures remaining fairly even throughout the year between 15 C and 30 C with rainfall ranging between 2,500 mm to 5,000 mm in some areas.

The central inner Himalayas has a cool temperate climate with annual rainfall averaging about 1,000 mm with the western region receiving comparatively higher rainfall.

The higher and more northern region has a severe alpine climate with annual rainfall around 400 mm. Much of the rainfall is concentrated in the summer months with the south west monsoon accounting for 60-90 per cent of the total rainfall.

There is substantial variation within these broad ranges and the climate and rainfall characteristics change dramatically from one valley to an adjacent one with consequent sharp changes in the composition of agricultural production.

Widespread flood rainfall may occur during the summer monsoons and the waters of the valley rivers may swell dramatically, spreading across the plains and flooding fields, bridges and houses.

GOVERNMENT

The Monarchy - On December 17 1907, Ugyen Wangchuck was crowned the first hereditary monarch of Bhutan by the civil and monastic representatives.

It was as a result of the influence of the strength and far-sightedness of Ugyen Wangchuck that for the first time Bhutan was united under a central authority which provided the country with stability and the opportunity for development. In 1926 Ugyen Wangchuck was succeeded by his son Jigme Wangchuck, who ruled until his death in 1952.

The third Druk Gyalpo, Jigme Dorji Wangchuck began a campaign of modernisation and expansion of Bhutan's Government and society based on the accomplishments of his two predecessors in uniting the country under a strong central authority. Hence, the National Assembly consisting of representatives of the people, the monastic order and civil administration was reestablished in 1953.

The present Druk Gyalpo, His Majesty King Jigme Singye Wangchuck acceded to the throne in 1972 on the demise of his father.

His Majesty the King is the Head of State and also the Head of Government. He is assisted by the Cabinet which consists of His Majesty's Representatives in various Ministries, Ministers and some senior civil servants.

The National Assembly - The National Assembly has 158 members of which 100 members represent the people. These are elected for a three year term by consensus in each of the Dzongkhags. Ten monastic representatives are elected by the regional monk bodies while forty representatives of the Government are nominated by the King. They include members of the Council of Ministers and the Royal Advisory Council, Secretaries of various Government Departments and several Dzongkhag officers.

The National Assembly meets twice a year. The Assembly enacts legislation and advises the Government on all matters of national importance. Decisions are passed by a simple majority. A secret ballot is taken on all matters of national importance. Any Bhutanese over 25 years of age can be a candidate for membership.

The Royal Advisory Council - The Royal Advisory Council was formally established in 1965 to advise the King and Government Ministers and to supervise the implementation of programs and policies laid down by the National Assembly. It consists of 10 members. There are two members elected by the National Assembly and two members appointed by the King. The Chairman is nominated by the King from among the members.

The Monk Body - The Monk Body which currently has a strength of about 5,000 is financed by an annual subsidy from the Government and is the sole arbiter on religious matters. The Je Khempo is the Head of the Body chosen from among high ranking gelongs (monks). He is assisted by four high ranking "Lopens" of the Central Monk Body which consists of 1,000 gelongs.

Local Government - Local administration has been strengthened to meet the requirements of decentralised administration and development. There are 18 Dzongkhags or Districts each under the charge of a Dzongda responsible for civil administration and development activities. Each Dzongda is assisted by a Dzongda Wongmo or a Dzongrab who are responsible for planning and development and civil administration. The larger Dzongkhags are sub-divided into sub-divisions (Dungkhags) headed by a Dungpa. Groups of villages have a headman - the Gup (in the north) or Mandal (in the south). In each Dzongkhag, the Dzongda is assisted in his development functions by the Dzongkhag Yargye Thschokchung (or District Development Committee) which consists of people's representatives and officials.

The Judiciary - Bhutan's legal code is based on that laid down by Ngawang Namgyal, the first Shabdung who arrived in Bhutan in 1616. Traditional Buddhist precepts are significantly maintained in the legal processes.

The High Court consists of six judges. Four of the judges are appointed by the King and two public representatives elected by the National Assembly subject to ratification by the King. There are courts in each Dzongkhag headed by a Thrimpon and assisted by Ramjams but minor disputes are settled by village gups.

CHAPTER 1

POPULATION

INTRODUCTION

The main source of statistics on population is the Population Census. Population Censuses are undertaken in most countries on a five or ten yearly basis and aim to provide a full count of the population according to a range of characteristics such as demography, health, education and other social aspects. Censuses are useful not only because they provide a range of current population data but also for use as a benchmark for making population estimates in non-Census years and for population projections. Population Censuses were undertaken in Bhutan in 1969 and 1980.

The second major element of population statistics relates to the demographic characteristics of the population. The most common source of information on demography is the vitals registration system (which usually covers the registration of births and deaths and sometimes marriages and divorces). In Bhutan the vitals registration system does not currently provide full coverage of births and deaths, and it has been necessary to undertake a special sample survey (in 1984) to obtain the important demographic information.

Statistics presented in this Chapter include estimates of current and future population together with data from the 1984 Demographic Sample Survey. The interpretation of the major demographic indicators is as follows:

Crude birth rate: number of live births in a year per thousand population.

General fertility rate: number of live births in a year per thousand women aged 15 to 49.

Total fertility rate: average number of children borne by women during their lifetime.

Gross reproduction rate: average number of daughters borne by women during their lifetime.

Net reproduction rate: reproduction rate adjusted for mortality of women.

Crude death rate: number of deaths in a year per thousand population.

Infant mortality rate: number of deaths during first year of life per thousand live births.

Rate of natural increase: the difference between the crude birth rate and the crude death rate.

MAIN FEATURES

The birth rate in Bhutan was estimated in 1984 at 39.1 births per thousand population. This is higher than Sri Lanka, India and Pakistan but at much the same level as Bangladesh and Nepal. The death rate at the same time was estimated at 19.3 deaths per thousand population. This represents an annual population growth rate of approximately 2 per cent. If this rate of population increase is sustained the population of Bhutan will double in the next 35 years.

In 1984, life expectancy was estimated at 45.8 years for males and 49.1 years for females. The expected number of live births for each woman during her lifetime was estimated at 5.9. There were an estimated 142 deaths of children in their first year per thousand live births. This rate is higher than India, Sri Lanka, Pakistan and Bangladesh.

TABLE 1.1 : POPULATION ESTIMATES BY AGE AND SEX, 1986

Age Group	Males	Females	Persons
0-4	123,300	108,100	231,400
5-9	72,300	74,300	146,600
10-14	70,300	73,800	144,100
15-19	67,900	66,800	134,700
20-24	58,800	57,200	116,000
25-29	50,000	49,600	99,600
30-34	42,800	41,600	84,400
35-39	36,600	34,800	71,400
40-44	31,500	29,000	60,500
45-49	28,300	25,900	54,200
50-54	24,600	22,400	47,000
55-59	20,300	18,400	38,700
60-64	15,900	14,700	30,600
65-69	11,600	10,900	22,500
70-74	7,900	7,900	15,800
75-79	4,500	4,600	9,100
80 and over	2,900	3,200	6,100
ALL AGES	669,500	643,200	1,312,700

Source: Ministry of Home Affairs-1980 Population Census projected forward using demographic methods.

TABLE 1.2 : POPULATION ESTIMATES BY DZONGKHAG, 1980

Dzongkhag	Population	Percentage
Ha	17,100	1.5
Paro	47,200	4.1
Samchi	197,900	16.9
Thimphu	94,600	8.1
Chirang	104,500	9.0
Dagana	27,700	2.4
Gasa	15,800	1.4
Punakha	18,700	1.6
Wangdiphodrang	47,700	4.1
Bumthang	23,600	2.0
Gaylegphug	112,800	9.7
Shemgang	43,300	3.7
Tongsa	28,600	2.5
Lhuntshi	36,900	3.2
Mongar	71,300	6.1
Pemagatsel	35,100	3.0
Samdrupjongkhar	72,200	6.2
Tashigang	170,000	14.5
BHUTAN	1,165,000	100.0

Source : Ministry of Home Affairs- 1980 Population Census.

TABLE 1.3 : POPULATION PROJECTIONS, 1991-2006, WITH DIFFERENT FERTILITY AND MORTALITY PARAMETERS

	Projections (a)								
	A	B	C	D	E	F	G	H	I
POPULATION ('000)									
1991	1,477	1,481	1,484	1,473	1,476	1,479	1,467	1,470	1,473
1996	1,661	1,676	1,689	1,642	1,657	1,670	1,619	1,663	1,645
2001	1,862	1,898	1,928	1,818	1,853	1,882	1,762	1,796	1,823
2006	2,090	2,159	2,216	2,006	2,072	2,125	1,900	1,963	2,012
DEMOGRAPHIC ASSUMPTIONS									
Total fertility rate	5.8	5.8	5.8	5.0	5.0	5.0	4.0	4.0	4.0
Crude birth rate, 2006	41.0	40.4	39.9	36.9	36.3	35.9	31.2	30.8	30.4
Crude death rate, 2006	17.6	14.1	11.3	17.2	13.8	11.2	16.7	13.4	10.9
Life expectancy, 2006									
Males	45.8	51.8	56.5	45.8	51.8	56.5	45.8	51.8	56.5
Females	48.7	55.0	60.0	48.7	55.0	60.0	48.7	55.0	60.0
Average annual population growth 1986 to 2006 (%)	2.4	2.5	2.7	2.1	2.3	2.4	1.9	2.0	2.2

(a) Projections based on nine different fertility and mortality assumptions (Projections A to I).
(b) For explanation of demographic measures see Introduction to this Chapter.

Source : 1980 Population Census projected forward using demographic methods based on nine different fertility and mortality assumptions (Projections A to I).

TABLE 1.4 : SUMMARY OF POPULATION INDICATORS, 1986

Population Indicators	
Sex Ratio (Males/Females)	104.1
Age Composition (%)	
0-14	39.8
15-64	56.2
65 and over	4.0
Total	100.0
Dependency Ratio (a)	
Child dependency	70.8
Old age dependency	7.2
Total dependency	78.0
Index of aging (b)	10.1

(a) Dependency ratio measures the number of dependents as a percentage of the population aged 15 to 64. Child dependency refers to children aged 0-14, while old age dependency refers to persons aged 65 and over. (b) Index of aging refers to the number of persons aged 65 and over as a percentage of the number of persons aged 0 to 14.

Source : Derived measures based on population estimates in Table 1.1.

TABLE 1.5 : PERCENTAGE OF POPULATION BY MARITAL STATUS AND AGE, 1984.

Age Group	Never Married		Married		Divorced/Separated		Widowed		Total	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
	0-14	99.9	99.8	-	-	-	-	-	-	100.0	100.0
15-19	92.1	73.4	7.7	25.5	-	-	-	-	100.0	100.0
20-24	54.5	30.1	43.8	64.8	1.5	4.4	-	-	100.0	100.0
25-29	26.8	12.4	70.0	80.5	2.4	5.7	-	1.4	100.0	100.0
30-34	13.1	8.4	82.8	81.3	1.9	7.3	2.3	3.1	100.0	100.0
35-39	10.0	5.5	85.8	84.9	1.8	5.7	2.5	3.9	100.0	100.0
40-44	7.6	6.3	87.9	81.4	1.7	5.3	2.8	7.0	100.0	100.0
45-49	6.9	6.9	86.8	78.7	1.4	5.4	5.0	9.1	100.0	100.0
50 and over	6.5	4.2	75.4	58.8	2.3	4.8	15.7	32.2	100.0	100.0
ALL AGES	57.8	52.0	38.0	39.0	1.0	2.8	3.2	6.2	100.0	100.0

Note : Estimates less than 1 percent have been given as a "-".

Source : 1984 Demographic Sample Survey.

TABLE 1.6 : SUMMARY OF DEMOGRAPHIC INDICATORS, 1984

Measures of Fertility and Mortality	
FERTILITY	
Crude birth rate	39.1
General fertility rate	169.6
Total fertility rate	5.9
Gross reproduction rate	2.9
Net reproduction rate	1.9
Rate of natural increase (%)	2.0
MORTALITY	
Crude death rate	19.3
Infant mortality rate	142.0
Life expectancy at birth	45.8
Males	49.1
Females	

Note : For explanation of demographic indicators see Introduction to this Chapter.

Source : Analysis of 1984 Demographic Sample Survey.

CHAPTER 2 HEALTH

INTRODUCTION

General health conditions in Bhutan are affected by low nutrition intake, poor sanitation, and a high prevalence of parasitic infections and contagious diseases. Efforts to establish modern medical facilities in Bhutan were begun in 1962. Institutional health facilities, until quite recently were concentrated in the urban centres, but today the emphasis has shifted to the rural areas where the majority of the population live. Basic health units (BHU's) usually serving remote districts, staffed by well-trained para-medical personnel are equipped to treat minor ailments and advise on preventive measures to avoid the spread of communicable diseases. These BHU's are supported by dispensaries.

There are also a number of special health programs in Bhutan administered by the Department of Health. These cover immunisation, maternal and child health services, malaria eradication, leprosy and family planning.

The main indicators of the health status of the population are morbidity and mortality. Morbidity refers to the types of illnesses people suffer from, while mortality relates to death rates and causes of death. Morbidity and mortality data are usually obtained from administrative sources. Morbidity data can often be obtained from patient records of health units, while information on mortality rates and causes of death is usually obtained from vitals registration systems (ie the system of civil registration of births and deaths).

In Bhutan, some morbidity statistics are available based on patients treated by hospitals, basic health units and dispensaries. Little information on mortality is available. While a registration system is in place for the reporting of births and deaths, it is recognised that there is some undercoverage and problems with the identification of cause of death. Overall levels of mortality have been estimated from the Demographic Sample Surveys, but cause of death data have not yet become available. Efforts are under way to improve the vitals registration system.

MAIN FEATURES

In 1986, there were 27 hospitals, 67 basic health units and 46 dispensaries scattered across Bhutan. A total of 134 doctors and 541 paramedical workers service the health needs of the population. This represents one doctor for every 9,800 population. There were 915 hospital beds available in 1986, representing one bed per 1,400 population.

Information on diseases of patients treated in basic health units and dispensaries, as summarized in Tables 2.3 and 2.4 provides a guide to the health problems of the people. The major diseases are diarrhoea/dysentery (17.5 percent of patients treated in 1986) and respiratory problems (16.5 percent). Worms, skin infection and malaria were also widespread. A comparison of 1985 and 1986 figures suggests that the incidence of some of the major diseases may be on the decline.

The immunization program has been given special priority in the administration of health services. In 1986, over 28,000 children were vaccinated for BCG, 17,000 against measles and

nearly 15,000 against both diphtheria and poliomyelitis. The number were up significantly from the previous year.

Maternal and child health services are an important part of the health services. In 1986, total attendance at maternal health clinics was over 40,000.

Malaria is still an endemic disease in Southern Bhutan with over 150,000 people living in malaria areas. Blood examinations carried out as part of the malaria eradication program produced over 16,000 positive readings during 1986. Leprosy is also a problem in some areas and at the end of 1986, leprosy hospitals had 1,674 patients including 71 new cases detected during the year.

TABLE 2.1 : SUMMARY OF HEALTH FACILITIES AND PERSONNEL, 1985 AND 1986

	1985	1986
Hospitals	27	27
Basic Health Units	65	67
Dispensaries	44	46
Indigenous Hospitals	1	1
Indigenous dispensaries	4	4
Hospital beds	857	915
Doctors	113	134
Paramedical Workers	n.a.	541
Population per doctor	11,300	9,800
Population per paramedical	n.a.	2,400
Population per bed	1,500	1,400
Per capita government health expenditure (Nu.)	n.a.	46.0

Source : Department of Health.

TABLE 2.2 : HEALTH PERSONNEL BY CATEGORY AND SEX, 1986

Category	Number		Total
	Males	Females	
Specialist doctors	19	3	22
Doctors	107	5	112
Staff nurses	5	51	56
Junior nurses	-	80	80
Assistant nurses	-	116	116
Laboratory technicians	32	3	36
Dental technicians	4	-	4
Dental hygienists	4	-	4
O.T technicians	4	-	4
Pharmacy technicians	63	-	63
X-Ray technicians	8	-	8
Health assistants	84	1	85
Basic Health Workers	85	-	85
ALL HEALTH PERSONNEL	416	259	675

Source : Department of Health.

TABLE 2.3 : PATIENTS TREATED BY BASIC HEALTH UNITS AND DISPENSARIES BY DISEASE, SEX AND AGE, 1986

Disease	Age 0-14			Age 15 and over			All	
	Males	Females	Persons	Males	Females	Persons	Persons	Percentage
Diarrhoea/Dysentery	18,785	16,955	35,740	15,041	11,095	26,136	61,876	17.5
Respiratory tract infection	13,236	13,311	26,547	17,138	14,887	32,025	58,572	16.5
Worms	11,261	11,335	22,596	9,783	9,036	18,819	41,415	11.7
Skin infection	11,123	10,585	21,708	10,240	7,886	18,126	39,834	11.2
Malaria/P.U.O	7,001	7,146	14,147	8,819	7,069	15,888	30,035	8.5
Conjunctivitis	4,313	4,446	8,759	4,446	3,964	8,410	17,169	4.8
Otitis media	2,791	2,523	5,314	1,061	973	2,034	7,348	2.1
Nutritional deficiency	4,430	4,915	9,345	6,954	7,663	14,617	23,962	6.8
Peptic ulcer syndrome	1,058	1,540	2,598	5,910	5,911	11,821	14,419	4.1
Disease of teeth and gum	656	848	1,504	2,867	2,573	5,440	6,944	2.0
Urinary tract infection and nephritis	971	1,101	2,072	2,133	2,097	4,230	6,302	1.8
Injuries	4,040	3,408	7,448	7,640	4,172	11,812	19,260	5.4
Sexually transmitted diseases	60	143	203	1,434	1,028	2,462	2,665	0.8
Other childhood diseases	1,465	1,455	2,920	544	327	871	3,791	1.1
Diseases of female genital tract	-	176	176	-	1,013	1,013	1,189	0.3
Complication of pregnancy and child birth peuperum	-	9	9	-	542	542	551	0.2
Others	3,128	3,594	6,722	6,578	5,677	12,255	18,977	5.4
ALL DISEASES	84,318	83,490	167,808	100,588	85,913	186,501	354,309	100.0

Source : Department of Health.

TABLE 2.4 : PATIENTS TREATED IN BASIC HEALTH UNITS AND DISPENSARIES BY DISEASE, 1985 AND 1986 (a)

Disease	Number		Percentage	
	1985	1986	1985	1986
Diarrhoea/Dysentery	52,668	61,876	18.2	17.5
Respiratory tract infection	48,118	58,572	16.6	16.5
Worms	33,651	41,415	11.6	11.7
Skin infection	34,145	39,834	11.8	11.2
Malaria/P.U.O	30,204	30,035	10.4	8.5
Conjunctivitis	12,516	17,169	4.3	4.8
Otitis media	7,793	7,348	2.7	2.1
Nutritional deficiency	20,774	23,962	7.2	6.8
Peptic ulcer syndrome	10,852	14,419	3.7	4.1
Disease of teeth and gum	5,330	6,944	1.8	2.0
Urinary tract infection and nephritis	5,061	6,302	1.7	1.8
Injuries	2,699	19,260	0.9	5.4
Sexually transmitted diseases	2,059	2,665	0.7	0.8
Other childhood diseases	1,263	3,791	0.4	1.1
Disease of female genital tract	958	1,189	0.3	0.3
Complication of pregnancy and childbirth peuperum	n.a.	551	n.a.	0.2
Others	21,532	18,977	7.4	5.4
ALL DISEASES	289,623	354,309	100.0	100.0

(a) The 1986 data are based on more complete coverage and this may affect comparisons between 1985 and 1986.

Source : Department of Health.

TABLE 2.5 : PATIENTS TREATED IN EACH HOSPITAL, 1985 AND 1986 (a)

Hospital	1985	1986
Government Hospitals		
Bumthang	19,072	9,552
Chirang	11,789	29,372
Gaylegphug	50,380	70,428
Pemagatsel	9,931	8,850
Paro	16,738	17,175
Phuntsholing	21,396	18,539
Samdrupjongkhar	12,754	15,052
Samchi	6,009	27,486
Sarbhang	6,070	21,730
Sibsü	4,112	15,752
Shemgang	4,172	4,529
Thimphu	98,368	122,352
Tashigang	7,877	27,934
Leprosy Mission Hospitals		
Gidakom	1,896	7,227
Lhuntshi	3,602	3,690
Mongar	10,911	13,430
Riserboo	2,945	11,960
Yebilepeha (Shemgang)	4,172	4,529
Army Hospitals		
Lungtenphug	29,367	27,855
Wangdiphodrang	18,940	13,164
Yonphula	n.a	n.a
Project Hospitals		
Gomtu	8,849	35,613
Tshimalakha	-	6,945
Other Hospitals		
Deothang	n.a	n.a
Ha	n.a	n.a
IBF, Thimphu	n.a	n.a
Tongsa	2,111	2,481
Indigenous Hospital	30,216	28,682
ALL HOSPITALS (b)	381,677	544,327

(a) Comparisons between 1985 and 1986 may be affected by different coverage in each year. (b) Total patient numbers exclude four hospitals for which data were not available.

Source : Department of Health.

TABLE 2.6: IMMUNIZATION ACTIVITIES, 1980 TO 1986
(children immunized)

Immunization	1980	1981	1982	1983	1984	1985	1986
BCG	18,088	26,923	17,044	20,508	20,321	17,379	28,469
DPT1	6,826	9,380	7,689	11,782	13,188	14,078	21,556
DPT3	2,327	5,378	4,237	7,403	7,462	10,139	14,846
OPV1	4,867	11,666	7,587	10,899	13,226	13,331	20,927
OPV3	1,679	4,644	4,186	6,135	7,223	10,190	14,179
Measles	8,747	8,998	8,728	9,440	12,738	12,487	17,076
TT1	-	-	-	-	2,295	5,327	4,912
TT2	-	-	-	-	986	1,454	2,395

Source : Department of Health.

TABLE 2.7: MATERNAL AND CHILD HEALTH SERVICES, 1981 TO 1986

	1981	1982	1983	1984	1985	1986
MATERNAL HEALTH SERVICES						
Attendance (a)						
Antenatal	3,807	4,360	5,106	7,841	13,548	18,532
Postnatal	4,806	4,903	9,834	13,141	18,080	22,803
Total attendance	8,613	9,263	14,940	20,982	31,628	41,335
Deliveries attended						
Home (b)	683	721	658	822	497	800
Hospital/Basic Health Units	213	310	489	1,460	1,817	3,007
Total deliveries	896	1,031	1,147	2,282	2,314	3,807
CHILD HEALTH SERVICES						
Attendance						
First visit	4,608	6,321	8,524	11,967	17,734	23,996
Repeat visit	36,688	36,543	36,084	65,526	93,275	90,754
Total attendance	41,296	42,864	44,608	77,493	111,009	114,750
Malnourished children (c)						
All malnourished	11,344	11,020	10,610	12,934	12,456	9,030
Third degree	1,092	1,087	1,116	1,114	1,250	953

(a) Refers to total attendance, not a count of individuals. (b) Home deliveries are those attended by health staff. Many women attending health units for antenatal care have deliveries at home without attendance by health staff and are not included in the delivery figures. (c) Children attending health units are classified according to three degrees of malnourishment. Third degree malnourishment refers to the most severe cases.

Source : Department of Health.

TABLE 2.8 : FAMILY PLANNING ACCEPTORS BY TYPE OF METHOD, 1981 TO 1986

Method of family planning	1981	1982	1983	1984	1985	1986	Percentage 1986
Vasectomy	210	210	851	637	447	414	3.8
Minilap	14	12	490	430	371	428	3.9
Intra uterine device(IUD)	78	180	387	337	584	896	8.1
Pills	1,011	1,242	1,599	1,440	4,314	6,355	57.7
Condoms	207	168	197	390	1,159	2,846	25.8
Injection DMPA	-	-	-	84	-	81	0.7
ALL METHODS	1,520	1,812	3,524	3,318	6,875	11,020	100.0

Source: Department of Health.

TABLE 2.9: LEPROSY CONTROL PROGRAMME, 1985 AND 1986

	1985	1986
Patients at beginning of the year	2,478	2,233
New cases detected	113	71
Relapse cases	5	9
Deaths	47	33
Released from control(a)	215	546
Lost to control(b)	101	60
Patients at the end of the year	2,233	1,674

(a) Patients successfully treated. (b) Patients unsuccessfully treated.

Source : Department of Health.

TABLE 2.10: MALARIA ERADICATION PROGRAMME, 1985 AND 1986

	1985	1986
Population in malaria areas	148,000	158,000
Blood film examined	69,421	82,446
Blood slide positive	15,999	16,523

Source : Department of Health.

CHAPTER 3 EDUCATION

INTRODUCTION

The development of a comprehensive education system in Bhutan was initiated in 1961. Prior to that time there were virtually no modern education facilities inside Bhutan, apart from the traditional education given in the monasteries.

Today there is an extensive network of schools and other educational institutions spread throughout the country. Many schools contain boarding facilities for students living in areas far from the nearest school. While the medium of instruction in schools is English, Bhutan's national language Dzongkha, is taught as a compulsory subject from primary to college level. School curricula also include religious instruction, training in traditional arts and crafts and agriculture.

The Department of Education maintains an extensive range of data on students, schools, and teaching personnel. Some summary data are presented in this Chapter.

MAIN FEATURES

In 1986 the total number of students enrolled in schools in Bhutan was 52,500. Of these, 37,000 were enrolled in primary schools, 11,700 in junior high schools and 3,800 in high schools. There were 18,000 females enrolled in schools (or over one third of total enrolment).

Student numbers have increased over the past few years from 36,900 in 1981 (including college students) to 52,900 in 1986.

There were altogether 1,934 teachers in 1986, of which 1,321 were in primary schools, 430 in junior high schools and 183 in high schools. A total of 734 teachers had had teaching training and there were 339 language teachers for Bhutanese and Nepali.

TABLE 3.1 : SUMMARY OF SCHOOLS BY DZONGKHAG, 1986

Dzongkhag	No. of schools	No. of teachers	No. of students		
			Males	Females	Persons
Chhukha	11	100	2,012	1,209	3,221
Ha	6	52	652	457	1,109
Paro	10	115	1,508	850	2,358
Samchi	22	290	5,286	2,959	8,245
Thimphu	14	233	3,344	2,675	6,019
Chirang	18	194	4,077	2,253	6,330
Dagana	5	37	820	279	1,099
Punakha	5	50	713	381	1,094
Wangdiphodrang	8	75	817	455	1,272
Bumthang	4	40	660	316	976
Gaylegphug	18	233	4,708	2,609	7,317
Shemgang	8	63	1,322	391	1,713
Tongsa	4	36	521	326	847
Lhuntshi	5	31	572	228	800
Mongar	7	63	1,163	409	1,572
Pemagatsel	4	39	858	172	1,030
Samdrupjongkhar	11	116	2,415	951	3,366
Tashigang	17	167	2,995	1,089	4,084
BHUTAN	177	1,934	34,443	18,009	52,452

Source: Department of Education.

TABLE 3.2 : NUMBER OF SCHOOLS BY DZONGKHAG AND TYPE OF SCHOOL, 1986

Dzongkhag	Primary Schools	Junior high Schools	High schools	All Schools
Ha	5	1	-	6
Paro	8	1	1	10
Samchi	18	3	1	22
Thimphu	10	2	2	14
Chirang	15	3	-	18
Dagana	4	1	-	5
Punakha	4	-	1	5
Wangdiphodrang	7	1	-	8
Bumthang	3	1	-	4
Gaylegphug	15	2	1	18
Shemgang	7	-	1	8
Tongsa	3	1	-	4
Lhuntshi	4	1	-	5
Mongar	6	1	-	7
Pemagatsel	3	1	-	4
Samdrupjongkhar	11	-	-	11
Tashigang	14	2	1	17
BHUTAN	147	22	8	177

Source : Department of Education.

TABLE 3.3: NUMBER OF STUDENTS BY DZONGKHAG AND TYPE OF SCHOOL, 1986

Dzongkhag	Primary Schools	Junior High Schools	High Schools	All schools		
				Males	Females	Persons
Chhukha	3,038	183	-	2,012	1,209	3,221
Ha	662	447	-	652	457	1,109
Paro	1,727	365	266	1,508	850	2,358
Samchi	5,970	1,964	311	5,286	2,959	8,245
Thimphu	3,708	1,280	1,031	3,344	2,675	6,019
Chirang	4,287	2,043	-	4,077	2,253	6,330
Dagana	912	187	-	820	279	1,099
Punakha	642	-	452	713	381	1,094
Wangdiphodrang	874	398	-	817	455	1,272
Bumthang	389	587	-	660	316	976
Gaylegphug	4,992	1,432	893	4,708	2,609	7,317
Shemgang	1,170	-	543	1,322	391	1,713
Tongsa	398	449	-	521	326	847
Lhuntshi	529	271	-	572	228	800
Mongar	991	581	-	1,163	409	1,572
Pemagatsel	506	524	-	858	172	1,030
Samdrupjongkhar	3,366	-	-	2,415	951	3,366
Tashigang	2,837	992	255	2,995	1,089	4,084
BHUTAN	36,998	11,703	3,751	34,443	18,009	52,452

Source: Department of Education.

TABLE 3.4: NUMBER OF STUDENTS BY TYPE OF SCHOOL AND GRADE, 1986

Grade	Primary Schools			Junior High Schools			High Schools			All Schools		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
PP	9,662	5,415	15,077	1,875	1,237	3,112	123	119	242	11,660	6,771	18,431
I	5,051	2,481	7,532	1,169	776	1,945	203	134	337	6,423	3,391	9,814
II	3,302	1,654	4,956	900	617	1,517	162	125	287	4,364	2,396	6,760
III	2,670	1,186	3,856	778	456	1,234	168	103	271	3,616	1,745	5,361
IV	1,877	762	2,639	681	411	1,092	129	97	226	2,687	1,270	3,957
V	1,325	534	1,859	563	365	928	134	108	242	2,022	1,007	3,029
VI	772	307	1,079	476	301	777	153	124	277	1,401	732	2,133
VII	..	..	..	440	135	575	371	186	557	811	321	1,132
VIII	..	..	..	416	107	523	413	135	548	829	242	1,071
IX	..	..	..	..	..	..	325	83	408	325	83	408
X	..	..	..	..	..	..	305	51	356	305	51	356
Total	24,659	12,339	36,998	7,298	4,405	11,703	2,486	1,265	3,751	34,443	18,009	52,452

Source: Department of Education.

TABLE 3.5: NUMBER OF STUDENTS (a) BY GRADE, 1981 TO 1986

Grade	1981	1982	1983	1984	1985	1986
Primary grades						
Pre-primary	16,428	17,366	19,217	20,085	20,375	18,431
I	6,191	6,446	7,018	7,705	8,359	9,814
II	4,384	4,995	5,307	5,668	6,064	6,760
III	3,395	3,805	4,331	4,682	4,986	5,361
IV	2,332	2,745	3,147	3,426	3,690	3,957
V	1,751	2,047	2,352	2,709	2,967	3,029
VI	-	-	-	-	-	2,133
Total Primary	34,481	37,404	41,372	44,275	46,441	49,485
Junior High grades						
VI	732	950	1,059	1,249	1,149	-
VII	693	700	869	995	1,129	1,132
VIII	431	609	700	809	906	1,071
Total Junior High	1,856	2,259	2,628	3,053	3,184	2,203
High School grades						
IX	194	239	263	336	391	408
X	174	162	218	219	295	356
Total High School	368	401	481	555	686	764
College(b)	204	226	278	330	367	422
Total students	36,909	40,290	44,759	48,213	50,678	52,874

(a) Including 422 college students. (b) College students include only those students studying in Bhutan.

Source: Department of Education.

TABLE 3.6 : NUMBER OF INSTITUTIONS, TEACHERS AND STUDENTS BY TYPE OF SCHOOL, 1986

	Primary School	Junior High School	High School	Total
No. of Schools	147	22	8	177
No. of Teachers	1,321	430	183	1,934
Students				
Males	24,659	7,298	2,486	34,443
Females	12,339	4,405	1,265	18,009
Persons	36,998	11,703	3,751	52,452
Student / Teacher ratio	28	27	20	27

Source : Department of Education.

TABLE 3.7: SUMMARY OF TEACHERS BY DZONGKHAG AND TYPE OF SCHOOL 1986

Dzongkhag	Primary schools	Junior High Schools	High Schools	All Schools
Chhukha	89	11	-	100
Ha	37	15	-	52
Paro	82	18	15	115
Samchi	201	67	22	290
Thimphu	127	55	51	233
Chirang	128	66	-	194
Dagana	27	10	-	37
Punakha	32	-	18	50
Wangdiphodrang	57	18	-	75
Bumthang	22	18	-	40
Gayleggphug	151	46	36	233
Shemgang	41	-	22	63
Tongsa	21	15	-	36
Lhuntshi	18	13	-	31
Mongar	40	23	-	63
Pemagatsel	21	18	-	39
Samdrupjongkhar	116	-	-	116
Tashigang	111	37	19	167
BHUTAN	1,321	430	183	1,934

Source: Department of Education.

TABLE 3.8: NUMBER OF TEACHERS BY QUALIFICATION AND TYPE OF INSTITUTION, 1986

Qualification	Primary Schools	Junior High Schools	High Schools	All Schools
With teaching training				
Post Graduate (Arts)	3	10	10	23
Post Graduate (Science)	-	3	8	11
Post Graduate (Commerce)	-	-	-	-
Graduate (Arts)	29	24	17	70
Graduate (Science)	17	21	13	51
Graduate (Commerce)	1	1	-	2
Other (a)	428	67	18	513
Volunteer and deputationist	15	32	17	64
Without Teaching Training				
Post Graduate (Arts)	16	26	15	57
Post Graduate (Science)	7	5	7	19
Post Graduate (Commerce)	1	-	1	2
Graduate (Arts)	105	48	15	168
Graduate (Science)	54	51	10	115
Graduate (Commerce)	11	3	1	15
Other (a)	287	60	24	371
Temporary and National Services	112	2	-	114
Language Teachers	235	77	27	339
TOTAL	1,321	430	183	1,934

(a) Includes National Institute of Education, Teachers Training Centre, Matriculation, Non-matriculation and Physical teachers.

Source: Department of Education.

CHAPTER 4 HUMAN RESOURCES

INTRODUCTION

The economy of Bhutan is characterized by the predominance of people engaged in self-employment, particularly those working their own land. There is also a good deal of small cottage industry often undertaken in the home. The number of persons working for wages is relatively small.

Statistics on human resources are designed to measure the involvement of people in economic activity. Economic activity refers to the production of economic goods and services and includes persons who are self-employed (eg. farmers operating their own land) as well as persons who work for wages (ie. employees).

Broadly, a statistical system for human resources (or labour) should cover the following topics:

a) Size and characteristics of the labour force; i.e. the number of people available for productive work and their skills, etc. This is of importance in terms of assessing the potential productive work force and its training needs to meet the future economic development of the country.

b) Employment; i.e. the number of persons employed in different activities. This is an essential component of measuring the structure of the economy and the importance of different industries. The categorization of employment into persons who are self-employed and employees is another important dimension.

c) Unemployment; i.e. measures of the underutilized labour.

d) Wage rates and earnings; these measures provide an indicator of the economic well-being of workers as well as providing a basis for assessing cost structures in different industries.

e) Conditions of work (covering aspects such as hours of work); these are important to assess the social conditions of workers.

Labour statistics may be obtained from three main sources:

a) Household Surveys, whereby information is obtained from the person himself about his employment, earnings and other aspects of his working activities.

b) Employer Surveys, whereby information on number of persons employed and wage levels is obtained from employers.

c) Administrative sources, whereby various aspects of labour statistics (eg. wage rates) are obtained from administrative sources.

In Bhutan, little data currently exist on labour. The only data currently available are some broad level data on economic activity which was obtained from a household survey, and some data on civil service employment and wages obtained from administrative records. Plans are under way for an improvement in the statistics in the human resources area.

MAIN FEATURES

In 1984, over 93 per cent of the population aged 15 to 64 were engaged in some economic activity, including 90 per cent of the males and over 96 per cent of the females. For males 78 per cent were engaged in agriculture and 12 per cent in other activities, while for females over 95 per cent were engaged in agriculture and only one per cent in other activities.

In January 1987, total civil service employment amounted to 11,078 plus an additional 2,104 teaching and non-teaching staff in schools. Excluding staff in schools, a total of 2,583 civil service employees (or 23 percent) were non-nationals while 1,060 (or 10 percent) were females. Total civil service employment increased by 11 percent between 1984 and January 1987.

The total wages bill for the civil service in 1986/87 was Nu. 152.8 million compared with Nu. 99.7 million in 1984/85.

TABLE 4.1: PERCENTAGE OF POPULATION ACCORDING TO ECONOMIC ACTIVITY BY AGE AND SEX, 1984

Age group	Agriculture	Government service	Business	Others	No Occupation	Total
MALES						
Less than 15	7.0	-	-	1.0	92.0	100.0
15 - 19	54.7	2.0	*	3.5	39.7	100.0
20 - 24	70.9	11.1	1.5	4.0	12.5	100.0
25 - 29	76.7	13.8	2.0	4.4	3.1	100.0
30 - 34	82.0	11.1	1.7	4.3	0.8	100.0
35 - 39	84.4	7.7	2.4	4.7	*	100.0
40 - 44	87.7	5.9	2.3	3.6	*	100.0
45 - 54	90.5	3.3	1.6	3.6	1.0	100.0
55 - 64	88.1	1.0	0.9	4.0	6.0	100.0
65 and over	71.1	1.5	*	0.9	26.0	100.0
ALL AGES	52.5	3.9	0.9	2.8	39.9	100.0
Age 15 - 64	78.4	6.5	1.4	4.0	9.6	100.0
FEMALES						
Less than 15	9.2	-	-	0.2	90.7	100.0
15 - 19	87.8	*	*	0.4	11.0	100.0
20 - 24	95.7	1.0	1.1	*	2.1	100.0
25 - 29	98.0	*	*	*	0.7	100.0
30 - 34	98.4	*	*	*	*	100.0
35 - 39	99.1	*	*	*	*	100.0
40 - 44	99.2	*	*	*	-	100.0
45 - 54	98.4	*	*	*	1.2	100.0
55 - 64	91.1	*	*	*	8.5	100.0
65 and over	73.2	*	*	-	26.1	100.0
ALL AGES	61.5	0.3	0.3	0.2	37.8	100.0
Age 15-64	95.4	0.4	0.5	0.2	3.6	100.0
PERSONS						
Less than 15	8.2	-	-	0.6	91.3	100.0
15 - 19	72.4	1.2	*	1.9	24.4	100.0
20 - 24	83.9	5.8	1.3	2.0	7.0	100.0
25 - 29	88.0	6.8	1.1	2.2	1.8	100.0
30 - 34	90.8	5.4	1.1	2.1	0.6	100.0
35 - 39	91.7	3.9	1.4	2.5	0.5	100.0
40 - 44	93.5	3.0	1.4	1.9	*	100.0
45 - 54	94.4	1.7	1.0	1.9	1.1	100.0
55 - 64	89.6	0.6	0.6	2.0	7.2	100.0
65 and over	72.1	1.0	*	0.5	26.0	100.0
ALL AGES	57.2	2.0	0.6	1.4	38.8	100.0
Age 15-64	87.2	3.4	0.9	2.0	6.5	100.0

Note : Cells for which the sample size is too small for accurate estimation have been indicated by an asterisk.

Source : Demographic Sample Survey 1984.

TABLE 4.2: EMPLOYMENT IN CIVIL SERVICE BY MINISTRY AND DEPARTMENT (a), JANUARY 1987

Ministry/Department	Males	Females	Persons
Ministry of Home Affairs			
Secretariat	61	7	68
Dzongkhag Administration	412	49	461
Survey and Land Records	222	15	237
Immigration and Census	74	12	86
Total Ministry of Home Affairs	769	83	852
Ministry of Finance			
Secretariat	42	10	52
HRH Office	12	0	12
Dechencholing Palace	30	2	32
Store Office	11	0	11
National Budget and Accounts	34	18	52
National Properties	83	5	88
Revenue and Customs	310	23	333
Total Ministry of Finance	522	58	580
Ministry of Communications and Tourism			
Secretariat	22	4	26
Posts, Telegraph and Civil Wireless	485	30	515
Telecommunications	325	56	381
Bhutan Tourism Corporation	337	26	363
Information	26	7	33
Druk Air Corporation	53	3	56
Development Support Communication Division	24	4	28
Government Press	37	8	45
Bhutan Government Transport Service	145	0	145
Broadcasting	28	5	33
Civil Aviation	14	1	15
Total Ministry of Communication and Tourism	1,496	144	1,640
Ministry of Social Services			
Secretariat	27	5	32
Health Services	1,105	339	1,444
Education(Office) (b)	106	17	123
Public Works Department	791	53	844
Total Ministry of Social Services	2,029	414	2,443
Ministry of Agriculture			
Secretariat	21	6	27
HRH Secretariat	27	0	27
Animal Husbandry	541	23	564
Forestry	875	22	897
Food Corporation of Bhutan	214	20	234
Agriculture	677	30	707
Total Ministry of Agriculture	2,355	101	2,456
Ministry of Foreign Affairs			
	137	26	163
Ministry of Trade and Industries			
Secretariat	27	6	33
Industries and Mines	24	0	24
Geological Survey of Bhutan	78	4	82
Trade and Commerce	28	4	32
State Trading Corporation of Bhutan	48	8	56
Export	96	1	97
Power	430	19	449
Gedu Wood Manufacturing Corporation	215	37	252
Penden Cement Authority	510	19	529
Total Ministry of Trade and Industries	1,456	98	1,554

Table continued on next page. For footnotes see next page.

TABLE 4.2(continued) : EMPLOYMENT IN CIVIL SERVICE BY MINISTRY AND DEPARTMENT(a), JANUARY 1987

Ministry/Department	Males	Females	Persons
Special Commission			
Special Commission Secretariat	24	1	25
National Library	36	4	40
National Museum	13	1	14
Antiques Preservation	79	1	80
Central Monastic Secretariat	22	0	22
Total Special Commission	174	7	181
Financial Institutions			
Bank of Bhutan	275	33	308
Royal Monetary Authority	54	6	60
Royal Insurance Corporation of Bhutan	150	30	180
Total Financial Institutions	479	69	548
Other Non-Ministerial Organisations			
His Majesty's Secretariat	71	2	73
Planning Commission	37	9	46
Central Statistical Office and Computer Centre	26	8	34
Royal Civil Service Commission	23	9	32
Royal Audit Authority	59	10	69
Royal Advisory Council	28	1	29
National Assembly	10	2	12
National Urban Development Corporation	100	8	108
City Corporation	47	2	49
National Women's Association of Bhutan	11	3	14
Judiciary	185	5	190
Bhutan Olympic Committee	4	1	5
Total Other Non-Ministerial Organisations	601	60	661
TOTAL CIVIL SERVICE EMPLOYMENT(b)	10,018	1,060	11,078

(a) Includes all permanent employees, employed under Bhutan Civil Service Rules. Casual labour is excluded. Employees of Chhukha Hydel Project are excluded. (b) Excludes teaching and non-teaching staff in schools.

NOTE : Staff numbers have been substantially reduced since January 1987.

Source : Census of Government Employees undertaken by CSO.

TABLE 4.3 : EMPLOYMENT IN CIVIL SERVICE BY MINISTRY BY NATIONAL/NON-NATIONAL, JANUARY 1987

Ministry	Nationals	Non-nationals	Total
MINISTRIES			
Home Affairs	724	128	852
Finance	495	85	580
Communication & Tourism	1,404	236	1,640
Social Services(a)	1,598	845	2,443
Agriculture	2,221	235	2,456
Foreign Affairs	94	69	163
Trade and Industries	894	660	1,554
NON-MINISTERIAL ORGANISATIONS			
Special Commission	180	1	181
Financial Institutions	352	196	548
Others	533	128	661
TOTAL CIVIL SERVICE EMPLOYMENT(a)	8,495	2,583	11,078

(a) Excludes teaching and non-teaching staff in schools.
(b) Staff numbers have been substantially reduced since January 1987.

Source : Census of Government Employees undertaken by CSO.

TABLE 4.4 : EMPLOYMENT IN CIVIL SERVICE BY MINISTRY AND SEX, 1984 AND 1987

MINISTRY	1984			1987		
	Males	Females	Persons	Males	Females	Persons
MINISTRIES						
Home Affairs(a)	3,013	375	3,388	769	83	852
Finance	283	25	308	522	58	580
Communication & Tourism	1,651	134	1,785	1,496	144	1,640
Social Services(b)	2,316	463	2,779	2,029	414	2,443
Agriculture	1,866	57	1,923	2,355	101	2,456
Foreign Affairs	132	19	151	137	26	163
Trade and Industries	673	30	703	1,456	98	1,554
NON-MINISTERIAL ORGANISATIONS						
Special Commission	43	4	47	174	7	181
Financial Institutions	379	41	420	479	69	548
Other	313	35	348	601	60	661
TOTAL				10,018	1,060	11,078
Teaching and non-teaching staff in schools(1987)	..	..	..	n.a	n.a	2,104
TOTAL CIVIL SERVICE EMPLOYMENT	10,669	1,183	11,852	n.a	n.a	13,182

(a) The drop in employment in Ministry of Home Affairs between 1984 and 1987 is because a number of employees in Dzongkhags were included under Ministry of Home Affairs in 1984 but were included under other Ministries in 1987 (eg. agricultural extension workers were included under Ministry of Agriculture in 1987). (b) Teaching and non-teaching staff in schools are included under Social Services in 1984 but excluded in 1987.

NOTE : Staff numbers have been substantially reduced since January 1987.

Source : Census of Government Employees undertaken by CSO.

TABLE 4.5 : WAGES AND SALARIES PAID BY GOVERNMENT ORGANISATIONS, 1981/82 TO 1986/87

(Nu. in millions)

Year	Central Government	Dzongkhags	Total Government
1981/82	62.8	2.7	65.5
1982/83	59.1	22.0	81.1
1983/84	60.5	24.5	85.0
1984/85	71.2	28.5	99.7
1985/86	98.8	38.9	137.7
1986/87	112.5	40.3	152.8

Note : Wages paid by government business organisations are not included. Wages for most casual staff are excluded.

Source : Department of National Budget and Accounts.

CHAPTER 5

LAND USE AND AGRICULTURE

INTRODUCTION

Bhutan is predominantly an agricultural country with agriculture being the main subsistence occupation of the majority of Bhutanese people. For this reason, programs to increase and improve both the quantity and quality of agricultural products and for the country to achieve self-sufficiency in food grains and to have a marketable surpluses for sale, are of paramount importance in government planning.

Animal husbandry also plays an integral part in the farming system in Bhutan. Farmers keep cattle for draught and milking purposes, in addition to a few chickens and some pigs for slaughter. At higher altitudes, herds of yak and sheep are kept on pasture.

The requirements for statistics on agriculture are extremely diverse. Existing agricultural data tend to be incomplete and fragmented. Data on land use are available based on remote sensing methods. However, statistics on cropping are less reliable with existing data mainly being based on estimates made by District, block and village officials. Data on livestock numbers are available from collections undertaken each year. Livestock production and yield data are limited to incomplete information available from a 1984 sample survey. This survey also provided detailed data on livestock holdings and milk yields. Only limited data on output from forestry are available.

Efforts are under way to improve the statistical system for agriculture.

MAIN FEATURES

Bhutan covers a surface area of about 46,500 square kilometres. About 71 per cent of the country's total surface area consists of forest, 9 per cent is under cultivation and the rest is wilderness. The total land under cultivation amounts to 356,000 hectares.

The main cereal crops grown are paddy, maize, wheat, barley, buckwheat and millet. In total it is estimated that in 1984 the area under cereals was 124,100 hectares of which paddy accounted for 30,600 hectares and maize 58,500 hectares. Pulses and oilseeds (mustards) were expected to be grown over an area of approximately 10,800 hectares by 1987, while a total of 8,000 hectares were expected to be planted with oranges. Other cash crops include potato, apples, chillies, ginger and cardamom.

Bhutan expects to increase food grain production from an estimated 164,000 metric tonnes in 1981 to 205,000 metric tonnes in 1987. These increases are mainly expected to come from an increase of over 40 per cent in the production of paddy. The main increases in cash crops are expected from potatoes, oranges, apples and chillies/vegetables.

The most important livestock in Bhutan are cattle, sheep, poultry and pigs. In 1986 there were an estimated 340,000 head of cattle, 36,000 head of yak, 44,000 head of sheep, 211,000 head of poultry and 89,000 head of pigs.

The total milk production during the year 1984 was 36,600 metric tonnes, of which 73 per cent came from cattle, 25 per cent from yaks and only 2 per cent from buffaloes. The per capita milk available during that year was therefore estimated at just under 80 ml per day.

The production of logwood in Bhutan in 1986 was estimated at 234,600 cubic metres.

TABLE 5.1 : AREA ACCORDING TO LAND-USE AND VEGETATION TYPES, 1983

Land-use and vegetation types	Area ('000 hectares)	Percentage
NON-FORESTED		
Non-agricultural		
Perpetual snow/glaciers	400.6	10.0
Barren exposed and rocky areas (above 3500 m)	345.6	8.6
Barren land, grassland and scrubs (below 3500 m)	30.7	0.7
Water spreads	52.3	1.3
Total non-agricultural	829.2	20.6
Agricultural		
Valley cultivation (slope less than 30 percent)	64.9	1.6
Terraced cultivation (slope more than 30 percent)	175.9	4.4
Old shifting cultivation (tsheri)	115.0	2.8
Total agricultural	355.9	8.8
Total non-forested	1,185.1	29.4
FORESTED		
Tree cover		
Fir	295.6	7.3
Mixed conifer	485.4	12.1
Blue pine	75.5	1.9
Chir pine	129.2	3.2
Hardwood mixed with conifers	219.3	5.5
Upland hardwood (temperate)	872.6	21.7
Lowland hardwood (tropical and sub-tropical)	351.4	8.7
Degraded forest	141.6	3.5
Plantations	2.7	0.1
Total tree cover	2,573.4	64.0
Other		
Alpine pasture/meadows	74.8	1.9
Alpine scrub (rhododendron, juniper scrubs)	191.8	4.7
Total other	266.6	6.6
Total forested	2,839.9	70.6
TOTAL SURVEYED AREA	4,025.0	100.0
AREA NOT YET SURVEYED	625.0	..
TOTAL AREA	4,650.0	..

Note : Estimates based on remote sensing.

Source: Land use survey carried out by Department of Forestry, 1983.

TABLE 5.2: AREA ACCORDING TO DIFFERENT LAND USE BY DZONGKHAG, 1983

('000 hectares)

Dzongkhag	Non-forested			Forested			Total Area Surveyed	Total Area	Percentage Forested
	Non-Agri-cultural	Agri-cultural	Total	Tree cover	Other	Total			
Ha	26.2	6.4	32.6	117.8	22.6	140.4	173.0	..	81.2
Paro	26.5	14.6	41.1	152.6	19.3	171.9	213.0	..	80.7
Samchi	8.4	48.4	56.8	133.6	4.6	138.2	195.0	..	70.9
Thimphu	31.0	13.9	44.9	215.8	15.3	231.2	276.0	..	83.7
Chirang	3.2	24.0	27.2	61.8	-	61.8	89.0	..	69.5
Dagana	2.9	10.5	13.4	77.8	1.8	79.6	93.0	..	85.6
Gasa	313.3	2.3	315.6	103.6	82.8	186.4	502.0	..	37.1
Wangdiphodrang	118.0	19.6	137.6	257.2	30.2	287.4	425.0	..	67.6
Bumthang	135.4	7.0	142.4	123.7	33.9	157.6	300.0	..	52.5
Gaylegphug	5.1	24.2	29.3	159.7	-	159.7	189.0	..	84.5
Shemgang	6.2	18.6	24.8	211.9	5.3	217.2	242.0	..	89.8
Tongsa	13.2	14.7	28.0	132.7	14.3	147.0	175.0	..	84.0
Lhuntshi	82.2	18.3	100.5	169.9	19.6	189.5	290.0	..	65.3
Mongar	6.0	20.5	26.5	165.5	-	165.5	192.0	..	86.2
Pemagatsel	0.2	15.2	15.4	33.6	-	33.6	49.0	..	68.5
Samdrupjongkhar	3.5	46.2	49.7	165.3	-	165.3	215.0	..	76.9
Tashigang	48.0	51.3	99.3	290.6	17.1	307.7	407.0	..	75.6
BHUTAN	829.2	355.9	1,185.1	2,573.4	266.6	2,839.9	4,025.0	4,650.0	70.6

Note : Estimates based on remote sensing.

Source: Land use survey carried out by Department of Forestry, 1983.

TABLE 5.3: LAND UNDER AGRICULTURAL USE BY DZONGKHAG, 1984

('000 hectares)

Dzongkhag	Wet Land	Dry Land	Tsheri Pangshing	Kitchen Garden	Orchard & Plantation	Total Area
Ha	0.1	1.5	0.3	-	0.3	2.2
Paro	2.1	2.5	0.2	-	0.2	5.0
Samchi	6.1	13.6	1.9	0.3	5.5	27.3
Thimphu	1.8	1.2	0.3	0.1	1.1	4.4
Chirang	3.0	7.8	0.1	0.1	3.8	14.8
Dagana	0.7	2.6	0.2	-	0.1	3.6
Gasa	0.1	0.3	-	-	-	0.4
Punakha	1.5	0.2	-	-	0.1	1.8
Wangdiphodrang	1.8	0.9	0.1	-	0.1	2.9
Bumthang	-	2.6	0.6	-	0.1	3.4
Gaylegphug	4.1	9.4	0.7	0.1	5.4	19.7
Shemgang	0.9	1.4	0.8	-	0.4	3.6
Tongsa	0.7	1.2	0.4	-	0.2	2.4
Lhuntshi	1.2	1.6	0.7	0.1	-	3.5
Mongar	0.5	2.9	0.9	0.1	-	4.4
Pemagatsel	0.1	1.8	0.7	0.1	-	2.7
Samdrupjongkhar	1.8	4.2	2.8	0.2	0.5	9.5
Tashigang	3.2	10.1	1.2	0.2	0.1	14.9
BHUTAN	29.7	65.6	11.8	1.3	18.0	126.5

Note : These figures conflict with those given in Table 5.2. The figures in this table are based on estimates made by District, block and village officials, while the figures in Table 5.2 were based on remote sensing methods.

Source : Department of Agriculture.

TABLE 5.4 : CROP AREA AND PRODUCTION FOR EACH CROP, 1981 AND 1984

	Crop Area ('000 hectares)			Crop Production ('000 tonnes)		
	1981	1984	Target 1987	1981	1984	Target 1987
Cereals						
Paddy	28.0	30.6	37.0	57.4	65.0	84.5
Wheat/Barley	12.0	14.4	16.6	13.3	16.0	22.5
Maize	56.8	58.5	52.5	80.7	87.3	85.1
Buck wheat/ millets	15.5	20.6	15.0	12.3	16.8	12.7
Total	112.3	124.1	121.1	163.7	185.1	204.8
Other Crops						
Pulses	4.0	3.0	5.3	2.4	2.6	3.8
Mustard	2.9	5.0	5.5	1.9	3.5	3.9
Potato	3.7	4.2	5.1	24.9	32.6	50.0
Chillies/ vegetables	3.1	1.7	3.6	12.2	5.3	15.1
Oranges	6.2	7.8	8.0	25.6	38.7	53.1
Apples	1.5	1.6	1.9	3.3	3.5	8.8
Cardamom	5.9	8.8	6.6	2.8	3.0	4.1

Note : Figures are based on estimates made by District, block and village officials. Target 1987 refers to targets for the Fifth Plan.

Source : Surveys undertaken by Agriculture Department in 1981 and 1984.

TABLE 5.5: IRRIGATION SERVICES COMPLETED, YEAR ENDING MARCH 1985 AND MARCH 1986

Activity	1985	1986
New construction		
Number of schemes	87	110
Length of channel (Kms)	252.9	348.9
Command area (hectares)	8,192.1	9,786.0
Renovation		
Number of schemes	112	174
Length of channel (Kms)	276.8	394.8
Command area (hectares)	7,713.6	12,491.9
Bank protection		
Number of schemes	71	72
Length of channel (Kms)	55.0	87.8
Feeder Roads		
Number of schemes	37	47
Length of roads (Kms)	164.3	143.3

Source : Department of Agriculture.

TABLE 5.6: IRRIGATION SCHEMES COMPLETED DURING YEAR ENDING MARCH 1986 BY DZONGKHAG

	New construction			Renovation			Bank Protection	
	No. of schemes	Length of channel (Km)	Command area (hectares)	No. of schemes	Length of channel (Km)	Command area (hectares)	No. of schemes	Length of embankment (Km)
Ha	6	4.3	81.0	5	4.0	48.2	3	44.0
Paro	1	1.9	100.0	26	42.6	1,836.6	25	3.8
Samchi	9	22.6	641.3	15	43.0	1,573.7	13	13.5
Thimphu	10	31.7	904.9	23	54.7	1,318.7	-	-
Chirang	10	22.7	571.7	5	13.4	206.5	2	1.0
Dagana	7	20.3	396.8	4	16.3	388.7	-	-
Gasa	2	2.9	50.6	5	7.8	79.4	-	-
Punakha	3	10.5	102.0	25	72.2	2,355.6	2	0.2
Wangdiphodrang	2	10.1	283.4	15	18.4	1,040.0	-	-
Bumthang	2	4.3	40.5	-	-	-	3	2.5
Gaylegphug	10	24.0	1,217.4	8	19.5	1,012.1	15	15.6
Shemgang	2	6.4	182.2	7	16.8	400.4	1	1.0
Tongsa	6	11.1	244.9	7	9.2	230.8	-	-
Lhuntshi	10	44.4	659.9	12	38.6	598.0	-	-
Mongar	5	21.4	789.1	6	8.4	478.5	-	-
Pemagatsel	4	10.1	206.9	-	-	-	5	4.2
Samdrupjongkhar	11	35.3	1,799.6	5	16.3	607.3	3	2.0
Tashigang	10	65.0	1,513.8	6	13.5	317.4	-	-
BHUTAN	110	348.9	9,786.0	174	394.8	12,491.9	72	87.8

Source : Department of Agriculture.

TABLE 5.7 : LIVESTOCK NUMBERS BY DZONGKHAG, 1986

District	('000)					
	Cattle	Yaks	Sheep	Poultry	Pigs	Horses
Ha	7.0	5.1	-	3.1	2.1	1.1
Paro	18.0	2.8	0.2	5.5	29.8	0.6
Samchi	43.3	-	4.5	31.9	2.8	0.2
Thimphu	12.2	7.3	1.3	1.5	3.4	0.4
Chirang	26.5	-	2.8	17.8	2.6	1.3
Dagana	14.3	-	0.7	13.9	2.4	0.6
Gasa	1.0	2.9	-	0.6	0.2	0.4
Punakha	9.5	-	-	5.4	3.0	0.9
Wangdiphodrang	14.4	2.7	11.2	7.7	5.3	2.2
Bumthang	9.4	3.6	6.9	3.8	-	1.3
Gaylegphug	37.4	-	1.0	45.1	4.4	0.3
Shemgang	17.3	-	-	5.8	3.0	1.6
Tongsa	11.3	-	4.7	9.4	1.6	0.6
Lhuntshi	16.4	0.3	0.4	7.3	3.7	1.2
Mongar	21.8	-	-	13.3	4.8	1.5
Pemagatsel	6.7	-	-	4.5	2.2	1.1
Samdrupjongkhar	23.1	-	0.3	15.6	3.6	1.6
Tashigang	50.5	11.2	9.7	19.0	13.6	6.7
BHUTAN	340.3	35.7	43.8	211.3	88.6	23.6

Source : Department of Animal Husbandry.

TABLE 5.8 : ESTIMATED ANNUAL LIVESTOCK PRODUCTION, 1984

Item	Production
Cows milk (tonnes)	26,625.1
Yaks milk (tonnes)	9,176.5
Buffaloes milk (tonnes)	786.2
Eggs ('000)	4,990.0
Pork (tonnes)	989.0
Beef (tonnes)	4,716.0

Source: Estimated using results from the 1984 Livestock Survey.

TABLE 5.9: ESTIMATED ANNUAL COWS MILK PRODUCTION BY DZONGKHAG, 1984

Dzongkhag	Production (tonnes)
Ha	655.7
Paro	1,995.0
Samchi	5,321.5
Thimphu	834.6
Chirang	2,196.8
Dagana	1,026.6
Gasa	57.9
Punakha	236.5
Wangdiphodrang	1,310.2
Bumthang	635.0
Gaylegphug	2,338.4
Shemgang	1,511.2
Tongsa	485.8
Lhuntshi	996.8
Mongar	1,265.8
Pemagatsel	484.6
Samdrupjongkhar	1,580.5
Tashigang	3,692.3
BHUTAN	26,625.1

Source: Estimated using results from the 1984 Livestock Survey.

TABLE 5.10 : UTILIZATION OF MILK PRODUCTION - PERCENTAGES, 1984

	Cows	Yaks	Buffaloes
Own consumption as fluid milk	7.8	*	*
Sale as fluid milk	1.6	*	24.8
Conversion into milk products	90.7	96.4	73.6
TOTAL	100.0	100.0	100.0

Source : 1984 Livestock Survey

TABLE 5.11 : ALL LIVESTOCK IN MILK(a), DAILY MILK YIELD, 1984

Daily milk yield (Kg)	Percentage of livestock
Less than 0.5	10.5
0.5 - 1.0	25.5
1.0 - 1.5	36.9
1.5 - 2.0	17.3
2.0 - 2.5	6.9
2.5 - 3.0	1.9
3.0 and above	1.0
TOTAL	100.0

(a) Includes cows, yaks, and buffaloes.

Source : 1984 Livestock Survey.

TABLE 5.12 : FOOD CORPORATION OF BHUTAN, IMPORTS AND DISTRIBUTION, 1981/82 TO 1986/87

Commodity	(tonnes)					
	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87
	IMPORTS					
Rice	2,345	5,843	6,033	5,388	7,211	11,282
Wheat	873	2,725	2,123	2,599	2,450	3,350
Sugar	1,276	1,381	1,800	1,824	2,749	3,574
Salt	3,475	2,755	2,326	3,598	5,689	3,516
Oil	-	-	240	306	557	874
	SALES					
Rice	2,127	5,561	4,537	4,863	6,956	11,761
Wheat	661	2,701	2,230	2,280	2,534	3,346
Sugar	1,085	1,289	1,575	1,996	2,579	3,731
Salt	429	278	179	617	3,603	3,513
Oil	-	-	214	213	472	516

Source: Food Corporation of Bhutan.

TABLE 5.13 : PRODUCTION OF LOGWOOD, 1981 TO 1986

	('000 cubic metres)					
	1981	1982	1983	1984	1985	1986
Commercial Logging						
Bhutan Logging Corporation	25.3	49.9	85.8	67.2	46.6	122.4
Other contractors	23.4	53.0	55.1	52.6	48.8	53.0
Logging for house construction and public works	28.6	72.3	41.2	54.2	56.1	59.2
TOTAL	77.2	175.2	182.0	174.0	151.5	234.6

Source : Department of Forestry.

CHAPTER 6 INDUSTRIES

INTRODUCTION

The subject 'industries' covers the whole range of industrial activity carried out by businesses in all fields including mining, manufacturing, wholesale and retail trade, and service industries. In Bhutan, the industrial sector has until recently, played a relatively small role in the economy of the Kingdom.

The mining industry in Bhutan is as yet relatively undeveloped. The Kingdom has significant deposits of a number of mineral resources, including limestone, coal, graphite, gypsum, slate and dolomite. Most mining activity is limited to relatively small operations, mainly involved in the mining of limestone, coal, slate and dolomite.

The manufacturing industry is dominated by a small number of major operators such as the Penden Cement Plant and the Gedu Wood Manufacturing Corporation. In addition, there are a number of smaller manufacturing plants concentrated in the food processing and wood products sectors. Cottage industries also play a prominent role. With its good timber resources and favourable agricultural conditions, there is ample scope for expansion of the manufacturing sector especially in these areas.

As the industrial sector grows in Bhutan, statistics on industry will become increasingly important. The CSO will be giving special attention to the development of statistical systems to meet the important needs for industrial statistics in the future.

MAIN FEATURES

There were 349 manufacturing and mining firms licenced in 1986, of which 14 were public-owned and 335 were in private ownership. A total of 249 firms were in the food industry, the majority of which were very small operations. The other important industry was wood and paper products with 55 licenced firms, over half of which employed more than 10 persons.

In the manufacturing sector as a whole, 285 firms employed less than 10 employees, 21 had employment within the range 10-19, 16 employed between 20-49 employees, while 18 had more than 50 employees.

TABLE 6.1: NUMBER OF LICENCED MANUFACTURING FIRMS BY INDUSTRY AND EMPLOYMENT, 1986

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

Source: Department of Industries and Mines.

TABLE 6.2 : NUMBER OF LICENCED FIRMS IN MANUFACTURING AND MINING INDUSTRIES BY SECTOR, 1986

Industry	Public	Private	Total
Mining	4	5	9
Manufacturing			
Food processing/milling	4	245	249
Textiles and Clothing	-	5	5
Wood and Paper Products	2	53	55
Chemical Products	1	11	12
Mineral Products	2	4	6
Other	1	12	13
Total Manufacturing	10	330	340
TOTAL	14	335	349

Source: Department of Industries and Mines.

CHAPTER 7

TRANSPORT AND COMMUNICATION

INTRODUCTION

Traditionally the principal means of transport in Bhutan has been foot paths and mule tracks and these will continue to play an important role into the future. The development of the motor road network was initiated in 1961 with the commencement of work on the construction of the first road from Phuntsholing to Paro and Thimphu. The importance of road transport has grown with the expansion of the road network, and there are now extensive bus services between most centres in the Kingdom. Civil aviation arrived in Bhutan with the establishment of Druk Air Corporation and its commencement of operations in 1983 on the Paro - Calcutta sector. Services were extended to cover the Paro - Dhaka sector in 1986.

Communication facilities were limited prior to 1962. Since that time an extensive postal service has been developed so that the majority of the population now has reasonable access to mail services. Telephone services have also been considerably expanded and telex exchanges installed in Thimphu and Phuntsholing. An extensive civil wireless system also exists servicing many centres.

The statistical needs in the area of transport and communication are very extensive. On the transport side interest centres on the activities of the major categories of transport, especially motor vehicles (eg. vehicles registered, licenced drivers, traffic accidents), details of bus services (eg. passengers and freight carried) and information on civil aviation (eg. distance flown, passengers carried). Communication statistics of interest cover the postal services (eg. mail articles handled), telephone services (eg. calls sent out and received) and information on other communication facilities.

MAIN FEATURES

By 1987 there were 2,165 kilometers of motorable roads in Bhutan of which 1,703 kilometers were black topped. There were a total of 3,660 registered vehicles in 1986, including 716 cars, 781 four wheel drive vehicles, 780 trucks and 136 buses.

Bus transport combines both public and private enterprise. In 1986 there were 111 Government buses registered and 25 private buses. Government buses carried 1.2 million passengers in 1985-86.

A total of 7,776 passengers were carried by Druk Airlines during 1986, an increase of over 30 percent compared with 1985.

Post offices in Bhutan handled a total of almost 11 million items of mail in 1986, an increase of 11 percent over the previous year.

TABLE 7.1 : ROAD NETWORK IN BHUTAN BY TYPE, 1987 (a)

Type of road	Distance (km)			
	National Highways	District Roads	Feeder Roads	All Roads
Black topped	1,378	210	115	1,703
Non-black topped	72	237	153	462
TOTAL	1,450	447	268	2,165

(a) Table refers to roads completed at the end of the Fifth Plan.

Source: Public Works Department.

TABLE 7.2: ROAD NETWORK IN BHUTAN BY DZONGKHAG, 1987(a)

Dzongkhag	Distance (km)			
	National Highway	District Road	Feeder Road	All Roads
Chhukha	132	37	17	186
Ha	15	11	16	42
Paro	104	51	16	171
Samchi	-	66	13	79
Thimphu	102	-	19	121
Chirang	64	-	24	88
Dagana	22	87	-	109
Punakha	-	12	28	40
Wangdiphodrang	101	-	38	139
Bumthang	122	-	7	129
Gaylegphug	106	-	48	154
Shemgang	142	-	-	142
Tongsa	163	-	-	163
Lhuntshi	-	47	-	47
Mongar	177	20	-	197
Pemagatsel	-	23	13	36
Samdrupjongkhar	59	48	5	112
Tashigang	141	45	24	210
BHUTAN	1,450	447	268	2,165

(a) Table refers to roads completed at the end of Fifth Plan.

Source : Public Works Department.

TABLE 7.3: NUMBER OF REGISTERED VEHICLES BY TYPE AND REGION(a) FEBRUARY 1986

Vehicle type	Western	Central	Southern	Eastern	Total
Cars	382	38	259	37	716
Four wheel drive vehicles	427	78	191	85	781
Taxis	66	5	16	3	90
Trucks	143	67	498	72	780
Buses	32	2	93	9	136
Scooters	607	102	353	95	1,157
ALL VEHICLES	1,657	292	1,410	301	3,660

(a) Vehicles registered in the southern region are assigned the same number plates as those registered in the western region.

Source: Department of Revenue and Customs.

TABLE 7.4 : NUMBER OF NEW MOTOR VEHICLE DRIVING LICENCES ISSUED (a) BY TYPE OF VEHICLE, 1982 TO 1986

Type of vehicle	1982	1983	1984	1985	1986
Scooter/Bike	61	82	141	105	179
Light Vehicle	205	177	307	322	531
Medium	30	32	24	30	18
Heavy	161	126	88	87	131
Other(b)	20	18	29	32	44
ALL VEHICLES	477	435	589	576	903

(a) The figures refer to new licences issued during the year (not including renewals). The figures do not refer to the total number of licensed drivers. (b) Includes road roller, tractor and bulldozer.

Source: Royal Bhutan Police.

TABLE 7.5 : BHUTAN GOVERNMENT TRANSPORT SERVICE, PASSENGERS CARRIED, 1982/83 TO 1985/86

Year	Passengers carried ('000)
1982/83	1,045.0
1983/84	1,149.0
1984/85	1,264.0
1985/86	1,239.0

Source: Bhutan Government Transport Service.

TABLE 7.6: NUMBER OF MOTOR VEHICLE ACCIDENTS BY TRAFFIC DIVISION, 1984 TO 1986

Traffic Division	1984	1985	1986
Thimphu	36	69	118
Chimakothi	41	45	27
Phuntsholing	30	35	37
Samchi	-	5	2
Gaylegphug	8	10	12
Chirang	3	1	1
Tongsa	6	5	6
Samdrupjongkhar	7	12	13
Tashigang	1	4	11
Mongar	3	1	3
TOTAL	135	187	230

Source : Royal Bhutan Police.

TABLE 7.7 : CIVIL AVIATION - DRUK AIR FLIGHT SERVICES, 1983 TO 1986

	1983	1984	1985	1986
Distance flown ('000 km)	64.4	125.4	152.0	201.2
Passengers carried	2,854	4,480	5,928	7,776
Passenger-kilometers ('000 km)	1,612	2,531	3,349	4,381

Source : Druk Air Corporation.

TABLE 7.8 : TELEPHONE CONNECTION CAPACITY (a) BY EXCHANGE, 1986

Exchange	Connection Capacity
Thimphu	900
Phuntsholing	400
Wangdiphodrang	50
Paro	100
Ha	50
Punakha	25
Chimakothi	50
Tongsa	35
Gaylegphug	100
Sarbhang	50
Samdrupjongkhar	100
Tashigang	35
Samchi	50
ALL EXCHANGES	1,945

(a) While figures refer to connection capacity, they should reasonably reflect the number of telephone sets in use.

Source: Department of Telecommunication.

TABLE 7.9 : NUMBER OF TRUNK LINES, 1986

Place	Distance (Kms)
Thimphu-Chimakothi	65
Thimphu-Phuntsholing (a)	130
Thimphu-Wangdiphodrang	45
Thimphu-Punakha	60
Thimphu-Paro	54
Wangdiphodrang-Punakha	15
Paro-Phuntsholing	124
Paro-Ha	18
Samdrupjongkhar-Tashigang	130
Gaylegphug-Tongsa	200
Gaylegphug-Sarbhang	23
Phuntsholing-Chimakothi	65
Samchi-Banarhat (India)	14

(a) Microwave.

TABLE 7.10 : NUMBER OF TELEPHONE TRUNK CALLS BY TYPE (a) ('000)

Type of call	Number of Calls
Domestic calls	84.9
International calls	
India	15.1
Other	3.1
Total	18.2
ALL CALLS	103.2

(a) Estimated annual number of calls based on calls sent during December 1986 to March 1987.

Source : Department of Telecommunication.

TABLE 7.11 : NUMBER OF POST OFFICES AND OTHER COMMUNICATION FACILITIES, 1980 AND 1986

	1980	1986
General Post Offices	2	2
Posts Offices	52	54
Branch Post Offices	27	29
Telegraph Offices	8	9
Wireless Stations (a)	28	36
Hydromet Stations	5	13

(a) Includes two stations installed at New Delhi and Dhaka Embassies.

Source : Department of Posts, Telegraph and Wireless.

TABLE 7.12: NUMBER OF ITEMS OF MAIL SENT BY DESTINATION, 1980 TO 1986

(000)

Destination	1980	1981	1982	1983	1984	1985	1986
Domestic	2,865	3,603	4,078	4,915	n.a.	5,934	6,667
Neighbouring	1,190	1,576	1,970	2,189	n.a.	3,445	3,740
Overseas	94	186	206	319	n.a.	376	418
ALL MAIL	4,149	5,365	6,254	7,423	n.a.	9,755	10,825

Source: Department of Posts, Telegraph and Civil Wireless.

TABLE 7.13: NUMBER OF ITEMS OF MAIL SENT BY TYPE OF ITEM, 1980 TO 1986

(000)

Type of Item	1980	1981	1982	1983	1984	1985	1986
Letters							
Ordinary	3,988	4,921	5,744	6,846	n.a.	8,830	9,856
Registered	57	195	246	268	n.a.	558	578
Total	4,045	5,115	5,991	7,114	n.a.	9,387	10,434
Aerogramme	13	17	18	30	n.a.	83	86
Postcards	46	120	121	142	n.a.	169	178
Printed matter	34	93	103	112	n.a.	84	98
Parcels	11	19	22	25	n.a.	31	29
ALL ITEMS	4,149	5,365	6,254	7,423	n.a.	9,755	10,825

Source: Department of Posts, Telegraph and Civil Wireless.

TABLE 7.14 : NUMBER OF ITEMS OF MAIL SENT BY TYPE OF ITEM AND DESTINATION, 1986

('000)

Type of Mail	Letters			Aero-gramme	Postcards	Printed Matter	Parcels	Total
	Ordinary	Registered	Total					
Domestic	6,225	288	6,513	-	82	50	23	6,667
Neighbouring	3,411	225	3,635	-	69	31	4	3,740
Overseas	220	65	286	86	27	17	2	418
ALL MAIL	9,856	578	10,434	86	178	98	29	10,825

Source: Department of Posts, Telegraph and Civil Wireless.

TABLE 7.15 : NUMBER OF TELEGRAMS SENT BY TYPE, 1980 TO 1986

('000)

Type	1980	1981	1982	1983	1984	1985	1986
Domestic	78.8	85.6	85.9	86.4	87.3	88.2	85.4
Overseas	35.2	42.6	42.2	43.1	44.1	45.3	43.0
Service messages	13.3	14.4	15.1	15.9	17.2	18.7	15.0
Transit	39.6	42.1	45.6	50.1	55.2	60.8	63.8
ALL TYPES	166.9	184.6	188.9	195.6	203.7	213.0	207.2

Source: Department of Posts, Telegraph and Civil Wireless.

TABLE 7.16: NUMBER AND AMOUNTS OF MONEY ORDER BY TYPE, 1980 AND 1986

Type	1980	1986
Internal money order		
Number ('000)	54.0	86.6
Amount booked (Nu.in '000)	4,735.9	8,039.6
Amount paid (Nu.in '000)	3,933.5	7,531.4
Foreign money order (a)		
Number ('000)	37.8	144.1
Amount booked (Nu.in '000)	1,412.7	4,944.3
Amount paid (Nu.in '000)	117.3	193.1

(a) Amount booked refers to money transferred out of Bhutan. Amount paid refers to amount transferred into Bhutan.

Source : Department of Posts, Telegraph and Wireless.

CHAPTER 8

ENERGY

INTRODUCTION

The major source of energy in Bhutan has traditionally been firewood which is available in abundant quantities from the country's extensive forests. Firewood still represents a majority of energy consumption.

Electricity generation, though still relatively small in comparison with the rest of the world, is growing in importance. Until recently electricity generation was based on small diesel generating and micro hydro-stations, providing limited supplies of electricity which have been supplemented by imports from India. With the commissioning of the Chhukha Hydel Project during 1987, Bhutan is in a position to substantially increase its electricity generation, and is now a significant exporter of electricity to India.

Statistics of importance in the field of energy cover all aspects concerned with the production, consumption and trade of energy resources. For electricity, this covers such things as installed capacity, electricity generation, details of transmission of electricity, consumption of electricity and exports. The data will be of particular interest in the coming years in monitoring the impact of Chhukha Project on energy consumption patterns and the overall development of the Kingdom.

MAIN FEATURES

Total installed capacity at March 1987 was 188.4 MW, of which 171.5 MW was hydro and 16.9 was diesel. This will increase by a further 168 MW with the commissioning of the third and fourth units of the Chhukha Hydel Project, expected early in 1988.

In the twelve months ending March 1987, total electricity generation was 364.2 MU, of which 340.5 MU was from the new Chhukha plant. A total of 318.7 MU (88 percent) was exported to India. Total sales to consumers in Bhutan amounted to 60.1 MU representing consumption per head of population of only 46 units. Some 17 towns and 98 villages are now electrified.

TABLE 8.1 : ELECTRICITY GENERATING STATIONS AND THEIR CAPACITY, MARCH 1987 (a)

Generating Stations	Machine Sizes (MW)	Installed Capacity (MW)
Hydro Stations		
Thimphu	4 x 0.090	0.360
Gidakom	5 x 0.250	1.250
Wangdiphodrang	3 x 0.100	0.300
Tashigang	3 x 0.250	0.750
Mongar	3 x 0.130	0.390
Paro	4 x 0.100	0.400
Nagu	1 x 0.010	0.010
Chhukha Hydel Project (b)	2 x 84	168
TOTAL HYDRO CAPACITY		171.5
Diesel Generation Stations		
Phuntsholing	2 x 0.128	0.256
	2 x 0.248	0.496
Samchi	1 x 0.135	0.135
Paro	1 x 0.090	0.090
	1 x 0.060	0.060
	1 x 0.400	0.400
Thimphu	2 x 0.248	0.496
	1 x 0.500	0.500
	2 x 0.255	0.510
	2 x 0.150	0.300
	1 x 0.950	0.950
	1 x 1.000	1.000
Damphu	1 x 0.070	0.070
Tongsa	1 x 0.060	0.060
Shemgang	1 x 0.080	0.080
Dagana	1 x 0.040	0.040
Chhukha Hydel Project	12 x 0.248	2.976
	5 x 0.400	2.000
	1 x 0.126	0.126
TOTAL DIESEL CAPACITY		10.5
TOTAL CAPACITY		182.0

(a) Excludes self-generating industries and non-utilities.

(b) The third and fourth 84 MW units are expected to be commissioned in early 1988.

Source : Department of Power.

TABLE 8.2 : ELECTRICITY SUPPLY, TWELVE MONTHS ENDING MARCH 1987

	Hydro	Diesel	Total
Installed Capacity (MW)			
Department of Power	3.5	5.4	8.9
Chhukha Hydel Project	168.0	5.1	173.1
Self Generating Industries	-	4.3	4.3
Non - Utilities	-	2.1	2.1
Total installed capacity	171.5	16.9	188.4
Electricity Generation (MU)			
Department of Power	5.5	1.5	7.0
Chhukha Hydel Project	339.4	1.1	340.5
Self Generating Industries	-	16.7	16.7
Total electricity generation	344.8	19.4	364.2
Auxiliary Consumption (MU)	..	2.0	2.0
Imports (MU)	..	..	26.8
Exports (MU)	..	..	318.7
Net Energy Requirement (MU)	..	..	70.3
Net Sales (MU)	..	..	60.1
Energy Losses (MU)	..	..	10.2
Percentage Losses (%)	..	..	14.5

Source: Department of Power.

TABLE 8.3 : ELECTRICITY TRANSMISSION AND DISTRIBUTION, TWELVE MONTHS ENDING MARCH 1987

Transmission Lines (Km)	
220 KV	76.0
66 KV	226.1
33 KV	33.5
11 KV	330.8
Low Tension Lines	400.5
Main Substations (No.)	38
Aggregate Capacity of Transformers (MVA)	53.9
Distribution Substations (No.)	172

Source: Department of Power.

TABLE 8.4 : ELECTRICITY CONSUMPTION, TWELVE MONTHS ENDING MARCH 1987

Towns Electrified (No.)	17
Villages Electrified (No.)	98
Consumers (No.)	13,464
Sales (MU)	60.1
Per Capita Consumption (units)	46

Source: Department of Power.

CHAPTER 9 TOURISM

INTRODUCTION

The tourism industry has been an important source of hard currency to Bhutan since the country was first opened to tourists in 1974. The potential as far as foreign exchange earnings are concerned is very high, though a strategy of regulating the number of tourists coming into Bhutan has been followed by the Government.

The main statistics of interest in the field of tourism relate to the characteristics of visitors and the details of existing tourist facilities. Interest centres on visitor arrivals, where they come from, when they come and the purpose of their visit. Earnings of foreign exchange from overseas visitors is another important aspect. Other areas of interest relate to existing tourist facilities, especially number of hotel establishments, rooms, beds and occupancy rates.

MAIN FEATURES

The total number of tourist arrivals in 1986 was 2,405, the highest number recorded in any year since tourism commenced. The largest numbers of tourists come from Europe, United States, Japan, and Australia. The majority of tourists (79 percent) come on a tour while the arrivals in the months of August, September and October accounted for over half of all arrivals in 1986.

TABLE 9.1 : TOURIST ARRIVALS BY COUNTRY, AND TOURISM REVENUES, 1984 to 1986

Country	1984	1985	1986
Europe			
West Germany	351	397	360
France	113	83	119
Italy	75	61	99
Other Europe	329	287	162
Total Europe	868	828	740
United States of America	514	550	776
Japan	396	411	448
Australia	66	46	60
Other	56	61	381
TOTAL TOURISTS (Nos.)	1,900	1,896	2,405
TOURISM REVENUE (Nu. million)	26.0	29.8	36.4

Source : Bhutan Tourism Corporation.

TABLE 9.2: TOURIST ARRIVALS BY PURPOSE, 1985 AND 1986

Purpose	1985	1986
Tour	1,493	1,894
Trekking	360	492
Mountaineering expedition	43	19
TOTAL	1,896	2,405

Source : Bhutan Tourism Corporation.

TABLE 9.3: TOURIST ARRIVALS BY MONTH, 1984 TO 1986

Months	1984	1985	1986
January	35	40	43
February	76	39	45
March	91	237	409
April	406	214	172
May	114	130	134
June	52	22	49
July	62	94	92
August	208	182	306
September	204	237	338
October	459	453	573
November	134	160	112
December	59	88	132
TOTAL	1,900	1,896	2,405

Source : Bhutan Tourism Corporation.

CHAPTER 10

BALANCE OF PAYMENTS

INTRODUCTION

Bhutan's economy is closely linked with India, though efforts towards diversification of products and markets are actively pursued.

While economic links with other countries are limited, significant amounts of aid have been received in recent years and this has enabled substantial increases in imports from third countries. Exports to third countries continue to be very low and reliance is placed on inflows of aid for the financing of imports.

Bhutan's major export commodities are cement, wood products and fresh fruit and vegetables, while it is required to import petroleum products, transport equipment and other manufactured goods.

Balance of payments statistics are designed to show the difference between the total payments made to foreign countries and the total receipts from foreign countries. Payments and receipts include imports and exports of merchandise; services and transfers (such as freight and insurance charges); expenditure by travellers; and capital movements (such as loans and investments). The balance between imports and exports is measured by the trade balance. A more comprehensive picture of the balance of payments situation is obtained by including services and transfers to provide a measure of the current account balance.

The balance of payments statements also show how any negative current account balance is financed - in the case of Bhutan this is achieved through foreign aid. Any surplus of foreign aid over and above current account deficits means an increase in the foreign currency reserves of the country.

Balance of payments statistics in Bhutan are compiled by the Royal Monetary Authority based on information from its own accounts and those of the Bank of Bhutan, together with information on imports and exports from the Department of Revenue and Customs. Efforts are under way to improve the data in a number of areas.

MAIN FEATURES

During the period from 1981/82 to 1986/87, the trade balance deficits showed an increasing trend, rising from a deficit of Nu. 414.2 million in 1981/82 to Nu. 802.5 million in 1986/87. This was due largely to a growth in imports over the period from Nu. 585.9 million to Nu. 1,125.5 million. Imports from countries other than India accounted for a significant part of this growth, rising from Nu. 65.3 million in 1981/82 to Nu. 175.5 million in 1986/87. Service payments are also increasing at a faster rate than service receipts with the result that the current account deficit has also risen sharply over the period - from Nu. 643.0 million in 1981/82 to Nu. 1,211.6 million in 1986/87.

Foreign aid payments increased from Nu. 654.5 million in 1981/82 to Nu. 1,381.8 million in 1986/87. Aid from India accounted for Nu. 1,001.9 million of the 1986/87 figure. Total aid inflow has generally been larger than current account deficits and therefore Bhutan's total international reserves have

TABLE 10.4: GROSS INTERNATIONAL RESERVES(a), 1980/81 TO 1986/87

Item	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87
	RUPEE REERVES (million rupees)						
Rupee reserves	179.7	209.5	260.4	312.5	381.3	371.1	446.9
Royal Monetary Authority	-	-	-	6.2	12.0	8.1	10.7
Bank of Bhutan	179.7	209.5	260.4	306.3	369.3	362.9	436.2
	CONVERTIBLE CURRENCY RESERVES (million US dollars)						
Convertible currency reserves	5.5	8.1	8.5	10.4	14.2	20.6	28.1
Royal Monetary Authority (c)	-	-	-	4.4	7.9	19.8	26.9
Royal Government (b)	3.2	3.3	2.8	-	-	-	-
Bank of Bhutan	2.3	4.1	4.5	4.7	6.3	0.8	1.1
Royal Insurance Corporation of Bhutan	-	0.6	1.2	1.3	-	-	-
	TOTAL RESERVES (million US dollars)						
Total reserves	27.4	30.5	34.6	39.6	44.9	50.8	62.6

(a) As of end-March. (b) Includes reserve tranche position in the International Monetary Fund from 1981/82. (c) The large change in 1985/86 is mainly a result of the takeover of the Bank of Bhutan's convertible foreign exchange by the Royal Monetary Authority of Bhutan.

Source: Royal Monetary Authority of Bhutan.

TABLE 10.5: EXCHANGE RATES, NGULTRUM/\$ US, 1980 TO 1987

	(period average)							
	1980	1981	1982	1983	1984	1985	1986	1987
January	7.94	7.94	9.12	9.79	10.72	12.62	12.28	13.04
February	7.93	8.18	9.19	9.90	10.76	12.94	12.37	13.07
March	8.11	8.21	9.28	9.97	10.75	12.96	12.29	12.94
April	8.05	8.25	9.56	9.98	10.83	12.49	12.40	12.81
May	7.88	8.39	9.28	9.99	11.03	12.55	12.48	12.69
June	7.83	8.59	9.42	10.05	11.05	12.46	12.61	12.84
July	7.75	8.87	9.54	10.09	11.34	12.03	12.51	13.03
August	7.77	8.99	9.55	10.17	11.57	11.94	12.58	
September	7.73	9.09	9.62	10.19	11.82	12.13	12.69	
October	7.71	9.16	9.67	10.22	11.83	12.05	12.85	
November	7.77	9.11	9.76	10.35	12.02	12.09	13.09	
December	7.90	9.12	9.68	10.48	12.17	12.16	13.17	
Calendar year average	7.86	8.66	9.46	10.10	11.36	12.37	12.61	
Fiscal year average	8.08	7.89	8.93	9.63	10.31	11.89	12.24	12.79
	(1979/80)	(1980/81)	(1981/82)	(1982/83)	(1983/84)	(1984/85)	(1985/86)	(1986/87)

Source: Royal Monetary Authority of Bhutan.

CHAPTER 11

MONEY, BANKING AND FINANCE

INTRODUCTION

Until recent times, most economic transactions in Bhutan were carried out on the basis of barter arrangements. The widespread use of money commenced during the 1960's with the expansion of trade with India and the inflow of development assistance. The Indian rupee was most commonly used until 1974 when the government first issued Ngultrum notes, Bhutan's official currency. The monetary sector has grown since then with increasing economic development, improvement in transport and communication facilities and greater urbanization, though the barter economy continues to be important.

The monetary sector in Bhutan comprises the Royal Monetary Authority, Bhutan's Central Banking organisation; and the Bank of Bhutan, the country's only commercial bank. The nonbank financial institutions are the Royal Insurance Corporation of Bhutan and the Unit Trust of Bhutan.

A statistical system for the money, banking and finance sector has been developed by the Royal Monetary Authority. The key elements of the system are:

- The Monetary Survey - The survey is a consolidation of the accounts of the Royal Monetary Authority and the Bank of Bhutan showing the financial relationships between the two institutions and other sectors of the economy. Items covered include foreign assets and domestic credit, together with information on the money supply.
- Financial statements for the two non-bank financial institutions.
- Interest rates for deposits and loans for the Bank of Bhutan.

MAIN FEATURES

In 1986 an increase in the broad money supply (M2) of Nu. 61.5 million or 12 per cent was recorded. This was largely accounted for by increases in term deposits of Nu. 35.8 million, in Ngultrum outside banks of Nu. 20.3 million, and demand deposits of Nu. 8.4 million.

From December 1984 to December 1986, there was an increase in net foreign assets of the Royal Monetary Authority and the Bank of Bhutan of Nu. 202.9 million. Domestic credit increased by Nu. 40.3 million over the same period mainly as a consequence of advances to government by the Bank of Bhutan. Net claims on government increased by Nu. 55.2 million, while claims on government corporations decreased by Nu. 24.4 million and on the private sector increased by Nu. 9.5 million.

Investment in the two non-bank financial institutions has grown rapidly over the past few years. Between December 1983 and December 1986, total investment in the Royal Insurance Corporation of Bhutan increased from Nu. 137.5 million to Nu. 267.1 million while investment in the Unit Trust of Bhutan increased from Nu. 25.2 million to Nu. 100.3 million.

TABLE 11.4: FINANCIAL SECTOR(a) - LOAN ADVANCES BY INDUSTRY,
1983 TO 1986
(Nu. in millions)

Industry	1983	1984	1985	1986
Agriculture	10.3	14.9	15.1	18.5
Industry	52.0	57.7	67.2	72.3
Building and construction	51.1	59.4	89.4	135.1
Trade and commerce	23.7	31.8	18.0	19.8
Transport	32.4	31.3	30.9	26.4
Other(b)	14.1	22.4	22.8	26.3
TOTAL	183.6	217.5	243.4	298.4

(a) Includes Royal Monetary Authority, Bank of Bhutan, Royal Insurance Corporation of Bhutan and Unit Trust of Bhutan.
(b) Private sector and Government enterprises.

Source: Royal Monetary Authority of Bhutan.

TABLE 11.5 : BANK OF BHUTAN INTEREST RATES - DEPOSITS,
1982 TO 1987
(percent per annum)

Type of deposit	Effective dates			
	October 1982	May 1983	June 1985	June 1987
Savings	5.0	5.0	5.0	5.0
Fixed				
3-6 months	5.5	5.5	6.5	6.5
6-9 months	6.0	6.0	8.0	8.0
9 months-1 year	7.0	7.0	8.0	8.0
1-2 years	8.5	8.5	8.5	9.0
2-3 years	9.0	9.0	9.0	10.0
3-5 years	9.5	10.0	10.0	11.0
5 years and over	10.0	11.0	11.0	11.0

Source: Bank of Bhutan.

TABLE 11.6: COMMERCIAL BANK INTEREST RATES- LOANS(a)
(percent per annum)

Type of loan	Interest rate(%)
Commercial	
Export trading	12.0
Import trading up to Nu.100,000	15.0
Other	16.0
Transport	
Buses, lorries and trucks, and cars	15.0
Agricultural(including livestock)	10.0
Industrial	
Small units up to Nu.200,0000	12.0
Medium units up to Nu.1,000,000	13.0
Large units above Nu.1,000,000	14.0
Tourism	13.0
Housing (commercial and residential)	15.0
Miscellaneous (including personal loans)	16.0

(a) Rates applicable since 1 September 1984. Rates apply to all financial institutions.

Source: Bank of Bhutan.

CHAPTER 12

PUBLIC FINANCE

INTRODUCTION

The system of modern public finance practices in Bhutan is of very recent origin. Traditionally taxes were being collected in kind; the levy on agricultural produce being on an average one fourth of the production of each farming family and labour contribution amounting to about two months labour for every adult. By 1960, as the government began to grow, institutionalization of public finances became a necessity.

In 1963, the position of a Finance Secretary was created in the Royal Secretariat and in 1968 the Ministry of Finance, one of the first few Ministries, was formed. In 1970 the system of payment of taxes in kind was largely dispensed with to be taken up by the system of cash taxes based on the type of land holding.

The first budget on modern lines was presented by the Ministry of Finance in 1971. It was called the 'Civil' budget as it covered only the needs of the Ministries of Finance, Home Affairs and Foreign Affairs. The requirements of development oriented Ministries like Communications and Tourism, Trade, Industry, Forests and Development were provided under a separate 'Development' budget administered first by the Development Secretariat, and then by its successor, the Planning Commission. With the commencement of the Fifth Five Year Plan the classification of the Government budgets into 'Civil' and 'Development' was replaced by the concepts of 'Maintenance' and 'Development' expenditures. 'Maintenance' or 'current' expenditures reflected mostly the current or consumption expenditures of the Government, while 'development' expenditures were identified largely with the expenditures of the Government on fixed capital formation.

MAIN FEATURES

Government domestic revenue rose by 30 per cent between 1985/86 and 1986/87 totalling Nu. 355.2 million in 1986/87. Total expenditure increased by over 58 per cent over the same period. Current expenditure in 1986/87 totalled Nu. 363.0 million (an increase of only 7 per cent over 1985/86). Thus current expenditure was almost covered by Government revenues in 1986/87. The Budget deficit in 1986/87 was Nu. 256.6 million, following a deficit of Nu. 134.6 million recorded in the previous year.

Domestic revenue amounted to 23 per cent of total expenditure in 1986/87, with grants from India accounting for 43 per cent.

TABLE 12.1: CURRENT BUDGETARY EXPENDITURE OF THE GOVERNMENT BY MINISTRY, 1981/82 TO 1986/87

(Nu. in millions)

Ministry / Non-ministerial Organisation	1981/82 (revised)	1982/83 (actual)	1983/84 (actual)	1984/85 (actual)	1985/86 (revised)	1986/87 (revised)
MINISTRIES						
Home Affairs	12.6	15.5	16.7	18.6	24.1	27.7
Finance	19.4	21.8	26.0	41.2	39.1	40.9
Communication & Tourism	9.5	13.8	12.5	13.7	15.8	17.4
Social Services	51.8	52.8	51.4	79.7	77.0	84.3
Agriculture	26.4	24.7	30.1	30.9	48.4	54.9
Foreign Affairs	7.9	11.7	11.5	13.4	20.8	19.7
Trade and Industries	7.0	10.6	10.8	11.4	12.8	9.0
NON-MINISTERIAL ORGANISATIONS						
Special Commission	1.2	1.4	1.0	1.0	10.8	14.1
Central Monastic Secretariat	-	-	-	0.1	0.8	1.1
Royal Monetary Authority	-	-	0.7	-	-	-
Social & Cultural Div.	0.3	0.3	0.3	0.8	0.5	0.3
His Majesty's Secretariat	1.1	1.7	1.8	2.0	2.9	3.2
Planning Commission	1.0	1.0	0.6	1.6	2.5	2.8
Science and Technology	-	-	0.1	0.3	0.3	0.3
Royal Civil Service Commission	0.5	0.7	2.1	4.8	0.9	1.1
Royal Audit Authority	1.0	1.2	1.4	1.9	2.4	2.8
Royal Advisory Council	1.0	0.9	0.9	1.0	2.0	1.8
National Assembly	0.6	0.8	0.8	1.1	1.8	1.7
Nat. Urban Development Corp.	1.2	2.6	2.9	12.0	-	3.0
National Women's Association	-	-	-	-	0.3	0.9
Judiciary	1.7	3.0	3.2	3.7	5.6	5.6
Bhutan Olympic Committee	-	-	-	0.2	0.3	0.3
Druk Air Corporation	0.2	2.7	3.1	4.7	-	-
Tourism Corporation	7.4	2.4	0.6	1.5	-	-
Bhutan Govt. Transport Service	11.4	0.5	-	0.1	-	-
DZONGKHAGS	6.6	42.9	44.8	58.3	70.0	70.2
TOTAL CURRENT EXPENDITURE	169.7	213.1	223.2	304.0	339.2	363.0

Source: Department of National Budget and Accounts.

TABLE 12.2 : BUDGETARY DEVELOPMENT EXPENDITURE OF THE GOVERNMENT BY MINISTRY, 1981/82 TO 1986/87

(Nu. in millions)

Ministerial / Non-ministerial Organisation	1981/82 (revised)	1982/83 (actual)	1983/84 (actual)	1984/85 (actual)	1985/86 (revised)	1986/87 (revised)
MINISTRIES						
Home Affairs	5.5	6.1	6.7	10.1	9.2	7.5
Finance	25.0	23.3	22.6	41.6	65.3	94.1
Communication & Tourism	10.2	5.2	25.7	9.1	12.8	78.6
Social Services	86.3	115.0	184.1	155.3	191.9	212.1
Agriculture	94.7	67.3	104.1	94.7	69.5	109.9
Foreign Affairs	0.1	-	3.2	3.9	5.9	7.4
Trade and Industries	21.7	13.1	24.1	34.6	115.2	391.7
NON-MINISTERIAL ORGANISATIONS						
Special Commission	-	2.4	1.4	0.7	1.9	4.0
Central Monastic Secretariat	-	-	-	2.5	-	1.7
Royal Monetary Authority	-	-	0.9	-	-	-
Social & Cultural Div.	0.3	0.6	1.7	2.8	-	-
His Majesty's Secretariat	-	-	0.1	0.1	0.5	0.3
Planning Commission	0.3	0.3	12.6	8.0	0.8	1.7
Science and Technology	-	-	0.1	0.1	0.2	4.1
Royal Civil Service Commission	1.2	3.9	3.5	3.4	1.2	0.8
Royal Audit Authority	-	-	0.3	0.1	0.3	0.4
Royal Advisory Council	-	-	-	-	0.3	-
National Assembly	-	0.1	0.1	-	-	0.4
Nat. Urban Development Corp.	3.1	3.5	4.5	24.0	24.0	113.4
National Women's Association	-	-	-	-	3.6	0.3
Judiciary	0.1	0.4	0.3	0.4	0.8	0.1
Bhutan Olympic Committee	-	-	-	1.5	1.3	0.9
Druk Air Corporation	4.0	0.3	24.3	5.4	-	-
Tourism Corporation	8.9	2.0	4.8	1.0	-	-
Bhutan Govt. Transport Service	4.4	-	-	-	-	-
DZONGKHAGS	1.4	31.1	50.9	55.3	57.9	34.8
TOTAL DEVELOPMENT EXPENDITURE	267.1	274.7	476.0	454.4	562.5	1,064.1

Source: Department of National Budget and Accounts.

TABLE 12.3 : BUDGETARY RECEIPTS (a) OF THE GOVERNMENT BY SOURCE, 1981/82 TO 1986/87

(Nu. in millions)

Source of Revenue	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	Total 1981/82 to 1986/87
TAX REVENUE							
Direct tax	11.0	20.7	43.3	39.4	44.1	62.9	221.4
Tax on income & profits	8.8	19.4	40.0	35.8	40.9	59.5	204.4
Company corporate & enterprise	3.7	13.4	28.9	24.1	24.0	40.6	134.7
Individuals & trading units	4.5	5.5	10.2	9.0	14.8	17.6	61.6
Agriculture Income Tax	0.6	0.4	0.9	2.7	2.1	1.3	8.1
Rural tax	2.2	1.3	3.3	3.6	3.2	3.4	17.0
Indirect tax	54.0	55.0	70.4	94.4	91.8	109.3	474.9
Taxes on goods & services	51.8	53.0	67.0	92.7	89.4	106.0	459.9
Sales tax	6.9	7.8	11.6	13.5	12.9	15.8	68.4
Selective excise on goods	39.1	40.6	47.5	71.0	67.2	79.5	344.9
Selective tax on services	1.3	0.9	1.0	1.2	1.4	1.7	7.6
Tax on use of goods/property	4.5	3.6	6.9	7.0	8.0	9.0	39.0
Taxes on international trade	0.2	0.2	0.7	1.1	1.9	2.8	6.9
Other tax	2.0	1.8	2.7	0.6	0.5	0.5	8.1
Revenue stamps	0.2	0.1	0.2	0.2	0.3	0.4	1.5
Municipal Tax	1.8	1.7	2.5	0.3	0.2	0.1	6.6
TOTAL TAX REVENUE	65.1	75.7	113.7	133.7	135.9	172.2	696.3
NON-TAX REVENUE							
Operating surpluses of departmental enterprises	2.6	2.0	0.1	1.0	-	-	5.8
Net profit transferred from non-fin. & public enterp.	12.7	28.3	39.1	75.1	50.7	83.5	289.3
Royalties and dividends	5.3	17.7	14.8	25.9	34.0	45.3	143.0
Administrative fees, charges and non-industrial sales	3.2	4.2	9.2	14.2	12.5	12.1	55.4
TOTAL NON-TAX REVENUE	23.7	52.2	63.2	116.2	97.3	140.9	493.5
CAPITAL REVENUE							
Sales fixed capital assets, stock, land and other intangible assets	0.7	0.5	2.2	3.7	3.7	6.5	17.4
Unclassified revenue	22.7	-	-	5.4	9.2	4.1	41.4
TOTAL CAPITAL REVENUE	23.4	0.5	2.2	9.1	13.0	10.6	58.8
RECEIPTS FROM DEPARTMENTAL ENTERPRISES							
Druk Air	-	-	1.5	6.9	1.7	-	10.1
Posts and Telegraphs	1.7	1.0	2.9	3.2	4.2	5.5	18.6
Telephones	1.5	2.2	3.8	0.8	0.7	1.2	10.2
Wireless	0.2	0.4	0.8	0.2	-	-	1.6
TOTAL RECEIPTS DEPT. ENTERP.	3.4	3.6	9.0	11.1	6.7	6.7	40.4
OTHER NON-REVENUE RECEIPTS							
Treaty of 1949	-	-	-	-	0.5	0.5	1.0
Audit recovery	-	0.2	-	0.2	0.9	1.8	3.1
Recovery of loan & advance	0.3	0.7	2.3	0.5	0.8	0.3	4.9
Surrender of revolving fund	-	-	1.4	0.7	0.2	-	2.2
Surrender of unspent balance of budget	0.2	0.9	1.1	0.3	0.8	1.1	4.5
Recovery of cost of vehicles	3.4	3.9	3.3	4.4	1.9	0.7	17.6
Recovery against cost of material	-	-	-	-	-	0.4	0.4
TOTAL OTHER NON-REV. REC.	3.9	5.7	8.0	6.1	5.2	4.8	33.7
ALL REVENUE RECEIPTS	119.6	137.7	196.0	276.2	258.0	335.2	1322.7

(a) Figures refer to actual receipts.

Source : Department of Revenue and Customs.

TABLE 12.4: SUMMARY OF BUDGETARY OPERATIONS, 1981/82 TO 1986/87

(Nu. in millions)

Item	1981/82 (revised)	1982/83 (actual)	1983/84 (actual)	1984/85 (actual)	1985/86 (revised)	1986/87 (revised)
Revenue						
Tax revenue	65.1	75.7	113.7	133.7	135.9	172.2
Non-tax revenue	23.7	52.2	63.2	116.2	97.3	140.9
Other	30.8	9.8	19.1	26.3	24.8	22.1
Total revenue	119.6	137.7	196.0	276.2	258.0	335.2
Grants						
India	195.3	259.7	256.2	355.6	339.1	611.6
Other	104.9	100.6	222.1	156.5	170.0	223.9
Total grants	300.2	360.3	478.3	512.1	509.1	835.5
Total revenue and grants	419.8	498.0	674.3	788.3	767.1	1,170.7
Expenditure						
Current	169.7	213.1	223.2	304.0	339.2	363.0
Development	267.1	274.7	476.0	454.4	562.5	1,064.3
Total expenditure	436.8	487.8	699.2	758.4	901.7	1,427.3
OVERALL SURPLUS/DEFICIT	(17.0)	10.2	(24.9)	29.9	(134.6)	(256.6)

Source : Ministry of Finance.

CHAPTER 13

PLAN OUTLAYS

INTRODUCTION

Development planning in Bhutan can be traced back to the year 1961 when the first Five Year Plan (1961-62 to 1965-66) was drawn up.

Initially, a self contained Development Secretariat was established to implement the Plan. At the time of the preparation of the Third Plan in 1971, the Planning Commission was established headed by His Majesty, the King. In the absence of basic economic information and skilled manpower, the formulation of the Third Plan, like earlier ones was relatively simple. Major developments in regard to the consolidation of the planning process took place in the Fourth Plan period, when the Dzongkhags were involved in the development process.

Until 1981-82, the responsibility for making Plan allocations, raising internal resources, and negotiating foreign assistance etc. lay with the Planning Commission. In 1981-82, a large part of the financial responsibilities of the Commission was transferred to the Ministry of Finance. The Commission was however, invested with responsibilities for the formulation of development plans and allocation of investible resources.

A substantial infrastructure for development of the economy had been built up in the first Four Plans so that by the end of the Fourth Plan, the planning process had gained a good deal of comprehensiveness and sophistication. These two factors enabled the economy to develop the capacity of absorbing much higher volumes of investible resources for development in the later Five Year Plans.

The Fifth Five Year Plan was successfully completed in 1986-87. The Sixth Five Year Plan will give emphasis to attaining the objective of economic self-reliance with progressively higher rates of growth and greater distributional equity among various sectors and regions. At the same time, it will lay renewed emphasis on the preservation and promotion of traditional values and ideals.

TABLE 13.1: OUTLAYS OF DEVELOPMENT PLANS, FIRST PLAN TO FIFTH PLAN

(Nu. in millions)

Sector	First Plan (actual)	Second Plan (actual)	Third Plan (actual)	Fourth Plan (actual)	Fifth Plan(a) (revised)
Agriculture	1.9	21.6	58.3	259.0	419.4
Food Corporation of Bhutan	-	-	-	-	135.5
Animal Husbandry	1.5	5.8	24.2	61.5	162.4
Forestry	3.2	6.9	28.4	110.3	229.9
Power	1.5	9.1	30.1	50.5	340.5
Industry and Mines (including Trade and Commerce)	1.1	1.0	25.2	175.0	323.3
Public Works Department	62.9	70.5	84.6	128.3	787.5
Road Transport/Aviation	7.5	12.0	9.5	-	26.3
Post & Telegraph	0.5	5.9	11.4	16.9	65.8
Telecommunications	-	-	14.8	37.3	33.7
Tourism	-	-	14.1	12.5	29.1
Education	9.4	35.7	90.0	134.6	519.1
Health	3.1	16.7	38.1	54.6	237.5
Information and Publicity	0.1	1.4	4.0	11.0	36.1
Urban Development	-	-	-	-	187.3
General Development	-	-	-	-	1,114.9
Other	14.4	15.6	42.5	54.7	-
TOTAL OUTLAYS	107.2	202.2	475.2	1,106.2	4,648.3

(a) For the Fifth Plan the figures are revised allocations as presented in the Interim Review of the Fifth Plan. Figures exclude Chhukha Hydel Project (Fifth Plan outlay Nu. 2,430 million). Small differences exist between outlays shown in this table and budgetary expenditures shown in Tables 12.1 and 12.2 because some expenditures will not be reflected in Development Plans.

Source: Fifth Plan documents produced by Planning Commission.

TABLE 13.2: OUTLAYS OF DEVELOPMENT PLANS, PERCENTAGE BY CATEGORY, FIRST PLAN TO FIFTH PLAN

(per cent)

	First Plan	Second Plan	Third Plan	Fourth Plan	Fifth Plan(a)
Agriculture	1.8	10.7	12.3	23.4	9.0
Food Corporation of Bhutan	-	-	-	-	2.9
Animal Husbandry	1.4	2.9	5.1	5.6	3.5
Forestry	3.0	3.4	6.0	10.0	4.9
Power	1.4	4.5	6.3	4.6	7.3
Industry and Mines (including Trade and Commerce)	1.0	0.5	5.3	15.8	7.0
Public Works Department	58.7	34.9	17.8	11.6	16.9
Road Transport/Aviation	7.0	5.9	2.0	-	0.6
Post & Telegraph	0.5	2.9	2.4	1.5	1.4
Telecommunications	-	-	3.1	3.4	0.7
Tourism	-	-	3.0	1.1	0.6
Education	8.8	17.7	18.9	12.2	11.2
Health	2.9	8.3	8.0	4.9	5.1
Information and Publicity	0.1	0.7	0.8	1.0	0.8
Urban Development	-	-	-	-	4.0
General Development	-	-	-	-	24.0
Other	13.4	7.7	8.9	4.9	-
TOTAL OUTLAYS	100.0	100.0	100.0	100.0	100.0

(a) See footnotes to Table 13.1.

Source: Fifth Plan documents produced by Planning Commission.

TABLE 13.3: PROPOSED OUTLAYS BY SECTOR, SIXTH PLAN (1987 - 1992)

(Nu. in millions)

Sector	Current	Capital	Total	% of Total Outlay
MINISTRIES				
Agriculture	760.9	717.7	1,478.6	15.6
Communication and Tourism	155.5	344.1	499.5	5.3
Trade and Industry	87.4	2,672.4	2,759.8	29.1
Social Services	1,064.7	1,519.1	2,583.8	27.2
Finance	487.1	240.2	727.3	7.7
Foreign Affairs	200.9	9.7	210.6	2.2
Home Affairs	383.3	90.4	473.7	5.0
NON MINISTERIAL ORGANISATIONS				
Special Commission	43.4	16.2	59.6	0.6
Central Monastic Affairs	83.2	5.4	88.6	0.9
Other	231.8	372.0	603.8	6.4
ALL SECTORS	3,498.2	5,987.1	9,485.3	100.0

Source: Planning Commission.

CHAPTER 14

GROSS DOMESTIC PRODUCT

INTRODUCTION

Human activities can be classified broadly into economic activities and non-economic activities. Economic activities are those which are devoted to making use of the scarce resources (including time and labour) in the production and distribution of economic goods, ie. goods and services (needed to satisfy human wants) which are scarce in relation to demand and are transferable. Economic goods command a price on the market for their being scarce and transferable.

The end result of all economic activities that have taken place in an economy during an accounting period is reflected in Gross Domestic Product (GDP). GDP represents the money value of all the goods and services that have been produced within the territorial limits of the country and are available for final uses like consumption, gross capital formation and net exports.

GDP can be measured both at current and constant prices. When expressed at current prices it reflects the money value of the final goods and services produced in an accounting year measured in the prices of that year. On the other hand GDP expressed at constant prices reflects the money value of such goods and services for all the years measured in one year's (base year) prices. In this case the base year prices are kept constant for evaluation purposes for all the years under review. For measuring the performance of the economy in regard to the production of economic goods and services in real terms over a period constant price estimates of GDP have to be taken into account. Current price estimates of GDP give a view of the levels of production performances of the economy for all the years under review at changing current prices.

In 1985, estimates of GDP by major kind of activity (ie. major industrial sector) at current and constant (1983) prices were produced for Bhutan for the period 1981-84. While the estimates suffered from deficiencies caused by the paucity of data, the series was recently extended for a further two years on the basis of the same methodology, in order to maintain comparability with the earlier data. Work on the revision of the GDP estimates based on wider coverage and more systematic methodology, and preparation of the Consolidated Accounts of the Nation has been initiated in the CSO.

MAIN FEATURES

In real terms (measured at constant 1983 prices), the economy witnessed a rate of growth of 9.2 per cent in 1986, following growth of 2.6 per cent and 3.3 per cent recorded in 1984 and 1985 respectively.

The high rate of growth in 1986 was due in large part to the substantial increases in electricity generation following the commissioning of the Chhukha Hydel Project. Other sectors to grow significantly during 1986 were Forestry and Logging (36 per cent) and Mining (35 per cent). Against this, declines were recorded for Construction (due to the completion of construction work on the Chhukha project) and Manufacturing.

TABLE 14.1: GROSS DOMESTIC PRODUCT AT CURRENT PRICES BY KIND OF ACTIVITY, 1981 TO 1986

(Nu. in millions)

Activity	1981	1982	1983	1984	1985	1986
Agriculture and livestock	555.4	647.5	769.6	884.3	989.4	1,109.7
Forestry and logging	68.6	116.8	127.9	131.9	170.7	264.1
Mining	4.0	6.2	4.7	6.7	10.9	14.8
Manufacturing	48.1	52.2	69.2	79.1	94.9	96.0
Electricity	1.1	3.0	3.1	3.2	3.6	96.0
Construction	168.8	229.3	261.4	268.5	242.3	234.4
Wholesale and retail trade, hotels and restaurants	151.2	174.7	200.7	230.7	259.1	290.1
Transport	32.2	36.8	44.1	50.3	60.0	68.8
Finance, insurance and real estate	136.7	145.3	156.7	175.5	191.2	192.6
Government services	151.4	177.4	196.9	221.1	322.8	355.1
Less: Imputed bank service charges	(26.9)	(29.9)	(30.2)	(38.5)	(44.6)	(43.3)
TOTAL GROSS DOMESTIC PRODUCT	1,290.6	1,559.3	1,804.1	2,012.8	2,300.3	2,678.3
Annual growth rate (%) (current prices)		20.8	15.7	11.6	14.3	16.4

Source : Estimates compiled by Central Statistical Office.

TABLE 14.2: GROSS DOMESTIC PRODUCT AT 1983 PRICES BY KIND OF ACTIVITY, 1981 TO 1986

(Nu. in millions)

Activity	1981	1982	1983	1984	1985	1986
Agriculture and livestock	670.0	709.5	769.6	808.2	850.2	892.6
Forestry and logging	80.7	127.3	127.9	121.1	141.1	192.2
Mining	4.2	6.5	4.7	6.3	7.7	10.4
Manufacturing	60.5	59.6	69.2	72.5	81.0	76.3
Electricity	2.5	2.7	3.1	3.1	3.7	91.0
Construction	204.3	252.3	261.4	244.0	200.2	176.2
Wholesale and retail trade, hotels and restaurants	177.9	189.6	200.7	212.7	219.6	226.7
Transport	37.9	39.9	44.1	46.3	51.4	54.8
Finance, insurance and real estate	147.1	151.3	156.7	170.0	175.4	174.5
Government services	183.2	195.1	196.9	201.0	219.1	225.7
Less: Imputed bank service charges	(32.9)	(32.9)	(30.2)	(35.0)	(38.4)	(33.8)
TOTAL GROSS DOMESTIC PRODUCT	1,535.4	1,700.9	1,804.1	1,850.2	1,911.0	2,086.6
Annual growth rate (%) (1983 prices)		10.8	6.1	2.6	3.3	9.2

Source : Estimates compiled by Central Statistical Office.

TABLE 14.3 : GROSS DOMESTIC PRODUCT PROJECTIONS(a) TO 1991/92
(at 1986-87 prices)

Activity	Nu. in millions			Annual growth rate (%)	
	1981/82	1986/87	1991/92 (project)	1981/82 to 1986/87	1986/87 to 1991/92
	Agriculture and livestock	830.0	1,109.7	1,416.2	6.0
Forestry and logging	110.9	264.1	466.0	19.0	12.0
Mining	6.0	14.8	37.0	20.0	20.0
Manufacturing	75.1	96.0	148.0	5.0	9.0
Electricity	2.6	96.0	431.0	105.0	35.0
Construction	270.8	234.4	314.0	(3.0)	6.0
Wholesale and retail trade, hotels and restaurants	226.7	290.1	370.2	5.0	5.0
Transport	46.6	68.8	101.1	8.0	8.0
Finance, insurance and real estate	161.4	192.6	229.0	3.5	3.5
Government services	287.2	355.1	432.0	4.0	4.0
Less: Imputed bank service charges	(42.3)	(43.3)	(50.0)	-	-
GROSS DOMESTIC PRODUCT	1,975.0	2,678.3	3,894.5	6.3	7.8

(a) Gross domestic product for 1986/87 is assumed to be the same as the figure for the calendar year 1986 given in Table 14.1.

Source: Estimates compiled by Central Statistical Office.

CHAPTER 15

PRICES

INTRODUCTION

The only price statistic currently compiled in Bhutan is the Consumer Price Index, often referred to as the CPI. The CPI has been produced twice a year since December 1979.

The purpose of the CPI is to provide a general indicator of the rate of price change for consumer goods and services. The CPI is important in monitoring overall price development and assessing changes in the living standards of the population.

The CPI is formed by measuring the change in the cost of purchasing a 'basket' of consumer goods and services, where items in the 'basket' are weighted according to their relative importance in the total spending of consumers. The 'basket' includes food items (eg. rice, other cereals, vegetables, oils and fats, and spices) together with non-food items such as clothing, fuel, furniture and other personal items. Items such as cereals are weighted more heavily than say furniture, because they represent a larger proportion of consumer expenditure. A price change in cereals will therefore have a greater effect on the CPI than a price change for furniture.

The CPI is presented as index numbers, where the indexes are measured relative to the base of June 1979 = 100.0. Price change is estimated by measuring change in the index numbers. For example, the total CPI in June 1987 was 184.4 compared with 182.0 in December 1986. This represents a price change of $100 \times (184.4 - 182.0) / 182.0$ per cent or 1.3 per cent over the period.

Other price indexes that could be produced include wholesale price indexes (ie. indexes of wholesale rather than retail prices), import price indexes and export price indexes.

MAIN FEATURES

In June 1987 the rate of inflation in Bhutan as measured by the change in the Consumer Price Index over the previous twelve months, was estimated to be 4.8 per cent. This means that prices for consumer items in Bhutan as a whole rose by an average of 4.8 per cent over this twelve month period. This compares with rates of 9.9 and 10.0 per cent recorded in December 1986 and June 1986 respectively. The lower rates of price increase, especially during the first half of 1987, are consistent with trends in India.

Prices for food rose by an average of 4.0 per cent in the year to June 87, while prices for non-food items rose by 6.5 per cent over the same period.

TABLE 15.1: CONSUMER PRICE INDEXES, JUNE 1981 TO JUNE 1987
(December 1979 = 100)

Component	Weight (%)	1981		1982		1983		1984		1985		1986		1987		Ave. change(a) (%)	
		June	Dec	June	Dec	June	Dec	June	Dec	June	Dec	June	Dec	June	Dec	June	Dec
INDEXES																	
Food	72.3	112.0	115.7	129.1	122.8	139.4	149.6	148.0	156.9	155.6	160.8	165.0	169.2	171.7			
Non-food	27.7	119.0	117.7	130.4	125.6	176.7	147.2	187.3	171.4	171.1	178.1	204.2	215.2	217.5			
Total	100.0	113.9	116.3	129.5	123.5	149.7	148.9	158.8	160.9	159.9	165.6	175.9	182.0	184.4			
PERCENTAGE CHANGE ON THE PREVIOUS YEAR																	
Food	72.3	11.0	14.5	15.3	6.1	7.9	21.9	6.1	4.9	5.2	2.5	6.1	5.3	4.0	7.9	7.8	7.8
Non-food	27.7	8.4	-0.9	9.6	6.7	35.5	17.2	6.0	16.5	-8.6	3.9	19.3	20.8	6.5	10.3	11.6	11.6
Total	100.0	10.2	9.7	13.7	6.2	15.6	20.6	6.1	8.0	0.7	2.9	10.0	9.9	4.8	8.6	8.9	8.9
PERCENTAGE CHANGE ON THE PREVIOUS PERIOD																	
Food	72.3	10.8	3.3	11.6	-4.9	13.6	7.3	-1.1	6.0	-0.8	3.3	2.6	2.5	1.4	3.7	3.7	3.7
Non-food	27.7	0.2	-1.1	10.8	-3.7	40.7	-16.7	27.2	-8.5	-0.2	4.1	14.7	5.4	1.1	5.3	5.3	5.3
Total	100.0	7.5	2.1	11.4	-4.6	21.2	-0.5	6.7	1.3	-0.6	3.5	6.2	3.5	1.3	4.2	4.2	4.2

(a) Average rate of change measured on a yearly or half-yearly basis.

Source : Collection undertaken by Central Statistical Office.

TABLE 15.2: CONSUMER PRICE INDEXES, MAJOR COMPONENTS, PERCENTAGE CHANGE ON PREVIOUS PERIOD, 1981 TO 1987

Component	Weight (%)	1981		1982		1983		1984		1985		1986		1987		Average change(a) (%)	
		June	Dec	June	Dec	June	Dec	June	Dec	June	Dec	June	Dec	June	Dec	June	Dec
Cereals	37.77	8.9	-1.0	21.2	-1.6	17.1	10.1	-7.5	8.4	-7.5	4.2	2.9	0.1	0.9	3.2	3.2	3.2
Pulses	0.67	-19.5	11.2	8.6	-8.8	-4.0	5.6	9.6	-0.7	14.2	2.8	4.0	1.0	2.8	4.2	4.2	4.2
Vegetables	2.43	-18.1	7.2	30.1	-9.0	11.6	-2.2	16.8	8.8	3.1	8.5	0.8	5.7	-0.1	4.5	4.5	4.5
Fruits	0.04	7.3	18.4	-3.5	1.3	29.1	-23.4	33.1	-17.5	22.8	35.1	25.3	-37.2	20.5	5.5	5.5	5.5
Edible oil and fats	2.87	8.6	13.0	0.8	-6.9	12.7	0.9	-0.4	5.8	-5.2	0.8	8.4	3.4	9.5	3.7	3.7	3.7
Spices	5.10	14.0	1.5	6.9	-10.7	11.5	1.7	13.9	-4.0	18.6	3.9	0.6	15.2	0.2	4.6	4.6	4.6
Milk and its products	7.07	25.0	18.9	-13.5	-3.9	32.8	4.2	4.1	-0.4	8.3	-1.1	0.7	6.5	0.5	4.3	4.3	4.3
Other food and intoxicants	16.36	14.9	3.8	6.5	-9.7	-0.3	6.1	6.7	6.7	5.6	2.8	3.1	1.8	2.3	3.9	3.9	3.9
Fuel and lighting	3.65	-42.6	17.7	-10.7	2.1	-9.3	18.8	-6.2	19.3	-7.5	8.3	11.3	6.2	-0.9	2.1	2.1	2.1
Clothing and footwear	21.20	7.1	-4.2	14.8	-5.7	55.1	-21.8	34.5	-12.8	0.8	3.1	17.3	5.0	1.2	5.7	5.7	5.7
Stationery goods and personal effects	0.62	5.7	3.1	19.9	-0.4	-7.1	8.3	5.3	7.3	4.5	3.5	3.4	1.5	0.2	4.1	4.1	4.1
Misc. goods and services	1.57	39.8	-2.6	8.1	7.3	-5.0	2.7	6.0	9.0	-2.4	8.1	0.0	9.0	2.1	6.6	6.6	6.6
Furniture and utensils	0.65	-0.7	23.0	-4.3	-2.5	16.2	3.6	6.6	8.2	-0.9	9.3	-2.8	7.2	3.2	5.5	5.5	5.5
Total	100.00	7.5	2.1	11.4	-4.6	21.2	-0.5	6.7	1.3	-0.6	3.5	6.2	3.5	1.3	4.2	4.2	4.2

(a) Average six monthly rate of change measured over the period December 1979 to June 1987.

Source : Collection undertaken by Central Statistical Office.

ANNEX 1

ADMINISTRATIVE UNITS

1. Chhukha Dzongkhag
Gewog :
 1. Bongo
 4. Getana
 7. Metab
 (a) Phuntsholing Dzongkhag
Gewog :
 1. Balujora
 4. Phuntsholing
2. Ha Dzongkhag
Gewog :
 1. Bee
 4. Samar
3. Paro Dzongkhag
Gewog :
 1. Dogar
 4. Humrel
 7. Naja
 10. Wangchang
4. Samchi Dzongkhag
Gewog :
 1. Pagli
 (a) Chengmari Dzongkhag
Gewog :
 1. Charchharey
 4. Nainital
 (b) Dorokha Dzongkhag
Gewog :
 1. Denchhukha
 4. Mayona
 (c) Sibsü Dzongkhag
Gewog :
 1. Bangra
 4. Sibsü
5. Thimphu Dzongkhag
Gewog :
 1. Babesa
 4. Geyni
 7. Kawang
 10. Teowang
 (a) Lingshi Dzongkhag
Gewog :
 1. Lingshi
6. Chirang Dzongkhag
Gewog :
 1. Chirang Dangra
 4. Kikhorthang
 7. Samjong
 (a) Dagapela Dzongkhag
Gewog :
 1. Dorona
 4. Suntalay
 (b) Lamidangra Dzongkhag
Gewog :
 1. Beteni
 4. Lamidangra
7. Dagana Dzongkhag
Gewog :
 1. Drujegang
 4. Lajab
8. Punakha Dzongkhag
Gewog :
 1. Chhubu
 4. Lingbukha
 7. Zoma
 (a) Gasa Dzongkhag
Gewog :
 1. Khamed
 4. Lunana

2. Chapchha
5. Geyli
3. Dungna
6. Jagchhu

2. Gengudala
3. Logchina

2. Isu
5. Sangbay
3. Katsho

2. Dopshari
5. Lamgong
8. Shaba
3. Doteng
6. Lungni
9. Tsento

2. Samchi
2. Chengmari
3. Tading
3. Gamauney

2. Dorokha
3. Dungteo

2. Biru
5. Tendu
3. Lahirini

2. Chang
5. Jemena
8. Mewang
3. Dagala
6. Kabisa
9. Teobesa

2. Naro
3. Soy

2. Naro
2. Naro
3. Gosing
6. Phungtenchhu

2. Emiray
5. Tashiding
3. Goshi

2. Chaunauti
3. Gairi Gaon

2. Kalizingkha
5. Tsangkha
3. Khibesa
6. Tsezang

2. Geonshari
5. Shengana
3. Guma
6. Talo

2. Khateo
3. Laya

ADMINISTRATIVE UNITS (continued)

9. Wangdiphodrang Dzongkhag
Gewog : 1. Athang 2. Daga 3. Dangchhu
4. Ganteo 5. Gase Tsogong 6. Gase Tsowog
7. Jena 8. Kashi 9. Nahi
10. Nisho 11. Phangyul 12. Phobji
13. Rubisa 14. Sephu 15. Thetso
10. Bumthang Dzongkhag
Gewog : 1. Chhokhor 2. Chhumi 3. Tang
4. Ura
11. Gaylegphug Dzongkhag
Gewog : 1. Bhur 2. Danabari 3. Gaylegphug
4. Lalai 5. Sershong 6. Surey
7. Taklai
- (a) Kalikhola Dungkhag
Gewog : 1. Deorali 2. Kalikhola 3. Nichula
- (b) Sarbhang Dungkhag
Gewog : 1. Doban 2. Hilay 3. Leopani
4. Sarbhangtar 5. Singye
12. Shemgang Dzongkhag
Gewog : 1. Bardo 2. Nangkor 3. Shingkar
4. Tong
- (a) Panbang Dungkhag
Gewog : 1. Drokhar 2. Ngala 3. Phangkar
13. Tongsa Dzongkhag
Gewog : 1. Dragteng 2. Korphu 3. Namther
4. Nubi 5. Tangsibi
14. Lhuntshi Dzongkhag
Gewog : 1. Gangzur 2. Jaray 3. Khoma
4. Kurteo 5. Menbi 6. Menji
7. Metsho 8. Tsenkhar
15. Mongar Dzongkhag
Gewog : 1. Chaskhar 2. Dametsi 3. Gongdu
4. Kengkhar 5. Mongar 6. Ngatsang
7. Saleng 8. Selambi 9. Tangrong
10. Tsakaling 11. Tsamang
16. Pemagatsel Dzongkhag
Gewog : 1. Chongshi Borang 2. Dungmed 3. Khangma
4. Khar 5. Shumar 6. Yurung
7. Zobel
17. Samdrupjongkhar Dzongkhag
Gewog : 1. Orong
- (a) Dechhenling Dungkhag
Gewog : 1. Dechhenling 2. Norbugang
- (b) Bangtar Dungkhag
Gewog : 1. Bakuli 2. Dalim 3. Martsala
4. Samrang
- (c) Daifam Dungkhag
Gewog : 1. Hastinapur 2. Louri 3. Serthig

ADMINISTRATIVE UNITS (continued)

18. Tashigang Dzongkhag
Gewog : 1. Kanglung 2. Phongme 3. Radi
4. Samkhar 5. Shongphu 6. Tongma Shangtseng
7. Uzarong 8. Yangner
- (a) Sakteng Dungkhag
Gewog : 1. Bartsam 2. Bidung 3. Merasakteng
4. Yalang
- (b) Tashi Yangtse Dungkhag
Gewog : 1. Jangphu 2. Tashi Yangtse
- (c) Thrimshing Dungkhag
Gewog : 1. Gomdar 2. Kangpara 3. Thrimshing
- (d) Wamrong Dungkhag
Gewog : 1. Khaling 2. Lumang 3. Nanong

TOTAL NUMBER OF GEWOGS - 191

BHUTAN

- - - - International Boundary
- - - - District Boundary
- Road, Metalled
- - - - Road under construction
- ⊙ Capital
- District Headquarter
- () Pass



Scale 1 1,000,000
 km 0 10 20 30