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**MANPOWER UTILIZATION IN A DEVELOPMENTAL  
PROCESS - A CASE STUDY OF MANIPUR  
( 1951 TO 1971 )**

**BY  
LAIPHRAKPAM TOMBI SINGH**

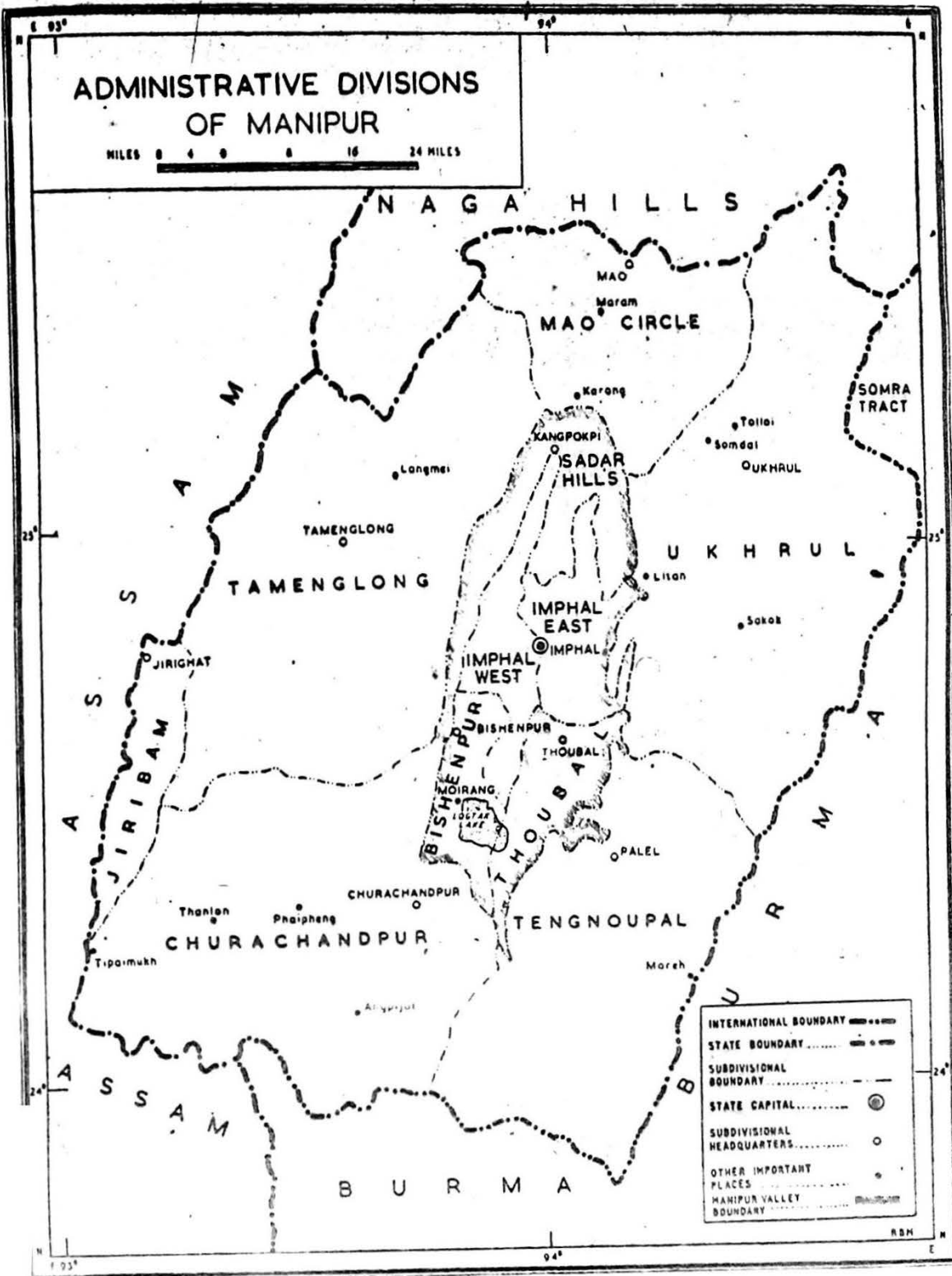
**A THESIS SUBMITTED TO  
THE POONA UNIVERSITY  
FOR THE DEGREE OF  
PH. D. IN ECONOMICS**

**GOKHALE INSTITUTE OF  
POLITICS AND ECONOMICS, POONA-4.**

**SEPTEMBER 1976**

# ADMINISTRATIVE DIVISIONS OF MANIPUR

MILES 0 4 8 16 24 MILES



## ACKNOWLEDGEMENT

This study has been made under the supervision of Dr. Amalendu Guha, Professor, Centre for Studies in Social Sciences, Calcutta. I drew very heavily upon Dr. Amalendu Guha, particularly when he was at the Gokhale Institute of Politics and Economics, Poona. His incisive suggestions, ungrudging help and constant encouragements went a long way in improving the quality of the work. For all these, I am deeply indebted - far more than any word can do justice - to him.

The work was initially started at the Gokhale Institute of Politics and Economics, Poona. The major part of the work, however, was completed at the Sardar Patel Institute of Economic and Social Research, Ahmedabad. I owe my thanks to the authorities of these Institutes for the facilities extended by them. Dr. Atul Sarma, Economist and Dr. R. Radhakrishna, Professor, both at the Sardar Patel Institute not only introduced me to this subject but also extended untiring help in all possible ways. What is more, Drs. Atul and Radhakrishna were the main source of inspiration all through. My heartfelt gratitudes are due to these two academicians.

I acknowledge gratefully the invaluable constructive suggestions made by Prof. P.N. Mathur, University College

of Wales, Aberyswyth, U.K., who warmly welcomed my request to go through the major part of the draft of the work despite his numerous preoccupations during his visit to India. I must also acknowledge my gratitude to Prof. D.T. Lakdawala, National Fellow at the Sardar Patel Institute for his kind comments and scholarly suggestions.

My colleagues, Mr. T. Suryanarayana, Statistician-Cum-Programmer and Mr. N.C. Shah, Research Assistant and Mr. K.N. Murty, Research Fellow at the Sardar Patel Institute helped me a lot in processing and computing the statistical data. I am indeed very much thankful to them. I owe to many other people, the mention of all of whom is almost impossible.

It is a real pleasure to acknowledge the neat and expeditious typing services provided by Mr. P. A. Patel.

Needless to mention, I alone am responsible for any errors and omissions that remain.

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September, 1976.

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## CHAPTER I

### INTRODUCTION

At the initial stage of macro-planning, the emphasis was ~~always~~ on the rate of economic growth in the country as a whole. Implicit in this emphasis was the expectation that ~~a~~ faster economic growth would have similar spread effects over all the different parts of the country and also over all the income classes. Over the years this approach of planning did however, bring out, more distinctly than ever, the fact of economic differentiation across the regions and income classes. The accent on a faster economic growth only strengthened and reinforced the economic bases of the developed pockets of the country.

It is now increasingly realized that the income level and pattern, generated in this process, failed to remove the inequalities. For, the planning process maintained - if not aggravated - the differentiated economic development of the pre-plan period. In the first instance, there were wide region-wise variations in resource endowments, levels of technology and externalities and even in social and economic institutions. Massive developmental efforts in the framework of a mixed economy helped those regions which had an edge over the rest in all these aspects. In fact, a recent empirical study of regional variations in India's industrial development brings out clearly that "..... in the regional context in India full scale development of technologically

interrelated industries has as yet not taken place, apart from in a few highly developed regions".<sup>1/</sup>

These results loomed large in the scene of Indian economic development prompted the planners to introduce 'space' explicitly in the objective functions.<sup>2/</sup> In other words, planning from the bottom began to be increasingly emphasized so as to achieve economic development in a balanced manner. In fact, the Fourth Five Year Plan laid special emphasis on the development of backward regions in the country. As a result the States in the federal structure as obtained in the country came to assume a new role in the context of the national development efforts.

State's role in the planning process is crucial. This is because the generation of income and employment largely depends on the promotion of primary industries like agriculture, forestry, fisheries, and secondary activities like mining, small and medium industries as well as the conservation of traditional handicrafts which are all in the domain of State-governments under our constitution.<sup>3/</sup> In the context

<sup>1/</sup> D. T. Lakdawala, Yoginder K. Alagh and Atul Sarma, Regional Variation of Industrial Development in India, Sardar Patel Institute of Economic and Social Research, Monograph Series-2, Ahmedabad, 1974, Chapter 1.

<sup>2/</sup> Government of India, Committee on Unemployment, Ministry of Labour and Rehabilitation, Report of The Working Group on Financial and Fiscal Measures, 1972, p. 19.

<sup>3/</sup> D. R. Gadgil, Planning and Economic Policy in India, Gokhale Institute of Politics and Economics, Studies No. 59, Poona, 1972, pp. 338-345.

of added emphasis on employment generation and income distribution for the removal of poverty, particularly in the Fifth Plan, States' responsibility in all round development of the regions increased further.<sup>4/</sup>

Consequent upon these new developments in the country's planning process, the States set up planning machinery of their own and also started formulating their State plans. While the major States of the country attempted to formulate their plans taking into consideration the resource endowments and financial resource mobilization, the minor States confined themselves to formulating impressionistic plans. Even the farmers have not as yet formulated plans taking into account technological levels and behavioural aspects of institutions. They thus impose the macro inferences while evolving policy instruments. In the process, crucial aspects like the size of the corporate sector and its behaviour, capital market and its behaviour, market organisations and consumption behaviour, to cite a few - have not received as much attention as they deserve in plan formulation. Let alone these questions, minor States have not been able to develop plans incorporating even those aspects as are taken into account by the farmer.

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<sup>4/</sup> Government of India, Planning Commission, Draft Fifth Five Year Plan 1974-79, Volume 1.

Minor States, in fact, have exhibited a tendency to superimpose the lessons drawn in the context of developed States or the country as a whole. This may be erroneous because there are wide variations among the States in respect of size, resource endowments, stages of development, the extent of integration with the national economy etc.

To formulate a plan suitable for a particular region adequate information regarding the level and pattern of development, structural relations of the economy, even the institutional behaviour is a precondition. With the accent on the removal of poverty and employment generation in the national plans, the relationship between economic development and manpower utilisation has to be clearly understood. For one thing the level and the pattern of economic development determine the level and structure of manpower utilisation. For the other they, together with asset distribution, determine income distribution and thus also the level of poverty. It is, therefore, necessary to map out the economic structure and institutional behaviour obtained in a region so as to formulate a plan in conformity with its needs.

Manipur is a small economy belonging to the group of States constituting the north-east India. Being one of the States least integrated with the national economy, the eco-

onomy of Manipur displays a number of peculiarities particularly relating to the crucial aspects of its development and manpower utilisation. Its resource endowments are broadly confined to agriculture and forest. Even agriculture is characterised by monocrop. Factory sector and its accompaniment, organised industrial credit institutions, are almost lacking. Thus the economy of the State is dominated - agriculture apart - by the household sector. Technological levels associated with the economic activities are of primitive nature. The level of economic development being low, social institutions play a very important role in factor mobility, particularly that of labour. These broad peculiarities associated with the economy of Manipur have to be investigated in depth if plans have to be formulated according to the requirements of this region. The present study is an attempt in this direction.

Little attempt has so far been made to map out the resource endowments, the level of technology and the structural relationships related to the economy of Manipur. It is possible that a lack of adequate information on most of the aspects of the State's economy has inhibited such attempts. In fact, before 1961 no such detailed information as are available in respect of other States, were available.

For a study on any aspects of the society and economy of Manipur, the major source of data has to be the census

reports. But because of frequent changes in coverage and concepts in different census reports, even these data are not comparable over time unless they are adjusted under suitable assumptions. For example, the concepts and definitions of workers are different in different census reports.

The National Sample Survey (N. S. S.) has started giving information separately for Manipur only very recently. State income estimates, which are readily available for most of the States ever since independence, are not available for Manipur until 1960-61. Informations on material input uses in agriculture or related aspects are totally lacking. Despite the fact that the household sector plays an important role in the economy of Manipur, not a single survey on various aspects of this sector has yet been conducted. It is also noteworthy that even this inadequate information is there only in respect of the valley region ignoring totally the hill region.

All these constraints on data do inhibit our proposed study. However, all attempts have been made to collect the relevant information as far as possible and to arrive at estimates under plausible assumptions wherever inevitable. The sources of data used in the study and the methods of adjustment of data, wherever resorted to, have, therefore, been indicated in appropriate places.

The specific questions to which the study has been

addressed are as follows :-

- (1) What is the structure of the economy of Manipur ?
- (ii) What are the characteristics of the predominant sectors of the economy ?
- (iii) What is the emerging pattern of industrialisation, if any ?
- (iv) What is the employment spread associated with different sectors ?
- (v) What is the extent of unemployment and under-employment ?
- (vi) What are the special features of the working force ?
- (vii) What is the level of living that has been made possible by the employment pattern ?
- (viii) What are the distinct features of the consumption basket and their relation to local products ?
- (ix) What are the dimensions of poverty ?
- (x) What are the food requirements of the economy and how the supply matches it ?
- (xi) What are the expected constraints on the growth of the economy ?
- (xii) Given the growth of the economy in the sectoral context what is the demand pattern of manpower ?



(xiii) How does the demand for manpower match the manpower supply ? - And so on.

While probing into these questions, the following general approach has been made. In the first instance, the situation relating to all these aspects, as in 1961, has been examined in details and depth. Then an attempt has been made to examine the dynamics of economic development that could be observed during the years 1951-71. On the basis of the study of dynamics, an attempt has been made to forecast under alternative assumptions the crucially important economic variables relevant to the problem under investigation. Finally, long range policy directions have been indicated.

#### Scheme of the Chapters :

Now the scheme that has been followed for the arrangement of the different aspects of the study is presented. Chapter Two attempts at mapping out the structure of the economy of Manipur. An attempt has also been made to bring out its peculiarities as well as the spatial differences between the valley and hill regions, together constituting the Manipur economy. The growth of the State Domestic Product and its sectoral components over time (1960-61 to 1970-71) have been examined so as to bring out the relative importance of the different sectors in the economy. Further, the interrelationships of the sectors have been examined.

Chapter Three examines the levels and pattern of consu-

mption in Manipur. It also compares consumption levels across expenditure classes and between rural and urban areas and presents expenditure elasticities for the analysis of consumption pattern. In addition, it examines the relationship between consumption and local production. Furthermore, it attempts to estimate the magnitude of poverty in rural and urban areas separately by using the well known caloric-norms and compares these results with those of all India.

Chapter Four discusses the concepts of labour-force, working force, unemployment, underemployment etc. which form the basic core of the study. It also discusses the problems relating to the data used in the study and indicates the broad methodologies in sifting data on a comparable basis. Finally, broad conclusions relating to different aspects of manpower in aggregate have been drawn.

Chapter Five examines distribution of working force according to different economic activities as also according to occupational pattern within the economic activity. Further, the manpower absorbed in different economic activities has been classified into primary, secondary and tertiary sectors, and labour productivity and other related questions with reference to these sectors have been examined. Also, trends in labour productivity in each sector during the period 1961 to 1971 have been examined.

In Chapter Six, agricultural sector as a source of emplo-

ymment and as a source of food supply has been examined. Different aspects such as land utilization, land-man ratio and the level of food production as against the demand for food because of a growing population have been examined. In addition, land distribution has been examined with a view to derive conclusions relating to income distribution.

Against the backdrop of the non-agricultural sector in general, the size and pattern of the industrial sector, its employment consequences with special reference to its spatial distribution have been examined in Chapter Seven.

In Chapter Eight, labour coefficients-matrix showing the labour coefficients by occupation associated with the output levels of various sectors has been presented and then the manpower requirement, both occupation-wise and activity-wise for the year 1981, has been projected under alternative assumptions regarding the sectoral output levels. These have been compared with the supply of manpower as estimated under different assumptions.

Finally, following the pedagogical tradition, Chapter Nine attempts at integrating the various conclusions that emerge from the study. An attempt also has been made to indicate the broad constraints that are likely to show themselves up in the economy of Manipur and then to indicate the policy framework in a perspective.

## CHAPTER II

### PROFILES OF MANIPUR

Manipur is geographically an isolated unit situated in the north-east corner of India. It has almost a rectangular shape with a total area of 22,357 square kilometres. The major part of the state is covered by hills which account for about 20,575 square kilometres or 92.00 per cent of the total area. The remaining part is an oval shaped valley with an area of only 1,782 square kilometres which is surrounded on all sides by hills. The physiographical feature of Manipur, therefore, presents two distinct regions, viz., the valley region and the hill region.

The State is bounded on the north by the State of Nagaland, on the south by the Union Territory of Mizoram, on the east by Upper Burma and on the west by the Cachar district of Assam. It has a boundary line of 854.40 kilometres of which 352.00 kilometres, or 41.20 per cent, form the international boundary with Burma. It is located between latitudes  $23^{\circ}50''$  N and  $25^{\circ}41''$  N., and longitudes  $93^{\circ}02''$  E and  $94^{\circ}47''$  E. with sub-tropical to temperate climate depending upon the elevation.<sup>1/</sup> The average rainfall of the State varies from 1,400 mms (56") to 4,000 mms. (160") in a year. The rainy season is from April to October and the temperature varies from  $0^{\circ}\text{C}$  to  $40^{\circ}\text{C}$ .

<sup>1/</sup> National Council of Applied Economic Research (N. C. A. E. R.), Techno Economic Survey of Manipur, Manipur Administration, 1961, p-1.

There are two main rivers, eight small rivers and numerous other streamlets. The two main rivers are the Barak and the Imphal. All the rivers rise from the hills and flow down through the valley region of Manipur towards the Loktak lake. Also all of them flow from north to southwards according to the natural slope of the State. The Loktak lake which is considered as the biggest lake to be found in the north-eastern parts of India measures approximately eight miles in length and five miles in width. The lake is covered with aquatic vegetation, such as weeds and water hyacinths. The lake is also regarded as the biggest source of fish supply which constitutes one of the important food items of the people of Manipur. At the same time, it provides considerable scope for employment in fishing to the people, specially those inhabiting its bordering area.

### 2.1 Political and Administrative Set-up :

Ever since the end of the Second World War there had been a popular demand in Manipur for a representative Government. The Maharaja conceded the demand in 1947 and accordingly, a constitution-making committee was set up. It was on the lapse of British Paramountcy over this princely State of Manipur on August 15, 1947 that a government was formed with the elected representatives of the people for the first time in its history. In pursuance of a merger agreement signed by the Maharaja, the princely State was integrated with the then dominion of India

on September 21, 1949.<sup>2/</sup> Henceforward the Government of India abolished the post of Political Agent in Manipur, and recognized it as a 'Part-C-State' administered by a Chief Commissioner. Later on, according to the States Reorganization Act, 1956, the status of 'Part-C-State' was abolished and Manipur was reorganized on November 1, 1956 as a Centrally-administered Union Territory. For about 15 years it continued in this status, and it was only since January 21, 1972 that the Government of India again passed its Twentyseventh Amendment Bill under the Caption, 'States Reorganization Bill, December 1971' converting Manipur into a full-fledged State of the Union of India.<sup>3/</sup>

The administrative set-up of the present Manipur State has also undergone a few changes in the course of time. Before November 14, 1969 the administrative set-up was a single district Union Territory. However, for a smooth functioning of the administrative machinery it had been divided into ten sub-regions known as sub-divisions<sup>4/</sup> (four in the valley region and six in the hill-region). Subsequently it was reorganized into five districts. Of the five districts, only one district

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<sup>2/</sup> G. D. Patel, The Land Systems of the Union Territories of India, Charotar Book Stall, Tulsi Sadan, Station Road, Anand (W. Pky.), India, 1970, p. 339.

<sup>3/</sup> Government of India, Ministry of Information and Broadcasting, India, (Reference Annual), Publication Division, 1974, p. 14.

<sup>4/</sup> Census of India 1961, District Census Handbook, Manipur.

viz., Manipur Central District, represented the whole of the valley region. The remaining four districts viz., Manipur West-District, Manipur North-District, Manipur South-District and Manipur East-District were all in the hill region. These five districts again were divided in all into twentyfive subdivisions<sup>5/</sup> (four in the valley and twenty one in the hill region).

These political and administrative reorganizations were carried out even before the existing poor intra-State and inter-State communications could be improved upon. Until recently roads in the State were not developed according to any plan.<sup>6/</sup> The state has no railways. The only land communication connecting Manipur with the rest of India is the Imphal-Dimapur Road, 216 kilometres in length. It links Imphal, the head quarter of the state, with the rail-head at Dimapur in Nagaland. So this Imphal-Dimapur Road is considered to be the first life-line of the economy of Manipur.

So far as the intra-State communication is concerned, Imphal is not yet connected by roads with some of the important areas in the hills. In 1969, the valley district occupying one-fourth of the total area, alone accounted for 1,308.74 kilometres or 51.80 per cent of the total road length of 2,526.58 kilometres in Manipur. As a result the road length per 100

<sup>5/</sup> Census of India 1971, Series-26, Manipur, paper No. 1 of 1972, (Supplement) Provisional Population Totals.

<sup>6/</sup> N. C. A. E. R., op. cit., p. 51.

square kilometres of the area in Manipur Central-District (23.53 kilometres) was followed by that of Manipur East-District (13.71 kilometres). This reduced to 3.26 kilometres in Manipur South-District as the lowest (Table 2.1).

Table 2.1

DISTRICT ROAD LENGTH IN MANIPUR AS ON MARCH 31,  
1969:

District	Road Length (in km.)	Percentage share of the total	Road Length (in km.) per 100 km. <sup>2</sup>
1	2	3	4
Manipur Central	1,308.74	51.80	23.53
Manipur North	165.50	6.55	6.51
Manipur South	160.00	6.33	3.26
Manipur East	650.40	25.74	13.71
Manipur West	241.94	9.58	5.27
<u>Manipur State</u>	<u>2,526.58</u>	<u>100.00</u>	<u>11.31</u>

Note : Total Road length covers both the surfaced and the unsurfaced.

Source: Government of Manipur, Statistical Outline of Manipur, Department of Statistics, 1970.

In 1970-71, the total road length in the State increased to 2,598.65 kilometres of which 951.21 kilometres were surfaced and 1,647.44 kilometres unsurfaced. The surfaced road length per 100 square kilometres was only 4.26 kilometres in Manipur as against 12.00 kilometres for all-India. The surfaced road length per one lakh of population was



88.67 kilometres which was far below the all-India average. This situation warrants development of the transport and communication system to the extent that it could pave the way for balanced growth and development of the economy.

## 2.2 Demographic Profile :

There is a distinct two-fold division of the population inhabiting Manipur. The valley region is inhabited by the Meitheis - i.e., the Manipuri Hindus, the Lois, Manipuri-Muslimans and various other small communities, all speaking the Manipuri language. The hill region is inhabited by as many as 29 tribes, broadly classified into two groups: the Nagas and the Kukis.<sup>2/</sup> Thus the population of hill region virtually represents the population of Scheduled tribes in Manipur. The region-wise distribution of population has been presented in Table 2.2.

Table 2.2

DISTRIBUTION OF POPULATION BY REGION IN MANIPUR, 1951-1971

Year	Valley-region	Hill-region	All-Manipur
1	2	3	4
1951	402267 (69.64)	175368 (30.36)	577635 (100.00)
1961	514667 (65.98)	265370 (34.02)	780037 (100.00)
1971	723834 (67.47)	345721 (32.23)	1072753 (100.00)

Note: Figures in parenthesis indicate percentages.

Sources: (1) Census of India 1961, Vol. XXII, Manipur & District Census Handbook of Manipur.

(11) Census of India 1971, Series-26, Manipur, Paper No. 1 of 1972 (Supplement) Provisional Population Totals.

<sup>2/</sup> Government of Manipur, Annual Administration Report 1968-69, Publicity Department, p. 1.

Although Manipur is a small State constituting only 0.68 per cent of the area and 0.20 per cent of the population of the country as a whole there is a significantly high rate of population growth. According to the 1951 Census, the total population of Manipur was 577,635. It increased to 1,07,753 in 1971 thus registering an increase of 495,118 person during the last two decades. The corresponding decadal growth rate of population was 35.04 per cent and 37.53 per cent during 1951-61 and 1961-71, respectively. Table 2.3 presents the decadal growth rate of population in Manipur from 1901 to 1971 by comparing with that of all-India.

Table 2.3

COMPARATIVE DECADAL GROWTH OF POPULATION BETWEEN  
MANIPUR AND ALL-INDIA : 1901-1971

Year	Manipur		All-India	
	Total Population	% of Decadal growth Rate	Total Population (in 0,000)	% of Decadal growth Rate
1	2	3	4	5
1901	284,465	-	236,281	-
1911	346,222	+ 21.71	252,122	+ 5.73
1921	384,016	+ 10.92	251,352	- 0.31
1931	445,606	+ 16.04	279,015	+ 11.01
1941	512,069	+ 14.92	318,701	+ 14.22
1951	577,635	+ 12.80	361,130	+ 13.31
1961	780,037	+ 35.04	439,235	+ 21.50
1971	1,072,753	+ 37.53	547,950	+ 24.80

Note: '+' indicates increase

'-' indicates decrease

Sources: (1) Census of India 1961, District Census Handbook of Manipur.

(11) Census of India 1971, Series 1 India, Paper 1 of 1972, Final Population Totals.

This high growth of population was reflected in the increase of population both in rural and urban areas. Nevertheless even at the end of 1971 Manipur remained predominantly rural, villages accounting for 86.81 per cent of the total population of the State. What is worth noting is that, according to the 1971 Census, out of the total 1949 villages in the State not a single village had the population of 10,000 and above. Table 2.4 presents a comparative size-wise distribution of population among villages of Manipur and all-India. This shows that a majority of the villages belonged to the lowest size-group i.e., with less than 500 population. The percentage share of the villages of this size-group was 74.30 in Manipur as compared to 55.34 per cent in the case of all-India. There were only eight villages in the largest size class with a population of 5,000 and above, constituting only 0.41 per cent of the total number of villages in Manipur as against 1.10 per cent for all-India.

Despite its high rate of population growth, Manipur is still one of the least densely populated States of India. The density of population in the State, according to the 1951 Census, was 27 persons per square kilometres. This increased to 35 persons in 1961 and to 48 persons in 1971. The corresponding all-India average density of population was 113 in 1951, and this increased to 138 in 1961 and to 178 persons in 1971. So the population of Manipur has one third of the all-India average density. Again, the average density of the State

**Table 2.4****DISTRIBUTION OF NUMBER OF VILLAGES ACCORDING TO THE SIZE OF POPULATION IN MANIPUR AND ALL-INDIA 1971**

Size of Population	Number of Villages	
	Manipur	All-India
1	2	3
10,000 to above	Nil	1,358 (0.24)
5,000 to 9,999	8 (0.41)	4,975 (0.86)
2,000 to 4,999	79 (4.05)	35,992 (6.25)
1,000 to 1,999	172 (8.83)	81,909 (14.23)
500 to 999	239 (12.26)	1,32,873 (23.08)
Less than 500	1,448 (74.30)	3,18,611 (55.34)
Unspecified	3 (0.15)	3 (0.00)
<b>All size</b>	<b>1,949 (100.00)</b>	<b>5,75,721 (100.00)</b>

Source : Government of India, Ministry of Information and Broadcasting, India (Reference Annual), Publication Division, 1974, p. 14.

Note : Figures in parenthesis indicate percentages.

varies from region to region, indicating a substantial difference between the valley and the hills. This can be noticed from the following Table 2.5.

Table 2.5

## DENSITY OF POPULATION BY REGION IN MANIPUR 1951 TO 1971

Year	(Density per sq. km.)		
	Valley region	Hill region	All-Manipur
1	2	3	4
1951	226	9	27
1961	283	13	35
1971	406	17	48

Note: The figures have been worked out on the basis of Region-wise area and population.

It reveals that although the area of the valley region is comparatively quite small as noted above, the concentration of population in it is very high. The average density of population in the valley was 226 persons and 406 persons in 1961 and 1971, respectively. Whereas in the case of hill region it was only 13 and 17 persons, respectively. Thus the distribution of population over space also clearly indicates that there are two distinct regions in Manipur : the thickly populated valley-region and the scantily populated hill region.<sup>8/</sup>

Very high,  
one of  
the  
highest  
in the  
country

<sup>8/</sup> The Administration Reports of Manipur also mentioned that, between the population of these two regions, the inhabitants of the valley enjoy fertile-soil, better network of transport facilities and hence are relatively advanced in their economic conditions, education, social habits etc. On the other hand, the inhabitants of the hill-region face a very difficult terrain and painfully inadequate transport facilities, or other amenities of life; hence are more isolated, backward, poor and still having improvident habits. See The Government of Manipur, Annual Administration Report for 1961-62, Manipur Administration, p.1.

### 2.3 Urbanisation :

The process of urbanization is closely connected with industrialization and/or overall economic development.<sup>9/</sup> In the demographic sense of the term, its growth can be defined as the growth in the proportion of population living in urban areas. It is thus a process by which a transformation of economic activities takes place. So far as urbanization is concerned, Manipur ranks below the national level. In fact, as noted above, it is predominantly rural. With an area of about five square kilometres enclosing the then royal palace and situated in the north of the Manipur Valley, Imphal was considered to be the only town of the State until 1951. In that year, the percentage of urban population in Manipur was only 0.49. But it increased to 8.68 per cent in 1961 and 13.19 per cent in 1971. The corresponding all-India average figures were 17.40 per cent in 1951, 17.98 per cent in 1961 and 19.91 per cent in 1971, (Table 2.6).

The growth of urbanization in Manipur over the last two decades, 1951 to 1971, specially during 1951 to 1961 calls for an explanation. When the Imphal Municipality was formed in 1956,<sup>10/</sup> its municipal limits were defined to include an

<sup>9/</sup> D. R. Gadgil, The Industrial Evolution in India in Recent Times, Oxford University Press, Bombay, Calcutta, Delhi & Madras, Fifth Edn., 1971, p. 142.

<sup>10/</sup> Government of Manipur, Annual Administration Report for 1956-57, Manipur Administration, p. 48.

Table 2.6

DISTRIBUTION OF POPULATION BETWEEN RURAL AND URBAN FOR  
MANIPUR AND ALL-INDIA : 1951-1971

Year	Manipur			All-India (Population in '000)		
	Rural	Urban	Total	Rural	Urban	Total
1	2	3	4	5	6	7
1951	574,773 (99.51)	2,862 (0.49)	577,635 (100.00)	298,147 (82.60)	62,803 (17.40)	360,950 (100.00)
1961	712,320 (91.32)	67,717 (8.68)	780,637 (100.00)	360,143 (82.02)	78,930 (17.98)	439,073 (100.00)
1971	931,261 (86.81)	141,492 (13.19)	1072,753 (100.00)	438,856 (80.09)	109,094 (19.91)	547,950 (100.00)

Note : Figures in parenthesis show the percentages.

Sources: (i) Government of Manipur, Statistical Outline of Manipur, Department of Statistics, 1959, p. 18.

(ii) Census of India, 1961, Vol. XXII & District Census Handbook of Manipur, Part II, p. 22.

(iii) Registrar General, Census of India 1971, Series 1, Paper No. 1 of 1972, Final Population Totals, p. 3.

extended area of about 14.99 square kilometres.<sup>11/</sup> This might be one of the major reasons of the apparently rapid growth. It may be noted that, Imphal apart, there was no other town until in 1971 seven new small towns<sup>12/</sup> were shown in the census reports. As many as six of them were in the valley-district.

<sup>11/</sup> Census of India-1961, District Census Handbook of Manipur, Part I, p. 42.

<sup>12/</sup> The newly declared towns were: Moirang, Thoubal, Kakching and Churachandpur (all Class V towns) and Lamlai, Bishenpur and Numbol (all Class VI towns). See Census of India 1971, Series 26, Manipur; Paper No. 1 of 1972 (Supplement) Provisional Population Totals.

Thus it was only since 1971 that the process of urbanization did no more remain limited to Imphal and its vicinity. The other important point to note is that, according to the 1971 census, the valley accounted for as much as 94.00 per cent of the total urban population while the entire hill region accounted only for 6.00 per cent.

Examining population distribution according to size, it is found that there was only one town, i.e., Imphal which had a population of 100,000 and above, and which was regarded as a Class I town in 1971. Imphal alone accounted for 71.00 per cent of the total urban population<sup>13/</sup> in the State. Of the seven other towns, four were in the class of a population of 5,000 to 9,999 accounting for 22.12 per cent and the remaining three had population less than 5,000 and accounted for 6.88

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<sup>13/</sup> The urban status of Imphal dated back to the Census of 1901 which reported 72,234 inhabitants. Since then there had been a continuous increasing trend reaching 99,716 population in 1941. The growth process of Imphal town can be explained in terms of D. R. Gadgil's generalization on the growth of towns and cities in India in that Imphal was the capital of the former Manipur State and seat of administration (Gadgil D. R., *op. cit.*, pp. 145-50). As a result, there was influx of population from the villages to attend to the royal service. And, in course of time, Kwairamband Keithel (Kwairamband Bazar) came up as the biggest trading centre in Manipur. Nevertheless, a steep fall in urban population was reported in the 1951 Census. This was caused by the reduction of the coverage of the old Imphal area of the Census. Its coverage was confined only to the fraction consisting of Kwairamband Keithel (Kwairamband Bazar), Government offices and institutions, the 4th Assam Rifles area and a few residential portions looked after by the then Imphal-town Fund. Other areas of Imphal which were non-agricultural but falling outside the jurisdiction of the Imphal-town Fund were treated as rural.



per cent of the total urban population (Table 2.7).

Table 2.7

DISTRIBUTION OF TOWN/TOWN AGGLOMERATION ACCORDING TO  
THE SIZE OF POPULATION : MANIPUR : 1971

Class 1	Size of Population 2	No. of town 3	Percentage share of the total population 4
I	1,00,000 and above	1	71.00
II	50,000 to 99,999	-	-
III	20,000 to 49,999	-	-
IV	10,000 to 19,999	-	-
V	5,000 to 9,999	4	22.12
VI	Less than 5,000	3	6.88
I - VI	All Sizes (Total)	8	100.00

2.4 Education and Literacy :

Investment in human resources is a part of all developmental programmes. Education system is to be geared to the economic transformation that is envisaged. In this perspective, it may be worthwhile to review the progress that has taken place in the field of education in Manipur. Upto 1855 there was not a single school in the State, and the facilities of university education did not exist until 1946.<sup>14/</sup> However, over the period of the last twenty years or so, there was a phenomenal progress in this respect. The Census of India 1951,

<sup>14/</sup> Government of Manipur, Second Five Year Plan of Manipur, Manipur Administration, p.11.

recorded the rate of literacy in the State at 12.58 per cent of the total population. The percentage of male literacy was 22.93 while that of female literates was 2.73. In 1961 and 1971, the percentages of literacy in the State rose to 20.42 and 32.80, respectively, thus securing the seventh rank in terms of literacy rate among all the States and Union Territories in India. By male and female it was, respectively 45.12 and 15.93 per cent in 1961, and 46.16 and 19.22 per cent in 1971. It indicates that the rate of growth of literacy in the State was considerably faster than that of the all-India average during the decades, 1951-1971.

Such a rapid growth of literacy rate was possible because of the distinct accent given on education by the successive Five Year Plans so as to meet locally the demand for educated manpower for employment as administrators and technicians. Previously this demand used to be met by recruiting trained and experienced manpower from outside the State, through offers of extra inducements.<sup>15/</sup> The First Five Year Plan allotted to education a sum of Rs. 17.70 lakhs or 11.43 per cent of the total plan outlay in the State.<sup>16/</sup> This was further raised to Rs. 57.00 lakhs<sup>17/</sup> and Rs. 111.83 lakhs<sup>18/</sup> during

<sup>15/</sup> Ibid. p. 1.

<sup>16/</sup> Government of Manipur, The First Five Year Plan for Manipur (1951-1956), Manipur Administration, 1953, p. 1.

<sup>17/</sup> Government of Manipur, Second Five Year Plan of Manipur, Manipur Administration, p. (111).

<sup>18/</sup> Government of Manipur, Third Five Year Plan, Manipur Administration, p. 2.

the Second and Third Five Year Plans, respectively, though in terms of percentage share, the educational outlay meanwhile dropped to 9.12 and 8.69 per cent of the total outlay. With the rapid increase in the plan expenditure on education, the number of educational institutions of different types increased substantially during the period from 1951 to 1970, as shown in Table 2.8. Yet it appears that professional and technical educational institutions and a university providing post graduate classes (general and technical) were yet to be set up.

Table 2.8

**DISTRIBUTION OF THE NUMBER OF EDUCATIONAL INSTITUTION  
BY DIFFERENT TYPES IN MANIPUR, 1951-1970**

Types of Educational Institution	Year		
	1951	1961	1970
1	2	3	4
Primary School	479	1821	2395
Middle/Junior High School	71	313	381
Higher Secondary and Higher English School	11	57	124
Colleges for Professional and Technical Education	-	2	12
College for General Education	1	2	13
All Types of Educational Institutions (Total)	562	2195	2925

- Sources : (i) Government of Manipur, Fact Books on Manpower in Manipur, Department of Statistics, Imphal, 1967.
- (ii) United Bank of India, Report of the Fact Finding Survey of Manipur, Research Division, Research and Development Department, Calcutta, 1972, p. (11).

## 2.5 Growth of State Domestic Product and Per Capita Income :

Net State Domestic Product or rather Per Capita income is one of the most important indicators of the economic growth of a State.<sup>19/</sup> Real per capita income which indirectly reflects the current standard of living of the people is considered to be the most significant welfare index. It can also be used for inter-regional comparison where welfare services provided by the State are more or less uniform.<sup>20/</sup> An examination of the movements of this indicator is, therefore, necessary for a study dealing particularly with the sources of economic growth.

Estimates of State Domestic Product as well as of per capita income for Manipur on a regular time series basis were not made before the year 1960-61. An estimate by the National Council of Applied Economic Research in its survey noted that the per capita income of Manipur in 1955-56 was Rs. 171 as against the all-India average of Rs. 261.<sup>21/</sup> According to the official estimates<sup>22/</sup> by industrial origin, made regularly

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<sup>19/</sup> Jacob Viner, 'The Economics of Development' in A. N. Agarwal and S. P. Singh (ed.), Approaches to the Problem of Under-Development, Oxford University Press, 1958, p. 12.

<sup>20/</sup> National Council of Applied Economic Research, (N. C. A. E. R.), Summing up the Pattern of Growth of States, Occasional Paper No. 12, New Delhi, p. 12.

<sup>21/</sup> N. C. A. E. R., op. cit., p. 61.

<sup>22/</sup> Government of Manipur, Estimates of State Domestic Product of Manipur, Department of Statistics, 1960-61 to 1971-72.

since 1960-61, there was an increase in the State Domestic Product of Manipur by Rs. 581.2 lakhs, over the years 1960-61 to 1970-71 (i.e., Rs. 1191.9 lakhs in 1960-61 to Rs. 1773.1 lakhs in 1970-71), computed at 1960-61 prices. Thus it registered the rate of growth of 6.40 per cent per annum during the period. Though the growth rate was high, there were considerable fluctuations when examined in details (Table 2.9).

That the growth in State Domestic Product at constant prices was higher than that in population is reflected in the fact that the per capita income of the State rose from Rs. 154.8 in 1960-61 to Rs. 167.9 in 1970-71, registering a growth rate of 3.10 per cent per annum during the period as against the corresponding growth rate of 1.50 per cent in all India.

## 2.6 Sectoral Growth and the Correlations :

An examination of the relative growth rates of the broad sectors, their correlations with the State Domestic Product and the inter-sectoral relations - these will indicate the relative importance of individual sectors as sources of economic growth. For this purpose all the 14 sectors of the official classification by industrial origin are grouped into three broad sectors : viz., (i) Primary, (ii) Secondary and (iii) Tertiary (Table 2.10).

In 1960-61, 56.85 per cent of the total net State Domestic Product was contributed by the Primary sector comprising

**Table 2.9**

**COMPARATIVE INDICES OF INCOME GROWTH BETWEEN MANIPUR  
AND ALL-INDIA : 1960-61 TO 1970-71  
(at 1960-61 prices)**

(1960-61 as base year)				
Year	Manipur		All-India	
	Net State Domestic Product	Per capita income	Net National Product	Per capita income
1	2	3	4	5
1960-61	100.0	100.0	100.0	100.0
1961-62	97.6	94.4	103.5	101.2
1962-63	98.2	92.2	105.6	101.0
1963-64	107.4	97.6	111.7	104.4
1964-65	112.8	99.4	119.7	109.6
1965-66	112.8	104.7	113.0	101.3
1966-67	153.3	126.7	114.7	100.5
1967-68	151.1	121.1	125.3	107.5
1968-69	170.1	132.0	128.3	107.7
1969-70	169.6	127.6	135.1	110.8
1970-71	149.9	108.5	141.0	113.3

Sources : The figures have been computed from

(i) Government of Manipur, Estimates of State Domestic Product of Manipur, Department of Statistics, 1960-61 to 1971-72.

(ii) Government of India, Cabinet Secretariate, Central Statistical Organization (C. S. O.), Estimates of National Product, 1960-61 to 1970-71.

Table 2.10

## STATE DOMESTIC PRODUCT OF MANIPUR BY INDUSTRIAL ORIGIN, 1960-61 TO 1970-71

Sr. No.	Industrial Origin	(Rs. in lakhs at 1960-61 Prices)										
		1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Agriculture including Livestock	627.0 (52.60)	536.9 (46.21)	538.7 (46.04)	605.8 (47.38)	618.7 (46.03)	675.5 (46.20)	1036.5 (56.23)	959.4 (53.32)	1150.7 (56.80)	1117.8 (55.33)	802.5 (45.26)
2	Forestry and logging	24.8 (2.08)	49.4 (4.25)	27.0 (2.31)	23.3 (1.82)	16.0 (1.19)	32.8 (2.24)	19.8 (1.48)	17.9 (0.99)	24.9 (1.23)	19.4 (0.96)	32.0 (1.84)
3	Fishing	13.9 (1.17)	16.8 (1.45)	16.8 (1.44)	28.0 (2.19)	24.4 (1.83)	34.4 (2.35)	27.1 (1.48)	23.9 (1.27)	25.7 (1.35)	27.3 (1.35)	27.3 (1.54)
1-3	Primary Sector	665.7 (55.85)	603.1 (51.91)	582.5 (49.79)	657.1 (51.39)	659.1 (49.05)	742.7 (50.79)	1073.4 (58.79)	1001.2 (55.65)	1201.3 (59.30)	1164.5 (57.64)	861.8 (48.64)
4	Mining and Quarrying	0.1 (0.01)	0.4 (0.03)	0.3 (0.03)	0.3 (0.02)	0.3 (0.02)	0.3 (0.02)	0.1 (0.01)	0.1 (0.01)	0.1 (0.01)	0.1 (0.01)	0.1 (0.01)
5	Large-scale Manufacturing	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
6	Small-scale Manufacturing	99.4 (8.34)	102.8 (8.86)	106.5 (9.10)	109.5 (8.56)	113.1 (8.42)	116.5 (9.97)	120.3 (6.59)	124.1 (6.90)	127.9 (6.31)	131.6 (6.51)	136.2 (7.68)
7	Construction	19.8 (1.66)	21.2 (1.82)	22.8 (1.96)	24.5 (1.92)	26.4 (1.96)	28.4 (1.94)	30.5 (1.67)	32.7 (1.82)	35.2 (1.74)	37.8 (1.87)	40.7 (2.30)
4-7	Secondary Sector	119.3 (10.9)	124.4 (10.71)	129.6 (11.09)	134.3 (10.50)	139.8 (10.40)	145.2 (11.93)	150.9 (8.27)	156.9 (8.73)	163.2 (8.06)	169.5 (8.39)	177.0 (19.99)
8	Electricity, gas and water supply	3.3 (0.28)	3.7 (0.32)	3.8 (0.32)	4.2 (0.33)	4.5 (0.33)	4.8 (0.33)	5.1 (0.27)	8.5 (0.47)	8.3 (0.41)	8.3 (0.41)	14.9 (0.84)
9	Transport and Communication	18.5 (1.55)	21.3 (1.83)	22.5 (1.92)	24.6 (1.92)	25.9 (1.93)	26.8 (1.83)	27.7 (1.52)	30.1 (1.67)	32.9 (1.62)	33.2 (1.64)	35.1 (1.98)
10	Trade, Storage, Hotels and Restaurants	172.9 (14.51)	179.7 (15.47)	186.4 (15.94)	193.1 (15.10)	200.2 (14.90)	208.5 (14.26)	215.2 (11.79)	223.2 (12.40)	231.5 (11.43)	241.5 (11.95)	255.9 (14.43)
11	Banking and Insurance	11.3 (0.95)	11.3 (0.97)	11.8 (1.00)	12.2 (0.95)	13.5 (1.00)	14.6 (1.00)	16.3 (0.90)	18.8 (1.04)	18.7 (0.92)	19.1 (0.96)	20.3 (1.14)
12	Real estate and ownership of dwelling	73.4 (6.16)	77.8 (6.69)	78.5 (6.71)	86.9 (6.80)	91.8 (6.83)	97.0 (6.63)	102.6 (5.62)	108.4 (6.02)	114.5 (5.65)	121.0 (5.99)	127.9 (7.21)
13	Public services	39.5 (3.31)	43.1 (3.71)	49.4 (4.22)	53.3 (4.17)	90.5 (6.73)	101.1 (6.91)	102.7 (5.63)	111.4 (6.19)	111.0 (5.48)	111.0 (5.49)	121.7 (6.86)
14	Other services	88.0 (7.38)	97.5 (8.39)	105.5 (9.01)	113.0 (8.84)	118.7 (8.83)	121.5 (8.31)	131.5 (7.21)	140.9 (7.83)	144.5 (7.13)	152.0 (7.53)	157.9 (8.91)
8-14	Tertiary Sector	406.9 (34.14)	434.4 (37.38)	457.9 (39.12)	487.3 (38.11)	545.1 (40.55)	574.3 (39.27)	601.1 (32.94)	641.3 (35.62)	661.4 (32.64)	686.1 (33.97)	733.7 (41.37)
15	Total Net State Domestic Product	1191.9 (100)	1161.9 (100)	1170.0 (100)	1278.7 (100)	1344.0 (100)	1462.2 (100)	1825.4 (100)	1799.4 (100)	2025.9 (100)	2020.1 (100)	1773.1 (100)

Note : Figures in parenthesis indicate percentages.

Source : Government of Manipur, Estimates of State Domestic Product of Manipur, Department of Statistics, 1960-61 to 1971-72.

the three primary industries : (i) agriculture including livestock, (ii) forestry and (iii) fishing. The relative contribution by this sector was the highest in the year 1968-69 at 59.30 per cent. Thus the Primary sector was by far the most important sector in terms of relative contribution. The rate of growth of this sector registered during 1960-61 to 1970-71 was 7.00 per cent per annum. Within the primary sector, agriculture including livestock was the most significant component. This sub-sector contributed between 46.03 per cent and 56.80 per cent of the net State Domestic Product.

Next in importance is the Tertiary sector comprising seven industrial origins : viz., (i) electricity, gas and water supply, (ii) transport and communication, (iii) trade, storage, hotels and restaurants, (iv) banking and insurance, (v) real estate ownership of dwelling, (vi) Public services and (vii) Other services. Its share of contribution to the net State Domestic Product ranged from 32.64 per cent in 1968-69 to 41.37 per cent in 1970-71 and recorded its growth at the rate of 6.10 per cent per annum during the period from 1960-61 to 1970-71. Amongst the different sub-sectors by industrial origin under this sector, the industrial origin of 'trade, storage, hotels and restaurants' was very prominent constituting, on an average, nearly half of the sectoral contribution. And it was followed by that of 'other services, and the real estate and ownership of dwellings' in that order.



The role of secondary sector, constituted of mining and quarrying, construction and manufacturing (large-scale and small-scale) plays a relatively minor role. The percentage share of this sector in the net State Domestic Product varied from 8.06 per cent in 1968-69 to 11.93 per cent in 1965-66. It should be noted that there was no contribution at all from large-scale manufacturing. For large-scale industries were conspicuous by their absence in Manipur's economy. In fact, the contribution from the secondary sector was essentially derived from small-scale manufacturing which covered the household industry. However, this sector as a whole registered the growth rate of 4.00 per cent during the years, 1960-61 to 1970-71.

Examining the growth rates of the individual sub-sectors, during 1960-61 to 1970-71, it is found that agriculture which had a very big base in the economy, as mentioned above, contributed substantially to this high growth, its growth rate being 7.42% (Table 2.11). The other sub-sectors like electricity, water supply and gas and public services had smaller bases to begin with and, hence, grew at the rate of 13.00 per cent to 14.00 per cent. The sub-sectors like small-scale industry, trade, storage and real estates and dwellings, which had relatively bigger bases, registered low growth rates. Nevertheless, all these sectors were growing above the rate of population growth (3.60 per cent). It may be mentioned that components of the primary sector like forestry and logging and mining and quarrying showed negative growth rates as - 2.63

Table 2.11

GROWTH RATES OF STATE DOMESTIC PRODUCT OF MANIPUR  
BY INDUSTRIAL ORIGIN (1960-61 to 1970-71)

Serial No.	Industrial Origin	Growth Rate
1	2	3
1	Agriculture including livestock	7.42
2	Forestry and Logging	- 2.63
3	Fishing	5.94
4	Mining & Quarrying	-10.44
5	Small-scale Manufacturing	3.16
6	Large-scale Manufacturing	Nil
7	Construction	7.50
8	Electricity, Water Supply & Gas	14.20
9	Transport & Communication	6.20
10	Trade Storage & Restaurant	3.90
11	Banking and Insurance	7.00
12	Real Estate and Ownership Dwelling	5.80
13	Public Services	13.00
14	Other services	5.80
15	Total Net Domestic Product	6.40

Note : The growth rate refers to per annum which has been computed on the basis of compound growth rate formula. To elaborate, we estimated the following functions by least-square method,  $\log y_t = \alpha + \beta t$ , where  $y_t$  is income in the period  $t$  and  $t$  is time. Then the growth rate will be given by Anti log of  $\beta - 1$ .

per cent and -10.44 per cent respectively.

The above analysis clearly shows the overwhelming importance of the primary sector of the economy of Manipur both in terms of its relative contribution to the State Domestic Product and the rate of growth over time. In fact, the fluctuation in the State Domestic Product was mainly caused by fluctuations in the absolute contribution of the primary sector that was essentially agricultural in composition. The importance of the primary sector vis-a-vis the State Domestic Product is also shown by the correlation-matrix of the sectoral outputs in the State Domestic Product. Correlation results, presented in Table 2.12 show that the State Domestic Product is highly correlated with the primary sector, the correlation coefficient being 0.97 when variables are expressed at current prices.

Yet another exercise has been done to examine if the movement of the agricultural output determines the output levels of the other sectors in the economy (Table 2.13). It has brought out that a 1 per cent change in the agricultural output generates change in the total output of the economy to the tune of 0.4905 per cent (Table 2.14). It has also brought out that, of the total nine sectors regrouped as per Census Classification, three sectors such as (v) small-scale and household industry, (vi) construction and (ix) other services are positively and significantly correlated with the movement in the output level of the agricultural sector. While

**Table 2.12**

**CORRELATION MATRIX OF INTER-SECTORAL OUTPUT AND ALSO  
WITH STATE DOMESTIC PRODUCT, DURING 1960-61 TO  
1970-71, MANIPUR**

(At Constant Prices)

	Primary 1	Secondary 2	Tertiary 3	State Domestic Product 4
Primary	1.0000	0.7874	0.7894	0.9734
Secondary	0.7874	1.0000	0.9945	0.9062
Tertiary	0.7894	0.9945	1.0000	0.9090
State Domestic Product	0.9734	0.9062	0.9090	1.0000

(At Current Prices)

	Primary 1	Secondary 2	Tertiary 3	State Domestic Product 4
Primary	1.0000	0.8206	0.8546	0.9838
Secondary	0.8206	1.0000	0.9902	0.9077
Tertiary	0.8546	0.9902	1.0000	0.9337
State Domestic Product	0.9838	0.9077	0.9337	1.0000

**Note :** The correlation coefficient between two sectors x and y is given by

$$r_{xy} = \frac{\sum (x - \bar{x}) (y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \cdot \sum (y - \bar{y})^2}}$$

**Table 2.13**

**ADJUSTED SECTORAL OUTPUT ON THE BASIS OF THE CENSUS CLASSIFICATION OF ECONOMIC ACTIVITY, MANIPUR : 1960-61 to 1970-71**  
(Rs. in lakhs)

	I	II	III	IV	V	VI	VII	VIII	IX	I-IX
	Agriculture including Livestock	Forestry and logging	Fishing	Mining and Quarrying	Small-scale manufacturing	Construction	Trade and Commerce	Transport & communication	Other services	Total
Year	2	3	4	5	6	7	8	9	10	11
1960-61	627.0	24.8	13.9	0.1	99.4	19.8	257.6	18.5	130.8	1191.9
1961-62	536.9	49.4	16.8	0.4	102.8	21.2	268.8	21.3	144.3	1161.9
1962-63	538.7	27.0	16.8	0.3	106.5	22.8	276.7	22.5	158.7	1170.0
1963-64	605.8	23.3	28.0	0.3	109.5	24.5	292.2	24.6	170.5	1278.7
1964-65	618.7	16.0	24.4	0.3	113.1	26.4	305.5	25.9	213.7	1344.0
1965-66	675.5	32.8	34.4	0.3	116.5	28.4	320.1	26.8	227.4	1462.2
1966-67	1026.5	19.8	27.1	0.1	120.3	30.5	334.1	27.7	239.3	1825.4
1967-68	959.4	17.9	23.9	0.1	124.1	32.7	350.4	30.1	260.8	1799.4
1968-69	1150.7	24.9	25.7	0.1	127.9	35.2	364.7	32.9	263.8	2025.9
1969-70	1117.8	19.4	27.3	0.1	131.6	37.8	381.6	33.2	271.3	2020.1
1970-71	802.5	32.6	27.3	0.1	136.2	40.7	404.1	35.1	294.5	1773.1

Note: The 14 sectors (industrial origins) have been adjusted into 9 sectors following the Census Classification of Economic Activity where (i) Trade, storage and restaurant, (ii) Banking and insurance and (iii) real estate and ownership dwellings - three altogether come under "Trade and commerce" activity; (i) Electricity, water supply & gas, (ii) Public Services, (iii) Other services come together under "Other services".

Source : Deduced from Table 2.10.

Table 2.14

CORRELATION OF AGRICULTURAL OUTPUT WITH THAT OF OTHER SECTORS AND WITH STATE DOMESTIC PRODUCT IN MANIPUR DURING THE PERIOD 1960-61 TO 1970-71

Sector 1	(Elasticity) 2	$R^2$ 3
Forestry and logging	- 0.7248	0.2193
Fishing	- 0.2285	0.5125
Mining and Quarrying	- 1.9787	0.6658
Small-scale Manu- facturing	- 0.0045	0.9997
Construction	0.0005	1.0000
Trade and Commerce	- 0.0054	0.9986
Transport and Commu- nication	- 0.0501	0.9780
Other Services	0.0153	0.9482
State Domestic Product	0.4905	0.9976

Note : We postulated that each sectoral output depends on agriculture. We fitted by least square method the following regression equation :

$$\log Y_{it} = \alpha + \beta \log X_t + Y_t$$

The coefficient of  $\log X$  gives the elasticity of a sectoral output with agricultural output.

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sectors such as forestry and logging and mining and quarrying do not have any functional relationship with the movement of agriculture. The sectors other than those mentioned above are related negatively to the movement of the agricultural sector, indicating that, in some sense or other, these sectors are competitive rather than complementary to the agricultural sector. <sup>23/</sup>

<sup>23/</sup> It may be mentioned that except for forestry and logging,  $R^2$ 's (percentage of variation in the dependent variable explained) where the functions fitted are quite high, suggesting a plausible functions relationship between the movement of agricultural output and output of other sectors.

## CHAPTER III

### CONSUMPTION PATTERN AND LEVELS OF LIVING

The present chapter discusses the consumption pattern and the incidence of poverty in Manipur with rural and urban breakup. With this in view, an attempt is made here to quantify the pattern of consumption through the well known Engel curve formulations. The main data used for this purpose are from the State Sample Survey of Manipur in collaboration with the Eighteenth round of the National Sample Survey (NSS) on consumer expenditure covering the period February 1963 to January 1964.<sup>1/</sup>

The discussion of this chapter is organized in the following manner. First, it attempts to describe in a comparative framework the consumption pattern of the average rural and urban population of Manipur. It also compares consumption levels across expenditure classes in both the regions. Secondly, we analyse the behaviour of consumers in an analytical framework by estimating the Engel Curves which has been carried out from the value of consumption of the items considered. Finally, it attempts to estimate the magnitude of

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<sup>1/</sup>(i) Government of Manipur, Rural Consumer Expenditure in Manipur, 1963-64 (Provisional), Department of Statistics, Imphal.

(ii) Government of Manipur, Urban Consumer Expenditure in Manipur, 1963-64 (Provisional), Department of Statistics, Imphal.

poverty in rural and urban areas separately by using the well known calorie norms and compares these results with those of the all-India.

### 3.1 Distribution of Population by Per Capita Expenditure Class :

Before proceeding to the above cited analysis it will be helpful to show the distribution of population (Table 3.1) in thirteen per capita monthly expenditure classes for rural and urban areas. It can be seen from the table that the pattern of distribution of the total population by expenditure class in Manipur deviates from that of the all-India to a large extent. In the rural areas of Manipur, 15.34 per cent of the population had the per capita total expenditure of Rs. 15 and less than that (considered as lower expenditure group); whereas this was as large as 31.96 per cent in the case of all-India. On the contrary, the percentage of population lying in the expenditure class of Rs. 15 to Rs. 34 (considered as middle expenditure group) was 69.95 per cent and 56.56 per cent for Manipur and all-India respectively. The same pattern of distribution found in the middle expenditure group was reflected in the higher expenditure group (Rs. 34 and above).

In the urban areas also, except in the case of higher expenditure group, the same phenomenon was observed. The percentage of population in the higher expenditure group in



Table 3.1

PERCENTAGE DISTRIBUTION OF ESTIMATED NUMBER OF PERSONS  
BY MONTHLY PER CAPITA EXPENDITURE CLASSES IN MANIPUR  
AND ALL-INDIA, 1963-64 :

Monthly per capita Expenditure classes (in Rs.)	Rural		Urban	
	Manipur	All-India	Manipur	All-India
1	2	3	4	5
0 - 8	0.42	3.28	-	1.14
8 - 11	1.68	9.42	-	3.34
11 - 13	4.85	8.82	-	5.14
13 - 15	8.39	10.44	5.68	6.78
0 - 15	15.34	31.96	5.68	16.40
15 - 18	20.56	14.86	17.61	10.78
18 - 21	12.54	12.48	9.09	10.25
21 - 24	12.17	10.22	12.50	10.49
24 - 28	12.54	9.20	22.16	10.77
28 - 34	11.84	8.80	12.50	11.55
15 - 34	69.95	55.56	73.86	53.84
34 - 43	6.71	5.87	15.34	9.68
43 - 55	4.15	3.67	1.70	7.25
55 - 75	3.17	1.73	0.57	6.75
75 & above	0.98	1.21	2.85	6.08
45-75 & above	15.01	12.48	20.46	29.76
All Classes	100.00	100.00	100.00	100.00

Sources : (1) Government of Manipur, Rural Consumer Expenditure in Manipur, 1963-64 (Provisional), Department of Statistics, Imphal.

(11) Government of Manipur, Urban Consumer Expenditure in Manipur, 1963-64 (Provisional), Department of Statistics, Imphal.

Manipur-urban was 20.46 as compared to 29.26 for all-India. Thus, the distribution of population over the expenditure classes broadly reveals that the concentration of consumer expenditure among households in urban areas was relatively less in Manipur as compared to the all-India.

Again, comparing the pattern of distribution between the rural and urban areas of Manipur significant difference can be observed because of the presence of higher percentage of urban population in the middle and higher expenditure group. In the lower expenditure group the rural population was 15.34 per cent whereas, in the urban counterpart, this percentage was only 5.68 having no population below the monthly per capita expenditure of Rs. 13 and less. The distribution of per capita total expenditure was therefore, more equitable in urban areas as compared to that of rural areas. But in spite of these intra-regional differences, Manipur appears to have a more equitable distribution of the total expenditure than that of the all-India.

### 3.2 Average Consumer Expenditure :

The average consumer expenditure for all classes on various items of consumption per person for a period of 30 days was Rs. 25.13 for the rural areas as compared to Rs. 28.16 for the urban areas making Rs. 25.44 for Manipur as a whole. This indicates that the per capita expenditure per month seems to be more than the per capita income per month (Rs. 16.73)

for Manipur as a whole.<sup>2/</sup> The fact is that expenditure was found to exceed income by about 52.00 per cent in the corresponding year. This bias might partly be due to errors in the answers provided by the respondents and partly due to the multipliers or divisors used to the consumer expenditure estimates.<sup>3/</sup>

The per capita expenditure on different commodity groups along with the percentages of per capita total expenditure spent on each of these groups is presented in Table 3.2 for the rural and urban areas of Manipur. Broadly speaking, at the group level the per capita expenditure for most of the specific items varied very little between rural and urban areas. Significant difference can be seen only with respect to milk and milk-products, sugar and gur, tobacco and products and other non-food items. Cereals, occupying the major share in the budgets, shows no significant

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<sup>2/</sup> Such behaviour of expenditure and income relation for the rural and urban areas separately was not known as there was no data on income separately for rural and urban areas of Manipur.

<sup>3/</sup> This phenomenon was observed in the countries like U. S. A. and U. K. also. See;  
(i) Dorothy Cole and J. E. S. Utting, 'Estimating Expenditure, Saving and Income from Household Budgets', Journal of Royal Statistical Society, Series-A, Vol. 119, 1956, pp. 371-392.  
(ii) H. H. Lamale, 'Consumer Expenditure, Income and Savings, Methodology of the Survey of Consumer Expenditure in 1950', Western School of Finance and Commerce, University of Pennsylvania, 1959.

Table 3.2

DISTRIBUTION OF AVERAGE PER CAPITA TOTAL EXPENDITURE INTO  
DIFFERENT CONSUMPTION ITEMS IN MANIPUR-RURAL AND  
MANIPUR-URBAN, 1963-64 :

Sr. No.	Consumption items	Rural	Urban
1	2	3	4
1	Rice	9.79 (38.95)	9.24 (32.81)
2	Cereals other than rice	0.08 (0.51)	0.02 (0.21)
3	Total cereals	9.97 (39.47)	9.26 (33.02)
4	Pulses and products	0.64 (2.54)	0.78 (2.76)
5	Milk and milk products	0.45 (1.79)	0.97 (3.44)
6	Meat, fish and eggs	2.45 (9.74)	2.41 (8.55)
7	Vegetables, fruits and nuts	1.30 (5.17)	1.69 (6.00)
8	Sugar and gur	0.17 (0.67)	0.35 (1.24)
9	Other food	1.81 (7.00)	2.44 (8.52)
10	All-food	16.69 (66.41)	17.90 (63.56)
11	Tobacco and products	0.89 (3.54)	0.20 (0.71)
12	Fuel and light	2.14 (8.51)	2.46 (8.70)
13	Clothing	1.94 (7.71)	1.37 (4.86)
14	Other non-food	3.47 (13.80)	6.23 (22.15)
15	All non-food	8.44 (33.58)	10.26 (36.43)
16	Total	25.13 (100.00)	28.16 (100.00)

Note: Figures in parenthesis indicate percentages.  
Sources: Same as Table 3.1.

difference between rural and urban areas.

Relative to the total expenditure, more was spent on milk and milk-products, other food, sugar and gur and other food items in urban areas as compared to the rural areas. Most striking difference is in the consumption of non-necessities i.e. goods other than food, clothing, fuel and light etc. The per capita consumption of these categories consisting largely of manufactured consumer goods and services (i.e. the non-food items) is twice as high in the urban areas as in the rural areas.

### 3.3 Per Capita Expenditure by Expenditure Class :

An analysis has been made here in a comparative framework of the expenditure on major commodities within the expenditure classes of rural and urban areas of Manipur. Tables 3.3 and 3.4 present the per capita expenditure by different expenditure classes and by commodity classification in rural and urban areas of Manipur.

#### 3.3.1 Expenditure on Food Items :

It can be seen from the abovementioned tables that in both the cases of rural and urban areas, persons in the higher per capita expenditure class spent lesser share of the total expenditure on all-food items than those in the lower per capita expenditure class. For example, in rural areas about 80.00 per cent of the total expenditure in the

Table 3.3

CONSUMER EXPENDITURE IN RUPEES (0.00) PER PERSON FOR A PERIOD OF 30 DAYS BY MONTHLY PER CAPITA EXPENDITURE CLASS AND BY ITEM OF CONSUMPTION IN MANIPUR-RURAL, 1963-64 :

Sr. No.	Consumption Item	0-8	8-11	11-13	13-15	15-18	18-21	21-24	24-28	28-34	34-43	43-55	55-75	75 & above
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Rice	2.44 (35.83)	5.27 (54.95)	6.87 (57.15)	7.38 (52.45)	8.71 (53.14)	10.16 (51.97)	9.80 (43.57)	10.06 (38.83)	10.38 (33.70)	11.20 (28.99)	13.12 (27.57)	17.90 (27.30)	12.95 (11.75)
2	Cereal other than rice	-	-	-	0.05 (0.36)	0.02 (0.12)	-	0.11 (0.49)	0.06 (0.23)	0.12 (0.39)	0.04 (0.10)	0.01 (0.02)	1.18 (1.80)	0.05 (0.05)
3	Total cereal	2.44 (35.83)	5.27 (54.95)	6.87 (57.15)	7.43 (52.81)	8.73 (53.26)	10.16 (51.97)	9.91 (44.06)	10.12 (39.06)	10.50 (34.09)	11.24 (29.09)	13.13 (27.59)	19.08 (29.10)	13.10 (11.88)
4	Pulses and products	-	0.26 (2.71)	0.45 (3.74)	0.46 (3.27)	0.53 (3.23)	0.55 (2.81)	0.59 (2.62)	0.51 (1.97)	0.77 (2.50)	1.09 (2.82)	1.22 (2.56)	1.00 (1.53)	1.44 (1.31)
5	Milk and milk products	-	0.24 (2.50)	0.18 (1.50)	0.08 (0.57)	0.23 (1.40)	0.66 (3.38)	0.35 (1.56)	0.45 (1.74)	0.74 (2.40)	0.80 (2.07)	1.12 (2.35)	0.36 (0.55)	0.59 (0.54)
6	Meat, fish and eggs	0.96 (14.10)	0.17 (1.77)	0.77 (6.41)	1.29 (9.17)	1.33 (8.11)	1.60 (8.18)	2.20 (9.78)	2.70 (10.42)	3.80 (12.34)	4.96 (12.84)	4.72 (9.92)	5.47 (8.34)	6.86 (6.22)
7	Vegetables, fruits & nuts	0.31 (4.55)	0.69 (7.19)	0.56 (4.66)	0.80 (5.69)	0.77 (4.70)	1.02 (5.22)	1.23 (5.47)	1.56 (6.02)	1.62 (5.26)	2.35 (6.06)	2.42 (5.09)	2.40 (3.66)	3.74 (3.39)
8	Sugar and gur	-	0.10 (1.04)	0.09 (0.75)	0.02 (0.14)	0.08 (0.49)	0.13 (0.66)	0.17 (0.76)	0.17 (0.66)	0.34 (1.10)	0.35 (0.91)	0.28 (0.59)	0.34 (0.52)	0.45 (0.41)
9	Other food	0.43 (6.31)	0.71 (7.40)	0.95 (7.90)	1.06 (7.53)	1.25 (7.63)	1.45 (7.42)	1.61 (7.16)	2.21 (8.53)	2.35 (7.63)	2.79 (7.22)	3.25 (6.83)	3.21 (4.90)	3.15 (2.86)
10	All-food	4.14 (60.79)	7.44 (77.58)	9.87 (82.11)	11.16 (79.32)	12.92 (78.83)	15.57 (79.64)	16.06 (71.41)	17.72 (68.39)	20.12 (65.32)	23.58 (61.04)	26.14 (54.93)	31.86 (48.60)	29.33 (26.61)
11	Tobacco and products	0.22 (3.23)	0.26 (2.71)	0.41 (3.41)	0.50 (3.55)	0.52 (3.17)	0.57 (2.92)	0.84 (3.73)	0.98 (3.78)	1.17 (3.80)	1.37 (3.55)	1.65 (3.47)	2.76 (4.21)	2.98 (2.70)
12	Fuel & light	1.78 (26.14)	1.09 (11.37)	1.17 (9.73)	1.72 (12.22)	1.74 (10.62)	1.72 (8.80)	2.18 (9.69)	2.14 (8.26)	2.35 (7.63)	3.23 (8.36)	3.95 (8.30)	3.33 (5.08)	4.56 (4.14)
13	Clothing	0.39 (5.73)	-	0.04 (0.33)	0.16 (1.14)	0.18 (1.10)	0.54 (2.76)	1.00 (4.45)	2.32 (8.95)	2.77 (8.99)	3.76 (9.73)	6.63 (13.93)	9.37 (14.29)	25.63 (23.25)
14	Other non-food	0.28 (4.11)	0.80 (8.34)	0.53 (4.41)	0.53 (3.77)	1.03 (6.28)	1.15 (5.88)	2.41 (10.72)	2.75 (10.61)	4.39 (14.25)	6.69 (17.32)	9.22 (19.37)	18.24 (27.82)	47.73 (43.30)
15	All non-food	2.67 (39.21)	2.15 (22.42)	2.15 (17.89)	2.91 (20.68)	3.47 (21.17)	3.98 (20.36)	6.43 (28.59)	8.19 (31.61)	10.68 (34.68)	15.05 (38.96)	21.45 (45.07)	33.70 (51.40)	80.90 (73.39)
16	Total	6.81 (100.00)	9.59 (100.00)	12.02 (100.00)	14.07 (100.00)	16.39 (100.00)	19.55 (100.00)	22.49 (100.00)	25.91 (100.00)	30.80 (100.00)	38.63 (100.00)	47.59 (100.00)	65.56 (100.00)	110.23 (100.00)

Note : Figures in parenthesis indicate percentages.

Sources : Same as Table 3.1

Table 3.4

CONSUMER EXPENDITURE IN RUPEES(0.00) PER PERSON FOR A PERIOD OF 30 DAYS BY MONTHLY PER CAPITA EXPENDITURE CLASS AND BY ITEM OF CONSUMPTION IN MANIPUR-URBAN, 1963-64 :

Sr. No.	Consumption Item	0-8	8-11	11-13	13-15	15-18	18-21	21-24	24-28	28-34	34-43	43-55	55-75	75 & above
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Rice	-	-	-	6.75 (45.18)	8.08 (50.03)	7.88 (39.52)	9.77 (42.87)	9.10 (35.12)	11.66 (37.59)	10.04 (25.24)	10.00 (20.99)	-	11.00 (10.72)
2	Cereal other than rice	-	-	-	-	-	-	-	0.10 (0.39)	0.01 (0.03)	-	-	-	-
3	Total cereal	-	-	-	6.75 (45.18)	8.08 (50.03)	7.88 (39.52)	9.77 (42.87)	9.20 (35.51)	11.67 (37.62)	10.04 (25.24)	10.00 (20.99)	-	11.00 (10.72)
4	Pulses and products	-	-	-	0.30 (2.01)	0.23 (1.42)	0.94 (4.71)	0.44 (1.93)	0.72 (2.78)	0.83 (2.68)	0.72 (1.81)	6.00 (12.59)	-	3.50 (3.41)
5	Milk and milk products	-	-	-	-	0.33 (2.04)	0.45 (2.26)	0.41 (1.80)	1.53 (5.91)	1.33 (4.29)	1.24 (3.12)	2.50 (5.25)	-	3.00 (2.92)
6	Meat, fish and eggs	-	-	-	1.40 (9.37)	1.52 (9.41)	0.66 (3.31)	2.16 (9.48)	2.67 (10.30)	2.34 (7.54)	4.51 (11.34)	3.33 (6.99)	-	3.60 (3.51)
7	Vegetables, fruits & nuts	-	-	-	1.26 (8.43)	0.61 (3.78)	0.77 (3.86)	1.03 (4.52)	1.72 (6.64)	2.22 (7.16)	2.48 (6.23)	4.67 (2.10)	-	7.02 (6.84)
8	Sugar and gur	-	-	-	0.13 (0.87)	0.21 (1.30)	0.28 (1.40)	0.15 (0.66)	0.38 (1.47)	0.39 (1.26)	0.65 (1.63)	0.46 (0.97)	-	0.75 (0.73)
9	Other food	-	-	-	0.65 (4.35)	1.40 (8.67)	1.42 (7.12)	2.25 (9.87)	1.48 (5.71)	2.92 (9.41)	4.66 (11.71)	3.03 (6.36)	-	2.41 (2.35)
10	All-food	-	-	-	10.49 (70.21)	12.38 (76.66)	12.40 (62.19)	16.21 (71.13)	17.70 (68.31)	21.70 (69.95)	24.30 (61.09)	29.99 (62.94)	36.00 (57.14)	31.28 (30.50)
11	Tobacco and products	-	-	-	0.46 (3.08)	0.26 (1.61)	1.56 (7.82)	0.85 (3.73)	1.40 (5.40)	1.02 (3.29)	1.74 (4.37)	1.44 (3.02)	-	5.25 (5.12)
12	Fuel & light	-	-	-	2.98 (19.95)	1.93 (11.95)	1.78 (8.93)	2.21 (9.70)	1.98 (7.64)	3.15 (10.15)	3.07 (7.72)	3.10 (6.51)	1.00 (1.59)	4.96 (4.84)
13	Clothing	-	-	-	-	0.46 (2.85)	-	0.69 (3.03)	1.18 (4.55)	0.64 (2.06)	3.74 (9.40)	9.50 (19.94)	-	4.40 (4.29)
14	Other non-food	-	-	-	1.01 (6.76)	1.12 (6.93)	4.20 (21.06)	2.83 (12.42)	3.65 (14.09)	4.51 (14.54)	6.93 (17.42)	3.62 (7.60)	26.00 (41.27)	56.68 (55.26)
15	All non-food	-	-	-	4.45 (29.79)	3.77 (23.34)	7.54 (37.81)	6.58 (28.87)	8.21 (31.69)	9.32 (30.05)	15.48 (38.91)	17.66 (37.06)	27.00 (42.86)	71.29 (69.50)
16	Total	-	-	-	14.94 (100.00)	16.15 (100.00)	19.94 (100.00)	22.79 (100.00)	25.91 (100.00)	31.02 (100.00)	39.78 (100.00)	47.65 (100.00)	63.00 (100.00)	102.57 (100.00)

Note : Figures in parenthesis indicate percentages.

Sources : Same as Table 3.1

lower expenditure class and about 27.00 per cent in the higher expenditure class was spent on food items, whereas, it varied from about 77.00 per cent to 30.00 per cent in the urban counterpart. Similar pattern is found in the consumption of cereals, rice alone accounting for about 100.00 to 95.00 per cent of the total expenditure on all-cereals.

In the case of pulses and pulses-products, milk and milk-products and sugar and gur, it appears that while in the urban areas persons in the higher expenditure class spent a larger share of the total expenditure, in the rural areas it was just reverse. It indicates that in rural areas the changes in demand for such specific items of consumption was not much associated with the changes in the levels of income.

However, it can be noted that, so far as the consumption of meat, fish and eggs are concerned, the proportion of expenditure on these items remained more or less the same for all the expenditure classes both in rural and urban areas. In the case of other-food items, it is observed that, its share of expenditure increased along with the per capita expenditure and it decreased only at the level of top expenditure classes. The same phenomenon was observed both in the rural and urban areas.



### 3.3.2 Expenditure on Non-food Items :

As compared to the pattern of expenditure on food items, the pattern of expenditure on non-food items gives a different picture. Both in rural and urban areas, the percentage share of total expenditure on all non-food items increased. In the rural areas it increased from 17.89 per cent of the total expenditure in the expenditure class Rs. 11-13, to 73.39 per cent in the highest expenditure class (Rs. 75 and above), as compared to 23.34 per cent in the expenditure class (Rs. 15-18) to 69.50 per cent in the highest expenditure class (Rs. 75 and above) in the urban areas. The same trend can be noticed in the consumption of other-non-food and clothing. It is interesting to note that expenditure on fuel and light was nearly 26.00 per cent of the total per capita expenditure for the lowest expenditure class in rural areas and about 20.00 per cent in the urban counterpart, which gradually decreased as the per capita expenditure increased.

The above discussion reveals that the pattern of consumption in Manipur, which is predominantly rural, was confined mainly to rice, fuel and light and clothing which indeed shows a life-style in which traditional sector plays a crucial role. Yet, it can be pointed out that in the food basket rice is the major cereal. Along with that meat, fish and eggs were also found to be very common for all the expenditure classes. Further the high percentage share of

expenditure on fuel and light was explained by the fact that in the remote parts, particularly in the hill areas of Manipur, firewood was used for giving light thereby accounting for its larger share in the total per capita expenditure. Even in the valley region, as well as in the urban areas, since the supply of electricity was very low at 7 KWH as compared to 93 KWH for all-India in 1971, the consumption of firewood and kerosene was very high. The valuation of the total quantity of firewood consumed, although it was locally produced, led to higher percentage of consumer expenditure.

Should be  
discussed  
on page  
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#### 3.4 Behaviour of Consumer Expenditure :

Now an attempt may be made to examine the major parameters like marginal propensity to consume (MPC) and the expenditure elasticities of demand etc. These parameters, apart from identifying the nature of the demand for commodities consumed, provide a useful information for making demand projections.

Quantification of the consumer behaviour in a cross-section study is usually done by relating the per capita expenditure on a particular item to the total per capita expenditure. This relation is termed as an Engel Curve. In the Indian context such relations were established by many research workers. All these studies experimented with alternative functional forms the identification of the best

fitted form that can be used for predictive purposes.<sup>4/</sup>  
 These studies accept the double-log formulation as an appropriate one, at the broad commodity aggregation. This particular form has an advantage of arriving at the expenditure elasticity of demand directly from the estimated relations. In the present study, we confine our attention only to two types of Engel curves, Linear and Double-log.

Algebraic Formulation of Engel Curves :

Assuming that the consumption per person depends only on the level of the total expenditure, we can express the Engel Curve as

$$V_i = f(V_0)$$

where  $V_i$  is the per capita expenditure of the  $i^{\text{th}}$  item and  $V_0$  is the per capita total expenditure.

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<sup>4/</sup> (i) N.S. Iyengar, 'Some Estimates of Engel Elasticities based on National Sample Survey Data', Journal of Royal Statistical Society, Series-A, Vol. 130, 1967, pp. 94-101.

(ii) R. Radhakrishna, 'An Analysis of the Consumption Patterns of India with an Application of Wald's Method of Determination of Indifference Surfaces', unpublished Ph. D. Thesis, 1969, Poona University.

(iii) K. Kalirajan, 'Inter-State Comparisons of the Pattern of Consumer Expenditure', unpublished M. Litt. Dissertation, 1973, Madurai University.

(iv) N. Bhattacharya, 'On Some Variables Elasticity Engel Curve Forms', Sankhya, Series-B, Vol. 26, 1964.

The linear and the double log types of Engel Curves can be written as :

$$V_1^T = \alpha_{11} + \beta_{11} V_0^T + V_{11}^T$$

$$\log V_1^T = \alpha_{21} + \beta_{21} \log V_0^T + V_{21}^T$$

where

$V_1^T$  is the expenditure on the  $i^{\text{th}}$  item of the  $T^{\text{th}}$  person.

$V_0^T$  is the total expenditure of the  $T^{\text{th}}$  person.

It can be seen that  $\beta_{11}$  from the linear form gives the estimate of the Marginal propensity to consume (MPC) for the  $i^{\text{th}}$  commodity. It shows the marginal increase in the expenditure of the  $i^{\text{th}}$  commodity as a result of one rupee increase in the total expenditure. So on theoretical grounds this functional form must satisfy the property of additivity which yields that the sum of the MPC's over all commodities must be equal to unity,

$$\text{i.e., } \sum_{i=1}^n \beta_{1i} = 1.$$

In the second Engel Curve formulation (i.e., Double-log types) the parameter  $\beta_{21}$  can be interpreted as the expenditure elasticity of demand, i.e., it gives the percentage increase in the consumption of the  $i^{\text{th}}$  commodity where there is 1.00 per cent increase in the total expenditure.

These two functional forms are estimated for 14 commodity classification for the rural and urban areas of Manipur. We adopted the weighted least squares procedure while estimating these forms, weights being the number of persons in each expenditure class. These results are presented in Tables 3.5 and 3.6. Both these functional forms have given satisfactorily good fits for almost all commodity groups.

It can be seen from these tables that the MPC for food (Table 3.5) is higher in rural areas when compared with urban areas and reverse is the case for non-food. Among the food group the MPC for pulses and milk, fruits and vegetables and sugar are comparatively higher in urban areas of Manipur.

*Milk MPC  
in rural  
areas &  
meat in  
urban  
areas  
barely  
significant,  
is itself  
problem*

Among the food group, cereal and cereal-substitutes show the highest MPC (0.1334) in rural areas and fruits and vegetables in the urban areas. Among the non-food group, other non-food (ONF) has the highest MPC in rural as well as the urban areas. However, the MPC for ONF is comparatively high in the urban Manipur. This suggests that the urban consumer is inclined to spend marginally more on ONF items for every increase of one rupee in his total expenditure. Other non-food items include expenditure on education, medical, service, conveyance etc. Clothing is the next item in terms of value of MPC in both

Table 3.5

RESULTS OF THE ESTIMATES OF ENGEL CURVES FOR CONSUMER  
EXPENDITURE IN MANIPUR, 1963-64 :

Sr. No.	Commodity	(Linear Form)					
		Rural			Urban		
1	2	$\alpha$	$\beta$	$R^2$	$\alpha$	$\beta$	$R^2$
		3	4	5	6	7	8
1	Rice	6.6718	0.1240* (0.0250)	0.69	7.9284	0.0488 (0.0268)	0.32
2	Cereals and cereal substitutes	6.5617	0.1334* (0.0269)	0.69	7.9284	0.0488 (0.0268)	0.32
3	Pulses and products	0.2722	0.0139* (0.0027)	0.71	0.3148	0.0391** (0.0158)	0.47
4	Milk and milk products	0.2048	0.0099** (0.0047)	0.29	0.0167	0.0344* (0.0102)	0.62
5	Meat, fish and eggs	0.1878	0.0901* (0.0131)	0.81	1.1569	0.0454** (0.0215)	0.39
6	Fruits and vegetables	0.3149	0.0392* (0.0049)	0.85	-0.4160	0.0759* (0.0074)	0.93
7	Sugar and gur	0.0203	0.0061* (0.0014)	0.63	0.1152	0.0083* (0.0028)	0.53
8	Other food	0.7591	0.0403* (0.0070)	0.74	1.0097	0.0464 (0.0256)	0.23
9	All food	8.3208	0.3329* (0.0456)	0.83	9.4961	0.2983* (0.0641)	0.73
10	Tobacco products	0.1522	0.0336* (0.0078)	0.63	-0.1841	0.0491* (0.0095)	0.77
11	Fuel & light	1.0692	0.0420* (0.0063)	0.80	1.4840	0.0343* (0.0102)	0.59
12	Clothing	-3.4664	0.2158* (0.0154)	0.95	-0.6732	0.0725** (0.0285)	0.45
13	Other non- food	-6.0750	0.3757* (0.0363)	0.91	-10.1228	0.5458* (0.0815)	0.84
14	All non-food	-8.3208	0.6671* (0.0440)	0.96	-9.4961	0.7017* (0.0640)	0.94

Note : Figures in parenthesis indicate standard errors of the estimates,

\* indicates significant at 1 per cent level,

\*\* indicate significant at 5 per cent level.

Source : Computed from the data given in Tables 3.3 and 3.4.  
For methodology See the text.

the areas. But MPC for clothing is strikingly higher in the rural areas.

However, the expenditure elasticities of demand, presented in Table 3.6 indicate a somewhat different picture. These expenditure elasticities show the percentage increase in the consumption of a specific item due to one percent increase in the total expenditure.

Food as a whole, has a higher expenditure elasticity in the urban sector than in the rural sector. On the contrary, urban consumer has a higher MPC than a rural consumer. But MPC and expenditure elasticity for pulses, milk and vegetables in the urban areas show the same direction. Similar trends can be noticed for the non-food items as a whole.

Among the food group, expenditure elasticities are less than unity for cereals, pulses and other food items in the rural areas and for cereals, meat, fish and egg, sugar and gur and other food items in the urban areas. These items are considered as necessary items of consumption in the consumer budget. Expenditure elasticity for fruits and vegetables in the rural areas and that of meat, fish and egg in urban areas are almost near to unity revealing that these are semi-luxury items of consumption. The rest of the items in the food budget are considered to be luxurious. Among non-food items, only fuel and light has expenditure elasticity lower than unity. The above are the broad features of consu-

Table 3.6

RESULTS OF THE ESTIMATES OF ENGEL CURVES FOR CONSUMER  
EXPENDITURE IN MANIPUR, 1963-64 :

(Double-log Form)

Sr. No.	Commodity	Rural			Urban		
		$\alpha$	$\beta$	$R^2$	$\alpha$	$\beta$	$R^2$
1	2	3	4	5	6	7	8
1	Rice	0.8965	0.4374* (0.0668)	0.80	1.3502	0.2684* (0.0903)	0.56
2	Cereals and cereal substitutes	0.8539	0.4546* (0.0678)	0.80	1.3792	0.2616* (0.0901)	0.55
3	Pulses and products	-3.1892	0.8441** (0.3570)	0.34	-4.8048	1.3237* (0.3676)	0.65
4	Milk and milk products	-4.9500	1.2613* (0.4496)	0.42	-10.4923	3.0252 (1.7526)	0.30
5	Meat, fish and eggs	-3.3575	1.3095* (0.1675)	0.85	-2.2361	0.9276** (0.3432)	0.51
6	Fruits and vegetables	-2.8210	0.9587* (0.0838)	0.92	-4.0926	1.3717* (0.2248)	0.84
7	Sugar and gur	-6.9043	1.5662* (0.3988)	0.58	-3.7227	0.7730 (0.6906)	0.15
8	Other food	-2.2206	0.8516* (0.0761)	0.92	-1.7526	0.7100 (0.7728)	0.10
9	All food	0.6576	0.6777* (0.0480)	0.95	0.5863	0.6952* (0.0821)	0.90
10	Tobacco products	-3.6004	1.1049* (0.2039)	0.73	-3.8347	1.1521 (0.7799)	0.21
11	Fuel & light	-1.1638	0.6048* (0.0690)	0.87	-0.5153	0.4244** (0.1711)	0.43
12	Clothing	-11.8570	3.6858* (0.6322)	0.76	-14.8493	4.1678 (2.6371)	0.24
13	Other non- food	-6.0897	2.1564* (0.1613)	0.94	-4.8287	1.8610* (0.2488)	0.87
14	All non-food	-3.3116	1.6470 (0.0857)	0.97	-2.5724	1.4384* (0.1071)	0.96

Note : Figures in parenthesis indicate standard errors of the estimates,

\* indicates significant at 1 per cent level,

\*\* indicate significant at 5 per cent level.

Source : Same as Table 3.5.



mption behaviour in the rural and the urban areas of Manipur.

### 3.5 Magnitude and Levels of Living :

After examining the pattern and levels of consumption in Manipur we may pass on to the identification of poverty level. This has been obtained from the same data source as was used for the above discussion.

The identification of a person by poverty status has become a complicated problem. Complication arises from the criteria one adopts. For instance, the concept of poverty in the United States would be different from that of India. Because an average person in United States can afford a much higher level of living than that of an average Indian. However, when a substantial segment of a society is deprived of the minimum level of living and continues at a bare subsistence level the society can be said to be plagued with mass poverty.<sup>5/</sup> Setting first of all a line that determines minimum level of living is, therefore, necessary. Broadly speaking, the concepts that can be adopted in this aspect varies depending on whether poverty measurement is discussed in absolute sense or in relative sense. But it is observed that for a country like

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<sup>5/</sup> H. Datt, 'Poverty and Planning Process in India', (Cyclostyled) Indian School of Social Science, Third All-India Conference on Economic Crisis and Fifth Plan, Bombay, 1975.

India, a discussion on relative poverty<sup>6/</sup> is rather incongruous because poverty looms large in the vast part of the country<sup>7/</sup> and therefore, most of the studies on poverty are with reference to the absolute standard.<sup>8/</sup>

In the determination of absolute poverty itself there are different norms. According to the Planning Commission, Government of India, the poverty level has been fixed at Rs.20/- (at 1960-61 prices) per person per month which is to be adjusted in the regional context due to variation of prices. This fixed norm has been used by Minhas<sup>9/</sup> and Vaidyanathan<sup>10/</sup> in their studies of rural poverty. But this figure has been considered very crude and hence subject to

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- 6/ In measuring the relative poverty, income distribution of the population in different fractile groups is estimated and a comparison of the levels of living of the top 5 or 10 per cent with the bottom 5 or 10 per cent of the population reflects the relative standards of poverty.
- 7/ V.M.Dandekar and Nilakantha Rath, op.cit., p. 4.
- 8/ In the absolute standard, minimum physical quantities of cereals, pulses, milk etc. are determined for a subsistence level and then the price quotations converted into monetary terms the physical quantities aggregating all the quantities include, a figure expressing per capita consumer expenditure is determined. The population whose level of income (expenditure) is below this figure, is considered to be below the poverty line.
- 9/ B.S.Minhas 'Rural Poverty, Land Distribution and Development Strategy', Indian Economic Review, Vol.V(New Series), No.1, April 1970.
- 10/ Vaidyanathan A. 'Some Aspects of Inequalities in Living Standards in Rural India', Sankhya, Series-C Vol.36, 1974.

a number of criticisms.<sup>11/</sup> It is pointed out that even if adjustments for price variations are made, the validity of identifying poverty through this norm in the regional or community context is open to question. In fact, there is a large extent of variations in the consumption baskets that are actually obtained because of variations in the availability of food items and habits etc.

Besides this norm for absolute poverty, two types of other methods that have been adopted based on the nutritional norms by determining the minimum requirement of food, may be mentioned. The first method of this approach can be associated with the work of Dandekar and Rath in which poverty has been defined in relation to the actual behaviour of the consumers. This has been defined in terms of the minimum calorie requirements. On the other hand, the second method is related to the optimum consumption baskets where the food cost necessary for meeting the calories, proteins etc. are determined. Then the minimum total expenditure will be arrived by adding certain assumed expenditure for non-food to the minimum food expenditure. Generally, non-food expenditure is taken as a ratio of food expenditure based on actual observed behaviour. This method was widely used by Sukhatma, Panikar, Patwardhan, Burdhan, Rudra etc.<sup>12/</sup>

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<sup>11/</sup> A. Rudra, 'Minimum Levels of Living-Statistical Examination', *Sankhya*, Series-C, Vol. 36, 1974.

<sup>12/</sup> R. Radhakrishna, Bhanumati K. Parikh and Naregh C. Shah, 'An Exploratory Study on Slum: Employment, Poverty and Liquor Consumption (A Case Study of Ahmedabad Slums)', *Monograph*, Sardar Patel Institute of Economic & Social Research, Ahmedabad, 1976.

The basic difference between the two is that the former addresses itself to identify the poverty line, given a minimum calorie need on the basis of existing consumption pattern, while the latter addresses itself to the determination of minimum cost involved in the meeting of calorie, protein norms at times disregarding the behavioural aspects of the consumer (but the expenditure on non-food is based on actual behaviour).

Nevertheless, both these methods have landed themselves on a controversial issue: what should be the minimum norm? Dandekar and Rath, for instance, took the norm of 2250 calories per person per day which was in fact laid down by the FAO. Meanwhile, Colin Clark<sup>13/</sup> after a close examination of this question has arrived at the conclusion that for tropical countries (one of which is India), calorie needs vary from 1625 to 2000 depending on the nature of occupation, hours of work, climate composition, population etc.

With this brief background of the methods and criteria that have been adopted to identify poverty line in different studies, we may indicate the specific criteria

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<sup>13/</sup> Colin Clark, Starvation or Plenty, Secker and Warburg, London, 1970, p. 17.

used for the present study.<sup>14/</sup>

To be on the safe side, we have estimated the extent of poverty in Manipur with reference to the following three norms : (i) the average of the Colin Clark norms, i.e. 1800 calories (i.e. lower limit 1625 and upper limit 2000), (ii) the upper limit norm of 2000 calories, and (iii) 2250 calories per person per day which has been used by Dandekar and Nath. The idea behind the use of these three different criteria is to focus on the range of poverty in Manipur under review.

To get an idea about the population below the poverty line according to the norms as indicated above, we first examine the distribution of per capita per day calorie intake from different items of food consumption<sup>15/</sup> in the corresponding expenditure levels. The calorie distribution is obtained by converting the per capita per month consumption in quantity terms (Tables 3.7 and 3.8) into calorie equivalent

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<sup>14/</sup> Even in the measurement of absolute poverty, the methods that have been used are subject to a number of limitations. One of the major limitations arises because of allocative problems of the consumption items. For consumption basket comprises, food, clothing, fuel and light, housing, education, medicine etc. But while determining the minimum requirements, only food has received overwhelming attention. Possibly because fixation of quantitative requirements for the rest of the items is rather difficult.

<sup>15/</sup> The necessary data to obtain such calorie converted estimates for the entire food budget are not available. However we examined the calorie distribution based on the following items as the relevant data are available, i.e. rice, other cereals, pulses, milk, meat, fish and eggs etc.

Table 3.2

PER CAPITA QUANTITY INTAKE OF FOOD ITEMS FOR A PERIOD  
OF 30 DAYS BY EXPENDITURE CLASS IN MANIPUR-RURAL,  
1963-64 :

Expe- nditure classes	(Quantity in kgs.)							
	Rice	Wheat	Maize	Cereal substi- tutes	Pulses and products	Milk	Meat	Fish
1	2	3	4	5	6	7	8	9
0- 8	4.13	-	-	-	-	-	0.41	0.10
8-11	9.82	-	-	-	0.31	1.03	0.03	0.52
11-13	13.18	-	-	-	0.60	0.67	0.12	0.35
13-15	13.43	-	0.41	0.02	0.59	0.18	0.03	0.75
15-18	17.47	-	0.05	0.05	0.59	0.32	0.06	0.59
18-21	18.53	-	-	0.04	0.59	1.26	0.05	0.82
21-24	19.31	0.29	0.21	0.03	0.62	0.70	0.18	0.90
24-28	19.71	-	0.20	0.07	0.60	0.89	0.10	1.37
28-34	19.30	0.02	0.36	0.19	0.92	1.02	0.20	1.79
34-43	19.70	-	0.26	0.21	1.36	1.47	0.20	1.87
43-55	22.97	-	-	0.12	1.28	2.18	0.50	5.16
55-75	31.65	-	5.47	0.01	1.16	0.67	0.38	1.96
75 & above	21.17	-	1.77	0.18	1.95	1.11	0.80	1.93

Source : Same as Table 3.1.

Table 3.8

PER CAPITA QUANTITY INTAKE OF FOOD ITEMS FOR A PERIOD  
OF 30 DAYS BY EXPENDITURE CLASS IN MANIPUR-URBAN,  
1963-64 :

(Quantity in kgs.)							
Expe- nditure classes	Rice	Wheat	Cereal substi- tutes	Pulses and products	Milk	Meat	Fish
1	2	3	4	5	6	7	8
0- 8	-	-	-	-	-	-	-
8-11	-	-	-	-	-	-	-
11-13	-	-	-	-	-	-	-
13-15	23.79	-	-	0.28	-	-	0.96
15-18	21.47	-	0.09	0.24	0.96	-	0.51
18-21	19.00	-	-	1.11	0.86	-	0.26
21-24	22.91	-	0.05	0.42	0.77	-	0.82
24-28	19.15	0.12	-	0.82	1.49	0.20	0.63
28-34	20.57	0.01	-	0.80	1.97	-	0.60
34-43	19.63	-	0.04	0.73	2.07	0.10	1.34
43-55	18.66	-	0.31	6.84	4.67	-	1.40
55-75	-	-	-	-	-	-	-
75 & above	46.66	-	-	9.39	5.60	-	0.93

Source : Same as Table 3.1.

terms (Tables 3.9 and 3.10) for rural and urban areas separately.

From these tables it can be observed that the percentage of population below the poverty line in rural Manipur both at 2000 and 1800 calories levels was 15.34. When we draw the line at 2250 calories we find that 35.90 per cent of the rural population was below the poverty line as against 40.00 per cent for all-India.<sup>16/</sup> But in the case of urban Manipur, irrespective of the calorie norms adopted, poverty did not exist while the corresponding figure for all-India was 55.00 per cent.<sup>17/</sup> Thus it can be concluded that the incidence of poverty was prevalent only in the rural areas of Manipur but this incidence was much lower as compared with the all-India estimates in 1963-64.

Occup. structure, <sup>age, sex, and</sup> ~~and~~ could have been used.

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<sup>16/</sup> V.M. Dandekar and Nilakantha Rath, op.cit.

<sup>17/</sup> Ibid.



Table 3.9

PER CAPITA PER DAY CALORIES INTAKE BY EXPENDITURE CLASS IN MANIPUR-RURAL, 1963-64:

Expe- nditure classes	Percentage of total person by expenditure class	Rice	Wheat	Maize	Cereals substi- tutes	Pulses and products	Milk	Meat	Fish	Total intake
1	2	3	4	5	6	7	8	9	10	11
0- 8	0.42	475	-	-	-	-	-	13	5	493
8-11	1.68	1129	-	-	-	36	26	1	24	1216
11-13	4.85	1516	-	-	-	70	17	4	16	1623
13-15	8.39	1544	-	48	2	69	5	1	35	1704
15-18	20.56	2009	-	6	5	69	8	2	28	2127
18-21	12.54	2131	-	-	4	69	32	2	38	2276
21-24	12.17	2221	33	25	3	73	18	6	42	2421
24-28	12.54	2267	-	24	7	70	23	3	64	2458
28-34	11.84	2220	2	42	19	108	26	6	84	2507
34-43	6.71	2266	-	31	21	159	37	6	87	2607
43-55	4.15	2642	3	-	12	150	55	15	241	3118
55-75	3.17	3640	-	645	1	136	17	12	92	4543
75 & above		2435	-	209	18	228	28	24	90	3032

Note : The calorie intake has been derived from Table 3.7 (See the text for details).

Table 3.10

PER CAPITA PER DAY CALORIES INTAKE BY EXPENDITURE CLASS IN MANIPUR-URBAN, 1963-64:

Expe- nditure classes	Percentage of total person by monthly per capita expenditure	Percentage of total person by monthly per capita expenditure							Total calories intake
		Rice	Wheat	Cereal substi- tutes	Pulses and products	Milk	Meat	Fish	
1	2	3	4	5	6	7	8	9	10
0- 8	-	-	-	-	-	-	-	-	-
8-11	-	-	-	-	-	-	-	-	-
11-13	-	-	-	-	-	-	-	-	-
13-15	5.68	2736	-	-	33	-	-	45	2814
15-18	17.61	2469	-	9	28	24	-	24	2554
18-21	9.09	2185	-	-	130	22	-	12	2349
21-24	12.50	2635	-	5	49	19	-	38	2746
24-28	221.6	2202	14	-	96	38	6	29	2385
28-34	12.50	2366	1	-	94	50	-	28	2539
34-43	15.34	2257	-	4	85	52	3	63	2464
43-55	1.70	2146	-	30	800	118	-	65	3159
55-75	0.57	-	-	-	-	-	-	-	-
75 & above	2.85	5366	-	-	1099	142	-	43	6650

Note : The calorie intake has been derived from Table 3.8 (See the text for details).

## CHAPTER IV

### LABOUR FORCE - DIMENSIONS AND COMPOSITION

In view of the importance of human input in economic pursuit, an analysis of the process of economic growth involves a detailed study of manpower.<sup>1/</sup> This, in turn, involves as a first step measurement of the size as well as the growth of employment over a specified period of time. Study of manpower, disaggregated into mutually exclusive categories explicitly incorporating the inflow into and the outflow from each category between the points of time, is also useful for forecasting optimal utilisation of human resources. It is, therefore, proposed to examine in this chapter (i) the population composition with particular reference to the population in the productive age-group, (ii) the conceptual and operational problems involved in examining the labour force of inter Census reports on a comparable basis, (iii) estimated components of labour force viz., the working force and the unemployed and (iv) the question of underemployment in the context of Manipur.

The size of population in its entirety is important in many ways while planning for a country or a region. But planning for economic activities has direct relevance only to the labour force of the country or region in question. The size of labour

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<sup>1/</sup> Noting the learned concensus, the term 'manpower' has been used synonymously with labour force in the present study.

force, though it depends on the size of aggregate population, is associated more with the population in the productive age-group. For, labour force is generally defined as all those people in productive age-group holding jobs (working force) and seeking jobs (unemployed). Thus to the extent population in productive age-group has a reference to age composition of the population, the study of population with reference to age structure becomes important.

#### 4.1 Population by age structure :

In the Indian context, it has almost become a convention to treat the people in the age-group of 15 to 59 years as the people in the productive (working) age-group. Some of the studies have empirically shown that the percentage of the population in the productive age-group varies from 55 for the underdeveloped countries to 65 for developed ones.<sup>2/</sup> As a corollary it can be inferred that the percentage of economically productive population should enhance the pace of the economic development.

The relevance of this hypothesis in the Indian context, taking Manipur's as a case study is examined. For this purpose statistical data for the total population by sex as well as by

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<sup>2/</sup> Generally productive age-group in developed countries covers a longer range of age as compared to that in underdeveloped countries. One is not clear whether this point was kept in while given this figure. See Charles P. Kindleberger, Economic Development, Mc. Graw Hill Book Company, Inc. New York, San Francisco, Toronto, London, Sydney, Second Edn., 1965 pp. 284-85.

broad age-groups for three censuses are presented in Table 4.1.

The table shows that the percentage of population in the working age-group to the total population which was 53.49 in 1951 reduced marginally to 51.08 and 51.41 in 1961 and 1971. It is also remarkable that even if we disaggregate this by sex separately, no significant change is visible during the period. For males, the percentage was 52.89 in 1951 which reduced to 50.62 in 1961 and to 51.68 in 1971; for females (if women power resources is not a misnomer), their percentage share was 54.08 in 1951 which gradually reduced to 51.53 and 51.13 in 1961 and 1971 respectively.

The other point to note is that while the share of population in the age-group, 0-14 increased over the years, the age-group lying between 60 and above claimed smaller share. Sex-wise analysis also revealed more or less the same pattern. Thus the growth of population affected its composition in such way that the components of the economically productive population, i.e., the population in productive age-group, tended to decline. At the same time, its unproductive counterpart tended to increase over the years. In other words, the growth of the economy of Manipur during the period under reviewed had not exerted favourable impact on the economically productive population.

The study of manpower has to be further extended by a detailed analysis of labour force. For one thing, the data

**Table 4.1**

**DISTRIBUTION OF POPULATION BY SEX AND BROAD AGE-GROUP IN MANIPUR, 1951-1971:**

Age-Groups	1951*			1961			1971		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10
0-14	117550 (41.42)	114370 (39.18)	231920 (40.28)	169684 (43.84)	166681 (42.41)	336365 (43.12)	228889 (42.26)	227051 (42.75)	455940 (42.50)
15-59	150100 (52.89)	157870 (54.08)	307970 (53.49)	195940 (50.62)	202499 (51.53)	398439 (51.08)	279935 (51.68)	271546 (51.13)	551481 (51.41)
60-above	16170 (5.70)	19690 (6.74)	35860 (6.23)	21434 (5.54)	23799 (6.06)	45233 (5.80)	32851 (6.06)	32481 (6.12)	65332 (6.09)
All ages	283820 (100.00)	291930 (100.00)	575750 (100.00)	387058 (100.00)	392979 (100.00)	780037 (100.00)	541675 (100.00)	531078 (100.00)	1072753 (100.00)

Note : Figures in parenthesis show percentages.

- Sources : (i) Census of India, 1951, Vol. I No. XII, Assam, Manipur and Tripura Part II-B.  
(ii) Census of India, 1961, Vol. I, Part II-C(1) General Population & Economic Table, pp. 390-456.  
(iii) Census of India 1971, Paper No. 3 of 1972, Economic Characteristics of Population.

used for the study of labour force also included, in the Indian context, people below and above the productive age as defined above.<sup>3/</sup> For another, the data on labour force as presented by the census reports which have been used as the main source, are not comparable over time. Therefore, it will be necessary to note the conceptual and operational difficulties and to estimate the required data on a comparable basis after overcoming the limitations the inter-census data are subject to.

#### 4.2 Conceptual Problems in Working Force :

It would be logical to start with the problems involved in the classification of population into 'workers' and 'non-workers.' Generally speaking, a person is included in the working force if major part of his time is spent in earning livelihood and his earnings (both cash as well as kind) contribute a major share of his livelihood expenses. Family workers, mainly engaged in household enterprises but not directly getting any cash payments are also included in the working force, while family workers attending household works are excluded. But the line of difference between workers and non-workers is often blurred. It is needless to point out the arbitrariness involved in the decision to classify a person as worker or non-worker using any operational definition. It is also true that there is no single operational definition which is free from the scope of interpreting in various ways.

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<sup>3/</sup> For a detail discussion see Ansley J. Coale and Edgar M. Hoover, Population Growth and Economic Development in Low-Income Countries, Princeton University Press, Princeton, New Jersey, 1965, p. 231.

The inter-census definitions and criteria of worker, particularly those used in the 1951, 1961 and 1971 Censuses in India, are not uniform and not comparable. As a result, some keen controversies have been raised on definition of worker adopted in the 1951 and 1961 Censuses, and thereafter estimates have also been given at individual level as well as at committee and commission level so that working force data can be utilised on the comparable basis over time.<sup>4/</sup>

Accordingly, so far as the working force data of 1951 and 1961 are concerned, we have used in our study the comparable data prepared at the official level<sup>5/</sup> after taking note of the differences<sup>6/</sup> between the concepts used in the 1951 and the 1961 Censuses. Now since the data on working force

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4/ See Sinha J.N., The Indian Working Force, (its growth and changing composition), Census of India 1961, Volume I, Monograph No. 11.

5/ Registrar General, Census of India 1961, Workers in India, 1901/11 to 1961, Paper No. 2 of 1967.

6/ There are two main sources of conceptual noncomparability between the working force data of the 1961 census and that of 1951 Census. Firstly, it arises from the fact that while the 1961 Census adopted the 'work' criterion, while the 1951 Census adopted the 'income' criterion as the eligibility test for reporting an individual as worker. The second source of noncomparability arises from the differences in the reference period. The 1961 Census adopted a reference period of 15 days in regard to regular employment in any trade, profession, service, business or commerce; and working season for seasonal activities such as agricultural workers, livestock, forestry and logging, fishing household industry. The earlier census has not adopted any reference period. See Ambanavar J.P., 'Comparability and Adjustment of Indian Working Force Data', Artha Vinana, Journal of The Gokhale Institute of Politics & Economics, Poona-4; Vol. XI, No.4, Dec. 1969 pp. 521-525.



that are provided in the census reports of 1961 and 1971 are also not strictly comparable as mentioned above, it will be necessary to generate comparable series of data. It may, therefore, be worth-while to note first the sources of differences between the two series of data.

The difference between the criteria used in the two censuses can be examined separately for two ~~categories~~ of activities : seasonal and regular. Thus, according to 1961 census, for a worker in the case of regular employment (i.e., employment in any trade, profession, service, business or commerce), the basis of work<sup>2/</sup> was satisfied if the person was employed during any of the fifteen days preceding the day on which the household was visited and the person who was working but was absent from his work during the fifteen days preceding the days on which the enumeration was taken place or even exceeding the period of fifteen days due to illness or other causes.<sup>8/</sup> In the case of seasonal work like cultivation, livestock, forestry, fishing, household industry etc., if a person had some regular work of more than one hour a day throughout the greater part of the working season, he was regarded as worker.<sup>9/</sup>

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2/ Work includes not only physical work but also mental work such as supervision and direction of work. See Census of India 1961, Vol. 1 - India, Part II-B(111), General Economic Tables, pp. 8-10.

8/ Ibid.

9/ Ibid.

Whereas, according to the 1971 Census the reference period in the definition of worker was that of one week prior to the date of enumeration in the case of regular work with the usual allowance on account of illness, travel, holiday, strike etc. Though the reference period was shortened by one week, it being one week in 1971 and fifteen days in 1961, it is expected that the persons who are engaged in these activities which have been defined to be regular, are attached fully, not casually to these activities. If this is so, the change in the length of the reference period will not materially affect the classification of the persons in terms of worker and non-worker.<sup>10/</sup>

Then it is argued that it is mostly in the category of seasonal workers that there may be some difference between the criteria used in these two censuses. In other words, it is the data on workers in seasonal activities that may not be comparable between 1961 and 1971. The fact is that according to the 1961 Census, a person was categorized basically as an economically active worker even if the person's contribution to work was extremely marginal. For example, if a person had put on an hour's work a day during the major part of the working season in respect of seasonal activities like agriculture or household industry he was treated basically as an economically

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<sup>10/</sup> A. K. Dasgupta, Agriculture and Economic Development in India, Associated Publishing House, New Delhi, 1973, p. 69.

active worker. Therefore experts also pointed out that the 1961 Census definition of worker was on the liberal side exaggerating participation rates as compared to that of the 1971 Census. Such liberal criteria included women workers who were basically engaged in attending to household duties but taking her husband's lunch to the field, or tending the cattle for about an hour a day. Similarly, a full time student, if he participated for a very short period in household economic activity, was treated as an economically active worker.<sup>11/</sup> In the 1971 Census on the other hand, this condition was removed, and instead, every individual was ascertained to declare himself what according to him was the main activity in which he participated. So depending on the answer he was classified as economically active worker such as cultivator, or as agricultural labour, or a worker in household-industry or in any other work. The classification in this case is based on the main activity of the person and not, as in the case of 1961 Census, on a minimum participation in certain activities.

#### 4.3 Adjustment of Working Force Data :

Consequent upon such changes in the criteria adopted by the 1961 and 1971 Censuses with respect to seasonal workers, major incomparability is likely to occur in the case of women

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<sup>11/</sup> Ibid.

and students<sup>12/</sup> - particularly in the rural cultivating households - as they always had the opportunities of participation in the household economic activities. Thus, there is likely to be an extent of undercounting in 1971 as compared to the 1961 Census data. Therefore, the data on working force provided by 1961 and 1971 Censuses have to be suitably adjusted before attempting to draw any inferences from them. In order to generate the comparable data on working force, the data on seasonal workers have been estimated and then adjustment has been made on the basis of the methodology indicated in the appendix to this chapter.

The adjustment of the data on the working force necessitated adjustment of other related data also. To elaborate, as per census classification<sup>13/</sup> the total population consists of 'workers' and 'non-workers'. The non-workers consist of those who are (i) voluntary unemployed, (ii) openly unemployed, (iii) dependent, infants and disabled, (iv) beggars, vagrants, etc. and (v) inmates of institutions. Again voluntarily unemployed category includes retired and allied class; students; and persons engaged in household duties. Thus, with

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<sup>12/</sup> It is also reported that so far as male workers are concerned the definitional changes would not have significantly mattered. See, J. Krishnamurthy, 'Working Force in 1971 Census - Some Exercises in Provisional Results', Economic and Political Weekly, Vol. VII, January 15, 1972.

<sup>13/</sup> Such classification was started only since 1961 Census, See the Census of India 1961, Vol. I - India, Part II-B (ii), General Economic Tables, pp. 10-11.

the adjustment of the data on workers, the data on non-workers are also affected. As a result each of the estimates of the disaggregated categories has to be adjusted separately. But the adjustment process has become further complicated due to the lack of data on each of the above categories in the 1971 Census reports at the time of conducting this study.

On the basis of the 1971 Census we have the data on total population and working force. While the data on non-workers can be had by taking into consideration the difference between total population and the working force, the detailed information on the components of non-workers are not yet available in the published reports of the 1971 Census. Had the objective of this study been just to generate comparable data on workers and non-workers between 1961 and 1971, the problem would have been simply that of adjusting the working force data after estimating the seasonal workers. But in view of its preoccupation with labour force, it has become necessary to estimate the size of its unemployed component. Then the broad features of the labour force, as estimated on a comparable basis may be discussed in the subsequent two sections.

*Census reclassified on the basis of sample not included*

#### 4.4 Working Force :

An examination of the total population by economic status in Manipur exhibits that the share of economically active popu-

lation (workers) and that of economically inactive population (non-workers) changed considerably between 1951 and 1971 (Table 4.2). There was a general fall in the proportion of workers in the total population in 1971, as compared to 1951; and the rate of fall was much higher in the case of female workers. The increased share of the total non-workers (from 48.46 per cent in 1951 to 53.05 per cent in 1971) was accompanied by a declining proportion of the female workers (from 25.70 per cent in 1951 to 21.47 per cent in 1971). In other words, the increasing proportion of non-workers was more or less due to a fall in the share of female workers in the total population.

Again considered by male and female separately, as also in the context of rural and urban areas, it can be seen that in Manipur as a whole (Table 4.3), the workers' participation rate for males declined from 52.58 per cent of the total male population in 1951 to 47.31 per cent in 1961. But it increased in 1971 again to 52.07 per cent. In the case of females, there was a continuous fall - from 50.86 per cent of the total female population in 1951 to 44.48 per cent in 1961 and to 43.39 per cent in 1971. Between rural and urban Manipur the pictures in this respect were quite different. That of Manipur-rural conformed to the general trends as shown above. But in Manipur-urban, the participation rates for both males and females were declining. Also, the workers' participation rate was much higher in rural areas than in the urban counterpart. More important,

Table 4.2

DISTRIBUTION OF POPULATION BY ECONOMIC STATUS  
IN MANIPUR, 1951 to 1971 :

Year	Workers			Non-Workers		
	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7
1951	149235 (25.84)	148482 (25.70)	297717 (51.54)	134585 (23.41)	143448 (25.05)	278033 (48.46)
1961	183127 (23.48)	174793 (22.41)	357920 (45.89)	203931 (26.14)	218186 (27.97)	422117 (54.11)
1971*	273364 (25.48)	230319 (21.47)	503683 (46.95)	268311 (25.01)	300759 (28.04)	569070 (53.05)

Note : Figures in parenthesis indicate percentages.

\* Adjusted figures as shown in Appendix to Chapter IV.

Source : Registrar General, Census of India 1961, Workers in India 1901/11 to 1961, Paper No. 2 of 1967.

**Table 4.3**

**DISTRIBUTION OF POPULATION INTO WORKERS AND NON-WORKERS BY SEX AND BY RURAL/URBAN IN MANIPUR, 1951 TO 1971 :**

**All-Manipur**

Year	Male			Female		
	Workers	Non-Workers	Total	Workers	Non-Workers	Total
1	2	3	4	5	6	7
1951*	149235 (52.58)	134585 (47.42)	283820 (100.00)	148482 (50.86)	143448 (49.14)	291930 (100.00)
1961	183127 (47.31)	203931 (52.69)	387058 (100.00)	174793 (44.48)	218186 (55.52)	392979 (100.00)
1971	273364 (50.47)	268311 (49.53)	541675 (100.00)	230319 (43.37)	300759 (56.63)	531078 (100.00)
<b>Manipur-rural</b>						
1961	169142 (47.92)	183795 (52.08)	352937 (100.00)	161209 (44.86)	198174 (55.14)	359383 (100.00)
1971	244849 (52.07)	225382 (47.93)	470231 (100.00)	230225 (44.08)	257805 (55.92)	461030 (100.00)
<b>Manipur-urban</b>						
1961	13985 (40.99)	20136 (59.01)	34121 (100.00)	13584 (40.43)	20012 (59.57)	33596 (100.00)
1971	28515 (39.91)	42929 (60.09)	71444 (100.00)	27094 (38.68)	42954 (61.32)	70048 (100.00)

Note : Figures in parenthesis indicate percentages.

\* For 1951 the adjusted data on working force by rural and urban break-up are not available. Therefore the relevant analysis of this year will confine only to Manipur as a whole.

Sources : (1) Registrar General, Census of India 1961, Workers in India, 1901/11 to 1961, Paper No.2 of 1962.

(11) Table A-5 in Appendix to this chapter.



the fall of female workers' participation rate was considerably higher in urban areas as compared to that in rural areas. It is possible that, with the availability of education-facilities and changes in cultural outlook, a larger number of females who used to be engaged in the traditional activities like handloom industry opted for education and withdrew from the labour force thereby bringing down, at least partly, the workers' participation rate. <sup>14/</sup>

#### 4.5 Unemployment :

We have already discussed about the broad classification of population into workers and non-workers. As noted earlier, amongst the different categories of non-working population, a component of labour force viz., the category of 'unemployed' (referred as open unemployed in this study) assumes a crucial importance in a study of our type. According to census reports the open unemployment is formed by two categories of non-working population : (i) persons seeking employment for the first time and (ii) persons employed before but now out of employment and seeking for works.

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<sup>14/</sup> While studying inter-State differences in female workers' participation in a study, the author could not firmly establish the relationship between certain economic variables and female participation rate. It is however, concluded that explanation for differences in females participation rate may be some broad non-economic factors such as culture. See, Leela Gulati, 'Female Work Participation,' a study of Inter-State Differences, Economic and Political Weekly, A Samaksha Trust Publication, Vol. X, No. 1 and 2, January 1975, p. 35.

Generally speaking, among the non-workers only those who are seeking work and are available for work at the current rates of remuneration are treated as unemployed.<sup>15/</sup> But the measurement of the dimension of unemployment in the Indian context is very complicated and subject to a number of problems, conceptual as well as operational.<sup>16/</sup> In spite of these difficulties involved in quantifying unemployment among non-workers and underemployment among workers Dandekar and Rath suggested the use of 'low income' as a criterion of unemployment and underemployment.<sup>17/</sup> The authors believed that an adequate level of employment may be defined in terms of its capacity to provide minimum level of living.<sup>18/</sup>

The identification of unemployment with poverty as done by Dandekar and Rath too has some limitations.<sup>19/</sup> The poverty

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<sup>15/</sup> Operationally, in some labour force surveys a person is treated as openly unemployed if he is not gainfully occupied on at least one day during the reference period (one week). See NSS Surveys on the Labour Force.

<sup>16/</sup> Raj Krishna, 'Unemployment in India' (Presidential Address), Indian Journal of Agricultural Economics, Vol. XXVIII, No.1 January - March, 1973, p. 1.

<sup>17/</sup> V.M. Dandekar and Nilakantha Rath, Poverty in India, Indian School of Political Economy, Poona, 1971.

<sup>18/</sup> The term 'minimum level of living' has been used in the sense of certain consumption norm. Ibid.

<sup>19/</sup> See R. Radhakrishna, Bhanumati K. Parikh and Naresh C. Shah, An Exploratory Study on Slums : Employment, Poverty and Liquor Consumption ( A Case Study of Ahmedabad Slums), Mimeograph, Sardar Patel Institute of Economic and Social Research, Ahmedabad, 1976.

norm makes the following implicit assumptions. First, poverty is due to less than full utilisation of labour available in the household. Second, households below the poverty line are willing to supply their labour for extra wage employment. These assumptions may be violated in varying degrees. There may not be direct correspondence between earnings and actual utilisation of labour. For instance, a person may be poor despite working very hard in some jobs where he is severely exploited.<sup>20/</sup> So, in using the poverty criterion with these assumptions one may categorize even a fully employed person as unemployed or underemployed. Second, it may also be pointed out that the large size of a household may by itself push the household below the poverty line.<sup>21/</sup> Households with a few workers but possessing large number of children may come under poverty line despite the full utilization of the labour of the household. One may argue that subsistence wage rate should allow for this composition and the poverty is not due to large size of the household but the low wage rate.

In view of these difficulties which cannot be overcome in a satisfactory way, resort has been taken to the information available in the 1961 Census for estimating the dimension of open unemployment in Manipur. As noted earlier, while the data on unemployment for 1961 are available in the published

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<sup>20/</sup> A.K. Sen Dimensions of Unemployment in India, Convocation Address, ISI, Calcutta, 31st Dec. 1973. See also Parthasarthy G. and Dasaradha Rama Rao, Anatomy of Employment and unemployment among labour household in rural areas, Mimeo, Andhra University, 1973.

<sup>21/</sup> See Parthasarthy G. and Dasaradha Rama Rao, op.cit.

census reports, those for 1971 are not. Nevertheless this study could not be postponed till the publication of the relevant 1971 data by the census authorities. Therefore it has been estimated as a residual of the total non-workers in the productive age-group minus (full-time students + persons in household duties + dependent, infants and disabled + retired, rentired or persons with independent means + beggars, vagrants etc. + inmates or institutions). As information on the latter categories are also not available in the census reports of 1971, the following adjustment procedures have been adopted.

For projecting the continuously increasing number of students in the age-group 15-59, a time series information on students-enrolment by different age-groups would have been highly useful. But such a time series even the raw data collected by the 1971 Census are not yet published. Therefore with a view to identify the type of students falling in the age-group 15-59, it has been assumed that students enrolled in the post-IXth Class (Table 4.4) fall in the age-group 15-59. It need not be mentioned that the available data on students enrolled in different educational levels during the period from 1952-53 to 1964-65 do not specify their age. Besides, the number of students in the base year, 1952-53 being very small as compared to that of the later years, the rate of growth was at first increasing at an increasingly higher rate (exponential) till 1960-61; later on it was

Table 4.4

TREND OF THE NUMBER OF STUDENTS ENROLLED IN POST  
IX-CLASS BY SEX IN MANIPUR, 1952-53 TO 1964-65 :

Year	Class IX to X		Above Class X	
	Male	Female	Male	Female
1	2	3	4	5
1952-53	2067	154	351	14
1953-54	1966	220	577	30
1954-55	2292	268	731	48
1955-56	2312	268	1119	75
1956-57	2773	372	1236	109
1957-58	3285	466	1418	122
1958-59	3603	590	1654	163
1959-60	3960	690	1666	213
1960-61	4804	846	1771	243
1961-62	5622	1187	1981	282
1962-63	7455	1781	2245	350
1963-64	8085	2362	3858	517
1964-65	8623	2516	3791	706

Source : Government of Manipur, Fact Books on Manpower in Manipur, Department of Statistics, Imphal, 1967.

increasing at a decreasing rate. The period 1960-61 to 1964-65 being more relevant because of its proximity to the year 1971, the rate of growth of students enrolled in the post-IXth Class has been worked out for males and females separately for this period, and these growth rates have been used to compute their number. According to this computation, the total number of enrolled students comes to be 29801 (males 23103 and females 6698) in the age-group 15-59 for the year 1971. In the case of other categories of non-workers excluding the unemployed, the proportions as obtained in the 1961 Census have been assumed to be constant.

Thus the distribution of non-workers into different categories (Table 4.5) reveals that the share of the persons engaged in household-duty accounted for 53.68 per cent in 1971 as against 51.38 per cent in 1961. While examining sex-wise, it is found that the relevant share of females' was significantly higher (75.45 per cent of the total female non-workers) than that of males (16.18 per cent of the total male non-workers) in 1971.

The share of full-time students in 1971 was 26.60 per cent of the total non-workers, male students accounting for 56.13 per cent and female students for 9.48 per cent of the respective total non-workers.

Next in importance was the category of dependent, infants and disabled persons accounting for 16.79 per cent

Table 4.5

DISTRIBUTION OF TOTAL NON-WORKERS IN THE AGE-GROUP 15-59 BY DIFFERENT CATEGORIES IN MANIPUR FOR 1961 AND 1971

Category of Population in the age-group 15 - 59 1	1961			1971		
	Male 2	Female 3	Total 4	Male 5	Female 6	Total 7
Full-time Students	19290 (57.11)	5069 (9.99)	24358 (28.82)	23103 (56.13)	6698 (9.45)	29801 (26.60)
Persons engaged in household duty	5343 (15.82)	38080 (75.06)	43423 (51.38)	6658 (16.18)	53492 (75.45)	60150 (53.68)
Dependents, Infants and Disabled	7007 (20.75)	7179 (14.15)	14186 (16.79)	8731 (21.22)	10084 (14.23)	18815 (16.79)
Retired, Rentired and Independent means	362 (1.07)	177 (0.35)	539 (0.64)	451 (1.10)	249 (0.35)	700 (0.63)
Beggars, Vagrants, etc.	156 (0.46)	86 (0.17)	242 (0.29)	194 (0.47)	121 (0.17)	315 (0.28)
Inmates of institutions	143 (0.42)	20 (0.04)	163 (0.19)	178 (0.43)	28 (0.04)	206 (0.18)
Open unemployed	1475 (4.37)	121 (0.24)	1596 (1.89)	1839 (4.47)	223 (0.31)	2062 (1.84)
<b>Total Non-Worker</b>	<b>33776</b> (100.00)	<b>50732</b> (100.00)	<b>84500</b> (100.00)	<b>41154</b> (100.00)	<b>70895</b> (100.00)	<b>112049</b> (100.00)

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Note : For 1971 the figures are estimated. For detail See the text above.

Source : For 1961, See Census of India 1961, District Census Handbook of Manipur, 1961.

of the total non-workers in 1971; 14.23 per cent of female and 21.22 per cent of male non-workers belonged to this category.

This feature indicates that the share of the category of unemployed was very low as compared to the proportions of the earlier three categories. The fact is that it accounted 1.84 per cent of the total non-workers in 1971 as compared to 1.89 per cent in 1961. However, it can be noted that it varied between male (from 4.47 per cent in 1971 to 4.37 per cent in 1961) and female (from 0.31 per cent in 1971 to 0.24 per cent in 1961). So far as the difference between rural and urban areas is concerned, it was not possible to make any estimate for open unemployment based on census information separately for 1971. This was because of the lack of data, particularly data on the enrolment of full-time students at the disaggregated level. Hence, it restricted to the aggregate level of the State by male and female.

Yet the 1961 Census indicated that in urban areas, the percentage share of unemployed (7.65) was higher than that of rural areas in Manipur (0.93) in the corresponding total non-workers. The difference was still more distinct when examined for males and females separately; that it was 14.13 per cent in urban as against 2.30 per cent in rural for males, and 1.46 per cent in urban as compared to 0.07 per cent in rural for females.



Besides the information based on the census reports, the estimates by the National Sample Survey for urban unemployment<sup>22/</sup> also, though not strictly comparable, throw light on the incidence of unemployment and help us draw comparison between Manipur and all-India (Table 4.6). According to the

Table 4.6

COMPARATIVE PICTURE OF THE INCIDENCE OF URBAN  
UNEMPLOYMENT BETWEEN MANIPUR AND ALL-INDIA

Year	N. S. S. Round	Manipur		All India	
		Male	Female	Male	Female
1	2	3	4	5	6
1963-64	18th	3.08	1.03	1.19	2.39
1964-65	19th	2.45	-	1.89	2.32
1965-66	20th	2.02	0.55	1.88	2.51
1966-67	21st	3.32	0.20	1.52	1.84
1967-68	22nd	1.50	0.21	1.57	0.43

Note : These are the percentages in the labour force.

Source: Ridker Ronald G. and Lubell Harold (et. al) Employment and Unemployment Problems of the Near East and South Asia, Vol. 1, Vikas Publication, Delhi, Bombay, Bangalore, Kanpur, London, 1971, pp.217-222. Requoted from NSS Report Nos. 164 (Draft) pp. 11-12; 181 (Draft) pp. 31-32; and 189 (Draft) pp. 14-15; 209 (Draft) pp. 31-32 and type script Tables Based on quick Tabulation for the 22nd Round.

<sup>22/</sup> In the urban surveys (beginning with the 16th Round in 1960-61) a person was defined as unemployed if he had not worked even on a single day during the reference week and was looking for full-time work. Thus persons not looking for full-time work were excluded. Persons below the age 14 and above the age of 60 years were also excluded. See Sudhir Bhattacharyya, 'A Note on Employment and Unemployment Concepts Adopted in the National Sample Survey' Appendix 1, Report of the Committee of Experts on Unemployment Estimates, Planning Commission, New Delhi, 1970.

National Sample Survey, 1963-64 to 1966-67,<sup>23/</sup> the size of urban unemployment for males in Manipur was higher than that of the all-India. In 1967-68 this situation was, however, indicative of a slight change; the relevant size tended to fall below the all-India average. In addition to this, for females, urban unemployment in Manipur during 1963-64 to 1967-68 was lower all throughout, as compared to its counterpart the all-India urban female unemployment. However any generalization from the National Sample Survey data on the urban area's will not be meaningful in our context. Since the share of urbanization was very low in Manipur, it could hardly reflect any trend representing the whole of Manipur.<sup>24/</sup> Hence it will be more helpful for us to depend on whatever data are available in the census reports while discussing the size of labour force (Table 4.7) as well as its participation rates in Manipur.

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<sup>23/</sup> In the case of rural unemployment such estimates are not available Statewise because of the general impression that total unemployment is not much of a problem in rural areas. For detail See, Government of India, Programme Evaluation Organization (PEO), Regional Variations in Social Development and Levels of Living - A Study of the Impact of Plan Programmes, Vol. 1, Planning Commission, 1967, p. 42.

<sup>24/</sup> Another source of data on open unemployment is employment exchanges. Yet, as an indicator of unemployment situation, the value of the data thrown up by this agency is also subject to certain important limitations and could not be used for a study of our type. See P. Bahadur, 'Urban unemployment - An Estimate Based on Employment Exchange Statistics' in V.K.R.V.Rao (ed.), Employment and Unemployment, Allied Publishers Private Limited, Bombay, New Delhi, Calcutta, Madras, London, New York, 1968, pp. 57-62.

Table 4.7

DISTRIBUTION OF POPULATION BY LABOUR FORCE  
STATUS IN MANIPUR, 1961 - 1971 :

Category	1961			1971		
	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7
Working Force	183127 (99.20)	174793 (99.93)	357920 (99.56)	273364 (99.33)	230319 (99.90)	503683 (99.59)
Unemployed	1475 (0.80)	121 (0.07)	1596 (0.44)	1839 (0.67)	223 (0.10)	2062 (0.41)
Total Labour Force	184602 (100.00)	174914 (100.00)	359516 (100.00)	275203 (100.00)	230533 (100.00)	505745 (100.00)

Source : Arrived from Table 4.4 and Table 4.5 (presented earlier).

In the light of the given level of working force and the unemployed, the labour participation rate<sup>25/</sup> in Manipur tended to increase slightly from 46.09 per cent in 1961 to 47.14 per cent in 1971. Such a tendency appears to have been more prominent particularly in the case of males (47.69 per cent in 1961 and 50.81 per cent in 1971). But in the case of females it is associated with a slight decrease from 44.51 per cent in 1961 to 43.41 per cent in 1971. This, in fact, confirms the decreasing participation rates of female workers as explained earlier.

<sup>25/</sup> This is the ratio of labour force to the total population. Here it has been used as the proportion of the number of person in the labour force per hundred person of the total population by sex.

#### 4.6 Underemployment :

After examining the size of labour force by its characteristics and components, it would be worthwhile to discuss further the characteristic features of the working force. For one of the main characteristics of working force, particularly in an underdeveloped economy, is underemployment leading to low productivity of workers and low income.<sup>26/</sup>

A discussion on underemployment is therefore in order. Underemployment may be defined as the number of hours of work (labour time) on offer by a worker at existing wage rate compared with the actual number of hours taken up. Alternatively, '.... among those the gainfully employed who work for fewer than the normal hours of work and are available for additional work, are regarded as underemployed'.<sup>27/</sup> This can be identified with the number of workers who can be removed without affecting the output. In such case the reduction in the size of work-force due to the withdrawal of workers can be met from the additional labour-hour available from the remaining workers in work-force.

When the gap between the number of hours of work on offer at the existing wage rate and the actual number of hours taken up is treated as underemployment, one has to

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<sup>26/</sup> W.A.Lewis, Economic Development With Unlimited Supplies of Labour, Manchester School of Economic and Social Studies, XXII, No.2, 1954, pp. 141-144.

<sup>27/</sup> Government of India, Programme Evaluation Organization, (PEO) op.cit., pp. 41-42.

face enormous measurement problems. Various compromises have been made while measuring the gap between the labour on offer and the labour used. The reasons lie partly in the deficiency of data, partly in complexities arising due to association between jobs and socio-economic groups, and partly in the analytical difficulties.

Broadly, an estimate of underemployment can be arrived from the National Sample Survey data on the number of hours worked per week in respect of persons regarded as gainfully employed during the reference week.<sup>28/</sup> In this estimate, as a general norm, it is assumed that a gainfully occupied person is severely underemployed if he worked for 28 hours or less, and moderately underemployed if he worked for more than 28 hours but less than 42 hours during the reference week.<sup>29/</sup> Thus according to the 17th round of the National Sample Survey (1961-62) of the total employed persons in Manipur-urban, about 51.20 per cent (i.e. 23.90 per cent severely and 27.50 per cent moderately) was underemployed (Table 4.8).

Similar estimate cannot be made for rural areas in Manipur due to the lack of data. As a result, such proportions of underemployment in urban areas of Manipur cannot

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<sup>28/</sup> It could be more useful if we got Statewise data on the extent of availability for additional work by rural and urban. But unfortunately such data was not available. See Government of India, Programme Evaluation Organization (PEO), op.cit.

<sup>29/</sup> See Raj Krishna, op.cit., p.2.

Table 4.8

PERCENTAGE DISTRIBUTION OF WORKING PERSON ACCORDING TO  
THEIR HOURS OF WORK GROUPS IN A WEEK IN MANIPUR-URBAN,  
1961-62

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Hours of work per week	Percentage of Total Workers
1	2
0 - 7	5.90
8 - 14	3.80
15 - 28	14.20
29 - 42	27.50
0 - 42	51.40
43 - 56	25.20
57 - 70	18.90
70 and above	2.30
Not recorded	2.20
Total	100.00

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Source : Government of India, Programme Evaluation  
Organization, Regional Variations in  
Social Development and Levels of Living -  
A Study of the Impact of Plan Programmes,  
Table -L, Planning Commission, 1967, p.139.

be applied to the rural areas of the State and also it cannot  
be generalized for Manipur as a whole. The nature and extent  
of underemployment may vary between the sectors of the economy

due to labour immobility created by institutional factors as well as the disproportionate development of the sectors. Nor are they stable over time and space.

Moreover, it may be pointed out that the above criterion cannot be used in the case of self employed family workers, workers in unorganized sectors such as domestic servants, casual workers etc. A worker, particularly belonging to family enterprises, may be doing a job leisurely as there is no other demand for his labour time. In other words, he may not work to the capacity efficiently in all his employed hours. Secondly, it is unrealistic on the ground that the supply of labour cannot be isolated from social processes. There is strong correspondence between jobs and socio-economic groups. Ability to keep away from manual work has been an important distinguishing socio-economic status.<sup>30/</sup> Strong social prejudices exist for certain types of jobs even among the poorer sections. Moreover, the wage rate at which they would offer their unutilized labour may vary with classes of workers and with the location of work. In fact, the individual supply functions cannot be isolated from the family variables. The possibility is, therefore, not ruled out that if one member in a family earns more, the other member, particularly housewife withdraws from the labour force and becomes voluntarily

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<sup>30/</sup> D. R. Gadgil, Women in the Working Force in India, Asia Publishing House, Bombay, 1965.

unemployed.<sup>31/</sup> The relationship between labour offered and wage rate has to take into account the above relevant variables and any attempt which ignores them will be meaningless.<sup>32/</sup>

In an another approach, the effective number of labour hours needed for the existing production are estimated by using work norms.<sup>33/</sup> This approach relies on computation with the help of data on labour available against specific assumptions regarding productivity levels. The extent of underemployment is estimated by measuring the gap between the existing number of workers in the work force and the effectively needed workers. In the case of this approach also fixing of work norms for various categories of production involves several simplifying assumptions. Nevertheless it can be applied to some extent for measuring underemployment in the agricultural sector, although it is next to impossible to apply it in the non-agricultural sector particularly in the service sector.<sup>34/</sup>

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<sup>31/</sup> This is a type of backward bending household labour supply curve.

<sup>32/</sup> Economists, ignoring social aspects raised a debate over available criterion without any reference to wage-rate. It is well taken that availability of labour should be linked up with wage-rate. But supply of labour cannot be seen in isolation of social process when these variables cannot be taken into consideration, wage rate has no relevance.

<sup>33/</sup> This method has been used extensively in estimating rural labour surplus on the basis of micro-economic data from the farm management surveys, See J.P.Bhattacharya: Unemployment among Indian Farmers, An Analysis of its Nature and Extent Based on data for Bihar, Arthavinana, Vol.3, No.3, 1961.

<sup>34/</sup> R.Radhakrishna, Ehanumati K.Parikh and Naresh C.Shah, op.cit.



However, if the poverty level is assumed as an incidence of unemployment and underemployment, as indeed it has been suggested in a study,<sup>35/</sup> one can arrive at some qualitative conclusions. In an approach of this type it is assumed that the proportion of population lying below the poverty line belongs to either the class of openly unemployed or the class of underemployed. Considered in terms of the poverty level in Manipur as measured in the preceding chapter and found below the all-India level, the extent of underemployment could be lower in Manipur-rural than in all-India rural. But the phenomenon of underemployment seems to be absent in Manipur-urban, its poverty level being zero. Yet the fact that the poverty level is zero in Manipur-urban apparently contradicts our earlier conclusion that the phenomenon of openly unemployed and underemployed are emerging in Manipur-urban. This might be resolved by noting the following facts. First, the urban working force in Manipur has mainly got an outlet in the service sector which is associated with higher productivity. Secondly, since poverty measure is based on the minimum calorie requirements at the household level, total earnings of the household derived from the relatively more productive sector may not show up poverty.

Unemp  
 Pov.  
 Rural  
 Urban  
 or comm

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<sup>35/</sup> V.M. Dandekar and Nilakantha Rath, op.cit.

## APPENDIX TO CHAPTER IV

### A NOTE ON THE METHODOLOGY FOR ADJUSTING WORKING FORCE DATA:

The present exercise primarily arrives from the non-comparability of the inter-Census work-force data of Manipur, particularly between the years 1961 and 1971 as discussed earlier. It, therefore, attempts at re-estimating the said work-force data for the year 1971 on the basis of the criteria adopted in the 1961 Census, in order to make them comparable. It also attempts further to quantify the difference if any between the total working force, as per our estimate and the actually reported figure for the same year.

An empirical observation on the actual workers' participation rates reported by the Censuses (Table 4-A.1) shows

Table 4-A.1

#### TRENDS OF WORKERS' PARTICIPATION RATES IN MANIPUR

Census Year	Male	Female	Person
1	2	3	4
1951	52.72	50.78	51.73
1961	47.31	44.48	45.89
1971	45.31	23.62	34.57

that during the decades, 1951-1971 the sharp fall of workers participation rate in Manipur at the State's aggregate level recorded in 1971 is striking. It also reveals that the decline is more conspicuous in the female group.

The phenomenon so observed is still aggregative in nature and does not delineate the different attributions of participation rate in various age-groups of population over the period. The workers' participation rate of a particular age-group may vary from the participation rate of another age-group of population. To disentangle the inter-bracket behavioural changes we disaggregate them into five broad age brackets.<sup>1/</sup> In doing so, we take into account of males and females separately. At the same time, rural and urban differences are also noted (Table 4-A, 2 and 4-A, 3) to minimise the discrepancies of overall figures at the State's aggregate level. But, why did such participation rates fall in all the age-groups except for the group, 'age not stated elsewhere' which accounts a very small share to the total population, seemingly unusual ? As a matter of fact, one has to answer it before putting the census indicators into any serious use. A discussion on this particular context has, therefore, been made in the main text of the preceding Chapter and it has been concluded that such changes are mainly subject to the respective criteria that had been used in the Census of 1961 and 1971 in general and to the criteria that had been adopted for the worker in seasonal economic activities in particular, hence the work force data between the two Censuses are not comparable.

As a consequence of the non-comparability between the

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<sup>1/</sup> The classification of specific age-groups are 0-14, 15-34, 35-59, 60 above and age not stated elsewhere.

Table 4-A.2

AGE-SEX SPECIFIC WORKERS RATE : A COMPARISON OF 1961  
CENSUS WITH 1971 CENSUS DATA, MANIPUR - RURAL

Age-Group (1)	Males			Females			Person		
	1961 Census (2)	1971 Census (3)	Differences of 1961 & 1971 Census (4)=(2)-(3)	1961 Census (5)	1971 Census (6)	Differences of 1961 & 1971 Census (7)=(5)-(6)	1961 Census (8)	1971 Census (9)	Differences of 1961 & 1971 Census (10)=(8)-(9)
0 - 14	3.40	3.68	- 0.28	7.92	4.28	3.64	5.64	3.98	1.66
15 - 34	76.96	67.98	8.98	75.48	40.72	34.76	76.19	51.38	24.81
35 - 59	95.51	95.76	- 0.25	76.43	45.43	31.00	86.13	71.39	14.74
60 & above	76.13	74.46	1.67	43.84	25.72	18.12	59.25	50.66	8.59
Age not stated	39.74	100.00	- 60.26	29.73	-	-29.73	34.48	100.00	- 65.52
All ages	47.92	46.42	1.50	44.86	24.95	19.91	46.38	35.79	10.59

Sources : (i) Census of India 1961, District Census Handbook of Manipur.

(ii) Registrar General, Census of India 1971, Paper No.3 of 1972,  
Economic Characteristics of Population.

Table 4-A.3

AGE-SEX SPECIFIC WORKERS RATE : A COMPARISON OF 1961  
CENSUS WITH 1971 CENSUS DATA, MANIPUR - URBAN

Age-Group (1)	Males			Females			Person		
	1961 Census (2)	1971 Census (3)	Differences of 1961 & 1971 Census (4)=(2)-(3)	1961 Census (5)	1971 Census (6)	Differences of 1961 & 1971 Census (7)=(5)-(6)	1961 Census (8)	1971 Census (9)	Differences of 1961 & 1971 Census (10)=(8)-(9)
0 - 14	0.64	0.82	- 0.18	3.90	0.72	3.18	2.25	0.77	1.48
15 - 34	58.49	49.11	9.38	61.09	20.35	40.74	59.75	34.73	25.02
35 - 59	85.89	79.27	6.62	73.65	32.77	40.88	79.75	57.57	22.18
60 & above	49.97	58.25	- 8.28	45.59	14.63	30.96	47.49	34.13	13.36
Age not stated	44.23	-	- 44.23	73.33	-	- 73.33	50.75	-	- 50.75
All ages	40.99	38.01	2.98	40.43	14.87	25.56	40.71	26.56	14.15

Sources : (i) Census of India 1961, District Census Handbook of Manipur.

(ii) Registrar General, Census of India 1971, Paper No.3 of 1972,  
Economic Characteristics of Population.

two working force data of 1961 and 1971, an adjustment to make them comparable is necessitated. Nevertheless, the adjustment as noted earlier can be made only after estimating the working force engaged in seasonal economic activities of 1971.

The working force data of 1971 Census both for rural and urban regions of Manipur have been adjusted with the following assumptions :

- (i) Of the total working force reported in 1971, the workers engaged in the regular category of economic activities are unaffected by the definitional changes.
- (ii) The age-sex specific workers participation rate in the economic activities of seasonal category in 1971 is the same as that of 1961.

*Interurb  
and urb*

#### Methodology :

Incidentally, by way of providing background materials containing the figures as reported in the respective Censuses have been observed. Then on the basis of the above assumptions the Census-wise total working force in 1961 and 1971 are delineated into two categories : seasonal and regular. To carry out our exercise we adopt the following methodology.

#### Writing :

$X_r^{1971}$  = Total number of reported workers in the regular category in 1971.

$W_r$  = Actually reported total working force in 1971.

$X_i^{1961}$  = Number of Seasonal workers in the  $i^{\text{th}}$  age bracket of population in the base year, i.e. 1961.

$P_i^{1961}$  = Total population in the  $i^{\text{th}}$  age bracket in the base year i.e. 1961.

$P_i^{1971}$  = Total population in the  $i^{\text{th}}$  age bracket in 1971.

Then, the number of estimated seasonal workers in the  $i^{\text{th}}$  age bracket in 1971

$$= \frac{X_i^{1961}}{P_i^{1961}} \times P_i^{1971} *$$

Therefore, total number of estimated seasonal workers for 1971

$$= \sum_i \left[ \left( \frac{X_i^{1961}}{P_i^{1961}} \right) P_i^{1971} \right] *$$

Now, the adjusted working force of 1971, i.e.,

$$W_A = \left[ \sum_i \left\{ \left( \frac{X_i^{1961}}{P_i^{1961}} \right) P_i^{1971} \right\} + X_P^{1971} \right] *$$

Lastly, the total number of persons undercounted as workers in 1971, are  $(W_A - W_P)$ .

### Findings :

Table 4-A.4 presents the estimated seasonal working force in Manipur for rural and urban areas separately. Then the adjusted total working force with male and female break-ups are presented in Table 4-A.5 for rural and urban areas. It can be seen from this table that the total adjusted working force in Manipur-rural is 448074 which has been distributed between

Table 4-A.4

ESTIMATED SEASONAL WORKERS BY SPECIFIC SEX AND AGE GROUP OF MANIPUR-RURAL/URBAN, 1971 :

Age-Group 1	Manipur-rural			Manipur-urban		
	Male 2	Female 3	Total 4	Male 5	Female 6	Total 7
0 - 14	6726	15753	22479	51	1041	1092
15 - 34	94122	107120	201242	2434	12814	15248
35 - 59	80075	63318	143393	3326	7769	11095
60 & above	20427	11044	31471	560	1370	1930
Age not stated	1	-	1	-	-	-
All age-groups	201351	197235	398586	6371	22994	29365

Table 4-A.5

ADJUSTED WORKING FORCE OF MANIPUR-RURAL/URBAN, 1971 :

Category 1	Manipur-rural			Manipur-urban		
	Male 2	Female 3	Total 4	Male 5	Female 6	Total 7
Estimated seasonal workers	201351	197235	398586	10284*	22994	33278
Reported regular workers	43498	5990	49488	18231	4100	22331
Total adjusted working force	244849	203225	448074	28515	27094	55609

\* Since the estimated figure is less than the reported, we arrived this by taking the ratio of the estimated and the reported seasonal workers in rural Manipur.



males (244849) and females (203225). In the urban regions the corresponding aggregate figure is 55609 of which males account for 28515 while females account for 27094.

After adjustment, the estimated undercounts in the working force data of the 1971 Census, presented in Table 4-A.6 (Manipur-rural and urban) reveals that in the aggregate, i.e., for the State as a whole, the corresponding figure (Table 4-A.7) is about 132820. Of this total, urban working force accounts for about 18034 whereas it is 114780 for rural. The proportion of undercount in the aggregate is comparatively more in the case of female (78.97). This phenomenon is consistently observed in the rural as well as in the urban areas. Particularly in the case of urban areas the proportion of undercount in the female working force is more when compared with that of rural areas. From these results, it can be inferred that the total undercount in the working force data of the 1971 Census is attributed to a large extent by the undercount in the female working force.

A comparative picture between the reported workers' participation rate and the adjusted workers' participation rate (Table 4-A.8) indicates that, if the criteria adopted for a worker in the seasonal economic activities in the 1971 Census were the same to that of the 1961 Census, the workers' participation rate of Manipur might have been 46.75 per cent of the total population in 1971 as against 34.57 per cent

Table 4-A.6

ESTIMATED UNDERCOUNTED WORKING FORCE OF MANIPUR-RURAL/URBAN, 1971

Category	Manipur-rural			Manipur-urban		
	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7
Observed working force	244849	203225	448074	28515	27094	55609
Reported working force	218277	115011	333288	27158	10417	37575
Estimated undercounted working force	26572	88214	114786	1357	16677	18034

Note : (i) The observed working force refers to the estimated data of the 1971 Census arrived from Table 4-A.4 and Table 4-A.5.

(ii) Estimated undercount working force is equal to observed working force minus Reported working force.

Table 4-A.7

DISTRIBUTION OF THE TOTAL UNDERCOUNTED WORKING FORCE  
IN MANIPUR INTO MALE/FEMALE BY RURAL/URBAN, 1971 :

Sex 1	Rural 2	Urban 3	Total 4
Male	26572 (23.15)	1357 (7.52)	27929 (21.03)
Female	88214 (76.85)	16677 (92.48)	104891 (78.97)
Total	144786 (100.00)	18034 (100.00)	132820 (100.00)

Note: Figures in parenthesis indicate percentages.

Source : Deduced from Table 4-A.6.

Table 4-A.8

A COMPARATIVE PICTURE OF WORKERS' PARTICIPATION RATE IN  
MANIPUR FOR 1971 BETWEEN REPORTED AND ADJUSTED FIGURES:

Category 1	Male 2	Female 3	Person 4
Reported	45.31	23.62	34.57
Adjusted	50.47	43.37	46.96

which was actually reported in the Census (pre-adjustment). Also, it is found that the workers' participation rate after adjustment, for males and females separately are 50.47 per cent and 43.37 per cent respectively as compared to their counterpart reported participation rates of 45.31 per cent and 23.62 per cent. Thus there is even to be a little increase in the workers' participation rate in 1971 as compared to that of the 1961 Census (45.89 per cent) of the total population. A similar phenomenon can be observed in the case of male but even after adjustment, the workers' participation rate of female in Manipur tends to be fallen in 1971 from that of the 1961 Census.

After arriving at such adjustment, we distribute the total working force into different industrial categories by sex for Manipur-rural (Table 4-A.9) and for Manipur-urban (Table 4-A.10) separately, and then for Manipur as a whole (Table 4-A.11). It may be noted that while distributing the adjusted working force, only those industrial categories related to seasonal economic activities have been taken care of. In other words, the estimated undercount in the reported working force data of the 1971 Census has been distributed on the basis of proportionality only among the industrial categories considered to be seasonal.

Table 4-A.9

DISTRIBUTION OF ADJUSTED WORKERS IN DIFFERENT INDUSTRIAL  
CATEGORIES BY SEX IN MANIPUR-RURAL, 1971

Sr. No.	Industrial Category	Male	Female	Total
1	2	3	4	5
(i)	Cultivators	185474 (75.75)	146648 (72.16)	332122 (74.12)
(ii)	Agricultural Labourers	9196 (3.76)	8459 (4.16)	17655 (3.94)
(iii)	Livestock, forestry, fishing, hunting, orchard and allied activity	2032 (0.83)	476 (0.23)	2508 (0.56)
(iv)	Mining and Quarrying	56 (0.02)	20 (0.01)	76 (0.02)
(v)a	Household-Industry	4593 (1.88)	41632 (20.49)	46225 (10.32)
(v)b	Manufacturing other than household-industry	2583 (1.05)	1087 (0.54)	3670 (0.82)
(vi)	Construction	2965 (1.21)	59 (0.03)	3024 (0.67)
(vii)	Trade and Commerce	3419 (1.40)	3112 (1.53)	6531 (1.46)
(viii)	Transport, Storage and Communication	2104 (0.86)	27 (0.01)	2131 (0.48)
(ix)	Other Services	32427 (13.24)	1705 (0.84)	34132 (7.61)
(i) - (ix)	All Category	244849 (100.00)	203225 (100.00)	448074 (100.00)

Note : Figures in parenthesis indicate percentages.

Table 4-A.10

DISTRIBUTION OF ADJUSTED WORKERS IN DIFFERENT INDUSTRIAL  
CATEGORIES BY SEX IN MANIPUR-URBAN, 1971

Sr. No.	Industrial Category	Male	Female	Total
1	2	3	4	5
(i)	Cultivators	6959 (24.40)	1394 (5.15)	8353 (15.02)
(ii)	Agricultural Labourers	783 (2.75)	681 (2.51)	1464 (2.63)
(iii)	Livestock, forestry, fishing, hunting, orchard and allied activity	324 (1.14)	65 (0.24)	389 (0.70)
(iv)	Mining and Quarrying	35 (0.12)	-	35 (0.06)
(v)a	Household-Industry	2183 (7.66)	20854 (76.97)	23037 (41.43)
(v)b	Manufacturing other than household-industry	1987 (6.97)	454 (1.68)	2441 (4.39)
(vi)	Construction	1573 (5.52)	30 (0.11)	1603 (2.88)
(vii)	Trade and Commerce	4250 (14.90)	2368 (8.74)	6618 (11.90)
(viii)	Transport, Storage and Communication	1885 (6.61)	28 (0.10)	1913 (3.44)
(ix)	Other Services	8536 (29.93)	1220 (4.50)	9756 (17.54)
(i) - (ix)	All Category	28515 (100.00)	27094 (100.00)	55609 (100.00)

Note : Figures in parenthesis indicate percentages.

Table 4-A.11

**DISTRIBUTION OF ADJUSTED WORKERS IN DIFFERENT INDUSTRIAL  
CATEGORIES BY SEX IN MANIPUR, 1971**

Sr. No.	Industrial Category	Male	Female	Total
1	2	3	4	5
(i)	Cultivators	192433 (70.39)	148042 (64.28)	340475 (67.60)
(ii)	Agricultural Labourers	9979 (3.65)	9140 (3.97)	19119 (3.80)
(iii)	Livestock, forestry, fishing, hunting, orchard and allied activity	2356 (0.86)	541 (0.23)	2897 (0.58)
(iv)	Mining and Quarrying	91 (0.03)	20 (0.01)	111 (0.02)
(v)a	Household-Industry	6776 (2.48)	62486 (27.13)	69262 (13.75)
(v)b	Manufacturing other than household-industry	4570 (1.67)	1541 (0.67)	6111 (1.21)
(vi)	Construction	4538 (1.66)	89 (0.04)	4627 (0.92)
(vii)	Trade and Commerce	7669 (2.81)	5480 (2.38)	13149 (2.61)
(viii)	Transport, Storage and Communication	3989 (1.46)	55 (0.02)	4044 (0.80)
(ix)	Other Services	40963 (14.98)	2025 (1.27)	43888 (8.71)
(i) - (ix)	All Category	273364 (100.00)	230319 (100.00)	503683 (100.00)

Note : Figures in parenthesis indicate percentages.

## CHAPTER V

### DISTRIBUTION OF WORKERS AND THEIR PRODUCTIVITY

Broad features of the labour force and its components in Manipur have been brought out in the preceding chapter. In this chapter an attempt has been made to examine the structure of the working force<sup>1/</sup> and its distribution among different industrial categories<sup>2/</sup> as also the changes that have taken place over time therein. An attempt has also been made to analyse these aspects in the context of rural and urban regions of Manipur. Further the hypothesis that, "..... the progress of an economy is in general associated with the relationship between the development of an economy on the one hand, and the structural changes of the working force by various industrial categories therein over a period of time, on the other"<sup>3/</sup> has been examined in the context of Manipur to the extent it can be done by examining the changes in productivity of the sectoral workers.

The structure of the working force can be examined by analysing in details the workers' participation rate by industrial category, or in other words, by examining the distribution

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1/ It should be noted that the data on the working force etc. used for analytical purposes in this and in the subsequent chapters are adjusted ones on the basis of the methodology discussed in the preceding chapter and hence comparable over time.

2/ Industrial category refers to the nine industrial categories as adopted by the Census of India, 1961 and 1971.

3/ Colin Clark, Conditions of Economic Progress, Mc. Millan and Co., London, 1951, p. 182.



of workers among different industrial categories.

### 5.1 Workers' Participation Rate :

Examining the workers' participation rate (Table 5.1), it is found that the participation rate in Manipur as a whole declined considerably (i.e., from 51.54 per cent in 1951 to 46.96 per cent in 1971). This suggests a higher rate of growth of population as compared to the growth in the number of workers. Manipur being predominantly rural, this aggregate picture was equally applicable to the Manipur-rural (Table 5.2). Though the workers' participation rate in the Manipur-urban was substantially lower than that in Manipur as a whole, the rate of fall over the years was considerably lower (Table 5.3) than that of the Manipur-rural or Manipur as a whole. Of the different industrial categories, workers' participation rate was the highest in the category of cultivators; agriculture being the key sector of the economy. What is more, participation rate in this category was more or less constant in the range of 32.02 in 1951 and 30.02 in 1961. The category of agricultural labourers which was almost non-existent (0.13 per cent in 1951) increased to the participation rate of 1.78 per cent in 1971. Participation rate in household industry which was as much as 13.01 in 1951 tended to be continuously

Table 5.1

## WORKERS' PARTICIPATION RATES BY SEX AND BY INDUSTRIAL CATEGORY IN MANIPUR, 1951-1971

Sr. No.	Industrial Category	1951			1961			1971		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11
I	Cultivators	41.15	23.16	32.02	36.48	23.66	30.02	35.53	27.88	31.74
II	Agricultural Labourers	0.15	0.11	0.13	0.31	0.25	0.28	1.84	1.72	1.78
III	Livestock, forestry, fishing hunting, plantation, orchard and allied activities	1.38	0.99	1.18	0.14	0.06	0.10	0.43	0.10	0.27
IV	Mining and Quarrying	0.11	0.00	0.06	0.00	0.00	0.00	0.02	0.00	0.01
V(a)	Household-Industry	3.68	22.07	13.01	1.88	18.29	10.15	1.25	11.77	6.46
V(b)	Manufacturing other than household-industry	-	-	-	0.22	0.07	0.14	0.84	0.29	0.57
VI	Construction	0.21	0.01	0.11	0.52	0.06	0.29	0.84	0.02	0.43
VII	Trade and commerce	2.17	3.67	2.93	1.38	1.67	1.52	1.42	1.03	1.23
VIII	Transport, storage and communications	0.52	0.10	0.31	0.78	0.01	0.39	0.74	0.01	0.38
IX	Other services	3.08	0.54	1.79	5.61	0.41	2.99	7.56	0.55	4.09
I-IX	All Categories	52.46	50.65	51.54	47.31	44.48	45.89	50.47	43.37	46.96

Sources: (1) Registrar General, *op.cit.*,

(11) For 1971, the figures have been worked out from Table 4-A.11.

**Table 5.2**

**WORKERS' PARTICIPATION RATE BY SEX AND BY INDUSTRIAL CATEGORY IN MANIPUR-RURAL, 1951-1971**

Sr. No.	Industrial Category	1951			1961			1971		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11
I	Cultivators	41.15	23.16	32.02	39.79	25.88	32.77	39.44	31.81	35.66
II	Agricultural Labourers	0.15	0.11	0.13	0.33	0.28	0.30	1.96	1.83	1.90
III	Livestock, forestry, fishing, hunting, orchards, plantation and allied activities	1.38	0.99	1.18	0.15	0.06	0.11	0.43	0.10	0.27
IV	Mining and Quarrying	0.11	0.00	0.06	0.00	0.00	0.00	0.01	0.00	0.01
V(a)	Household-Industry	3.68	22.07	13.01	1.46	16.92	9.26	9.98	9.03	4.96
V(b)	Manufacturing other than household-industry	-	-	-	0.16	0.00	0.10	0.55	0.24	0.39
VI	Construction	0.21	0.01	0.11	0.39	0.06	0.23	0.63	0.01	0.32
VII	Trade and commerce	2.17	3.67	2.93	0.83	1.30	1.07	0.73	0.68	0.70
VIII	Transport, storage and communications	0.52	0.10	0.31	0.48	0.00	0.24	0.45	0.01	0.23
IX	Other services	3.08	0.54	1.79	4.33	0.30	2.30	6.90	0.37	3.67
I-IX	All Categories	52.46	50.65	51.54	47.92	44.86	46.38	52.08	44.08	48.11

Sources : (i) Registrar General, *op.cit.*,

(ii) For 1971, the figures have been worked out from Table 4-A, 9.

**Table 5.3**

**WORKERS' PARTICIPATION RATE BY SEX AND BY INDUSTRIAL CATEGORY IN MANIPUR-URBAN, 1961-1971**

Sr. No.	Industrial Category	1961			1971		
		Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8
I	Cultivators	2.22	0.01	1.13	9.74	1.99	5.90
II	Agricultural Labourers	0.07	-	0.03	1.10	0.97	1.03
III	Livestock, forestry, fishing, hunting, plantation, orchard and allied activities	0.08	-	0.04	0.45	0.09	0.27
IV	Mining and Quarrying	-	-	-	0.05	-	0.02
V(a)	Household-Industry	6.23	32.81	19.44	3.06	29.77	16.28
V(b)	Manufacturing other than household-industry	0.80	0.29	0.55	2.78	0.65	1.73
VI	Construction	1.81	-	0.91	2.20	0.04	1.13
VII	Trade and commerce	7.01	5.59	6.31	5.95	3.38	4.68
VIII	Transport, storage and communications	3.90	0.01	1.97	2.64	0.04	1.35
IX	Other services	18.86	1.60	10.29	11.95	1.74	6.90
I-IX	All Categories	40.99	40.31	40.65	39.92	38.67	39.29

Sources : (1) Registrar General, op.cit.,

(11) For 1971, the figures have been worked out from Table 4-A.10.

declining and reached at the level of 6.46 in 1971. This observation was applicable to both rural and urban Manipur separately in varying degrees. Participation rates only in construction and other services increased continuously although between the two industrial categories, the rate of increase was higher in the case of the latter. This observation was also applicable to the Manipur-rural. But in the Manipur-urban, except for the categories of cultivators, agricultural labourers, manufacturing and construction, the participation rates declined in all the remaining categories during the last decade (1961-1971).

#### 5.2 Distribution of Workers by Industrial Category :

Examining the distribution of workers among the nine industrial categories as shown in Table 5.4, Table 5.5 and Table 5.6, the following important features can be noted.

In Manipur as a whole, the workers in industrial categories of cultivators, agricultural labourers and household-industry together accounted for as much as 87.63 per cent of the total workers in 1951 indicating once again the preponderance of agriculture and household-industry in the economy of Manipur. The preponderance of these two sectors retained even in 1971, the two sectors together accounting for 85.15 per cent. This observation was essentially applicable to the Manipur-rural. But in the Manipur-urban household-industry, trade and commerce and other services

Table 5.4

## DISTRIBUTION OF TOTAL WORKERS BY SEX INTO DIFFERENT INDUSTRIAL CATEGORIES IN MANIPUR, 1951-1971

Sr. No.	Industrial Category	1951			1961			1971		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11
I	Cultivators	117060 (78.43)	67893 (45.72)	184953 (62.12)	141182 (77.10)	92996 (53.20)	234178 (65.43)	192433 (70.39)	148042 (64.28)	340475 (67.60)
II	Agricultural Labourers	433 (0.29)	336 (0.23)	769 (0.26)	1186 (0.65)	998 (0.57)	2184 (0.61)	9979 (3.65)	9140 (3.97)	19119 (3.80)
III	Livestock, forestry, fishing, hunting, plantation, orchard and allied activities	3924 (2.63)	2899 (1.95)	6823 (2.29)	557 (0.30)	231 (0.13)	788 (0.22)	2356 (0.86)	541 (0.73)	2897 (0.58)
IV	Mining and Quarrying	317 (0.21)	5 (0.00)	322 (0.11)	17 (0.01)	- (0.00)	17 (0.01)	91 (0.03)	20 (0.01)	111 (0.02)
V(a)	Household-Industry	10470 (7.02)	64689 (43.57)	75159 (25.25)	7291 (3.98)	71875 (41.12)	79166 (22.12)	6776 (2.48)	62486 (27.13)	69262 (13.75)
V(b)	Manufacturing other than household-industry	-	-	-	848 (0.46)	258 (0.15)	1106 (0.31)	4570 (1.67)	1541 (0.67)	6111 (1.21)
VI	Construction	596 (0.40)	31 (0.02)	627 (0.21)	2003 (1.09)	233 (0.13)	2236 (0.62)	4538 (1.66)	89 (0.04)	4627 (0.92)
VII	Trade and commerce	6186 (4.15)	10758 (7.25)	16944 (5.69)	5328 (2.91)	6561 (3.75)	11889 (3.32)	7669 (2.81)	5480 (2.38)	13149 (2.61)
VIII	Transport, storage and communications	1475 (0.99)	295 (0.20)	1770 (0.59)	3014 (1.65)	19 (0.01)	3033 (0.85)	3989 (1.46)	55 (0.02)	4044 (0.80)
IX	Other services	8774 (5.88)	1576 (1.06)	10350 (3.48)	21701 (11.85)	1622 (0.94)	23323 (6.51)	40963 (14.98)	2925 (1.27)	43888 (8.71)
I-IX	All Categories	149235 (100.00)	148482 (100.00)	297717 (100.00)	183127 (100.00)	174793 (100.00)	357920 (100.00)	273364 (100.00)	230310 (100.00)	503683 (100.00)

Note : Figures in parenthesis indicate percentages.

Sources : Same as Table 5.1

Table 5.5

## DISTRIBUTION OF WORKERS BY SEX INTO DIFFERENT INDUSTRIAL CATEGORIES IN MANIPUR-RURAL, 1951-1971

Sr. No.	Industrial Category	1961			1971		
		Male	Female	Total	Male	Female	Total
I	Cultivators	140423 (83.02)	92992 (57.68)	233415 (70.66)	185474 (75.75)	146648 (72.16)	332122 (74.12)
II	Agricultural Labourers	1163 (0.69)	998 (0.62)	2161 (0.65)	9196 (3.76)	8459 (4.16)	17655 (3.94)
III	Livestock, forestry, fishing, hunting, plantation, orchard and allied activities	530 (0.31)	231 (0.14)	761 (0.23)	2032 (0.83)	476 (0.23)	2508 (0.56)
IV	Mining and Quarrying	17 (0.01)	-	17 (0.01)	56 (0.02)	20 (0.01)	76 (0.02)
V(a)	Household-Industry	5165 (3.05)	60820 (37.73)	65985 (19.97)	4593 (1.88)	41632 (20.49)	46225 (10.32)
V(b)	Manufacturing other than household-industry	575 (0.34)	159 (0.10)	734 (0.22)	2583 (1.05)	1087 (0.54)	3670 (0.82)
VI	Construction	1385 (0.82)	233 (0.14)	1618 (0.49)	2965 (1.21)	59 (0.03)	3024 (0.67)
VII	Trade and commerce	2935 (1.74)	4678 (2.90)	7613 (2.30)	3419 (1.40)	3112 (1.53)	6531 (1.46)
VIII	Transport, storage and communications	1684 (1.00)	15 (0.01)	1699 (0.51)	2104 (0.86)	27 (0.01)	2131 (0.48)
IX	Other services	15265 (9.02)	1083 (0.67)	16348 (4.45)	32427 (13.24)	1705 (0.83)	34132 (7.61)
I-IX	All Categories	169142 (100.00)	161209 (100.00)	330351 (100.00)	244849 (100.00)	203225 (100.00)	448074 (100.00)

Note : Figures in parenthesis indicate percentages.

Sources : Same as Table 5.2

**Table 5.6**

**DISTRIBUTION OF WORKERS BY SEX INTO DIFFERENT INDUSTRIAL CATEGORIES IN MANIPUR-URBAN, 1961-1971**

Sr. No.	Industrial Category	1961			1971		
		Male	Female	Total	Male	Female	Total
I	Cultivators	759 (5.43)	4 (0.03)	763 (2.77)	6959 (24.40)	1394 (5.15)	8353 (15.02)
II	Agricultural Labourers	23 (0.16)	-	23 (0.08)	783 (2.75)	681 (2.51)	1464 (2.63)
III	Livestock, forestry, fishing, hunting, plantation, orchard and allied activities	27 (0.19)	-	27 (0.10)	324 (1.14)	65 (0.24)	389 (0.70)
IV	Mining and Quarrying	-	-	-	35 (0.12)	-	35 (0.06)
V(a)	Household-Industry	2126 (15.20)	11055 (81.38)	13181 (47.81)	2183 (7.66)	20854 (76.97)	23037 (41.43)
V(b)	Manufacturing other than household-industry	273 (1.95)	99 (0.73)	372 (1.35)	1987 (6.97)	454 (1.68)	2441 (4.39)
VI	Construction	618 (4.42)	-	618 (2.24)	1573 (5.52)	30 (0.11)	1603 (2.88)
VII	Trade and commerce	2393 (17.11)	1883 (13.86)	4276 (15.51)	4250 (14.90)	2368 (8.74)	6618 (11.90)
VIII	Transport, storage and communications	1330 (9.51)	4 (0.03)	1334 (4.84)	1885 (6.61)	28 (0.10)	1913 (3.44)
IX	Other services	6436 (46.02)	539 (3.97)	6975 (25.30)	8536 (29.93)	1220 (4.50)	9756 (17.59)
I-IX	All Categories	13985 (100.00)	13584 (100.00)	27569 (100.00)	28515 (100.00)	27094 (100.00)	55609 (100.00)

Note : Figures in parenthesis indicate percentages.

Sources : Same as Table 5.3



together accounted for 88.62 per cent of the total workers in 1961 suggesting the structural difference of the urban economy from that of rural areas in the State. Over the years, however, the importance of these three sectors declined substantially in that they together accounted for only 70.87 per cent of the total workers in 1971. It is worth noting that the fall in the share of these three sectors had been more or less matched up by the increasing share of the category of cultivators and agricultural labourers, together accounting for 17.65 per cent of the total workers in Manipur-urban.

In a dynamic sense, while the importance of the industrial categories like cultivators, agricultural labourers, construction, transport, storage and communication and manufacturing and other services had been increasing in the economy of Manipur as a whole, the remaining sectors had displayed a falling tendency over the years. More important, the significance of the household-industry as a source of employment had been declining. Broadly speaking, these observations hold good even in the case of Manipur-rural. In the Manipur-urban, industrial categories of cultivators, agricultural labourers, livestock, etc., manufacturing and construction demonstrated an increasing importance whereas the major urban activities such as household industry, trade and commerce and other services were losing ground. However, with the new emergence of manufacturing other than household-industry

(from 1.35 per cent in 1961 to 4.39 per cent in 1971), construction (from 2.24 per cent in 1961 to 2.88 per cent in 1971) and the significant increase in cultivators (from 2.77 per cent in 1961 to 15.02 per cent in 1971); the Manipur-urban displayed an extent of dispersion of activities. But the point is that greater dispersion had taken place in favour of agricultural activities. This fact may suggest that Manipur-urban has been a mere extension of rural peripheries. In other words, the process of urbanisation in Manipur has not brought in its trail in a big way the activities that are generally associated with urban areas. As will be discussed later, in the absence of the medium and large-scale industries in the State the shift of the workers in the traditionally important industrial category of household industry which is associated with lower productivity took place in favour of relatively more productive industrial category of cultivators.

In Manipur as a whole, in 1951, male workers were found mainly in the industrial categories of cultivators (78.43 per cent of the total male workers) and the household industry (7.02 per cent). Female workers, on the other hand, were predominant in the industrial category of cultivators (45.72 per cent of the total female workers), household-industry (43.57 per cent) and trade and commerce (7.25 per cent), they together accounting for 96.54 per cent of the total female workers. Urban workers being apparently of marginal significance in the overall context, this really represents the picture of Manipur-

rural. In 1971, the industrial category of cultivators, as a source of employment to male workers, retained its predominance (70.39 per cent of the total male workers) in the economy of Manipur. The household-industry yielded its place to other services that accounted for 14.98 per cent (as against 2.48 per cent by the household-industry). On the other hand, while female workers still concentrated in the industrial category of cultivators (64.28 per cent) and household industry (27.13), considerable shift took place in favour of the category of cultivators. The other point to note is that trade and commerce which accounted for 7.25 per cent of the total female workers paled into insignificance (2.38 per cent in 1971). In essence this picture represented the Manipur-rural as well. In Manipur-urban, however, the industrial categories of other services (46.02 per cent of the total male workers), trade and commerce (17.11 per cent), household-industry (15.20 per cent); transport, storage and communications (9.51 per cent) - these were important in that order as sources of employment for male workers in 1961. In 1971, other services, cultivators, trade and commerce, household-industry and agricultural labourers absorbed 29.93 per cent, 24.40 per cent, 14.90 per cent, 7.66 per cent and 2.75 per cent, respectively of the total male workers; together they accounted for 79.64 per cent. Female workers in urban areas were largely concentrated in household-industry, trade and commerce and other services. This was true even in 1971, though as sources of employment to female workers, their rela-

tive position notably changed. The household-industry absorbed 76.97 per cent of the female workers in 1971 as against 47.81 per cent in 1961; trade and commerce 8.74 per cent in 1971 as against 15.51 per cent in 1961; and other services 4.50 per cent in 1971 as against 25.30 per cent in 1961. The shift of this type on the part of female workers might suggest that over the years job requirements under trade and commerce and other services might have so changed that they elbowed out female workers from these industrial categories.

### 5.3 Distribution of Workers by Occupation :

The discussion of these broad feature of the distribution of working force among nine industrial categories may be further supplemented by a brief reference to the different types of occupations in which workers were engaged. With this purpose in view Table 5.7 incorporating the information on distribution of workers in Manipur as a whole by 64 types of occupation<sup>4/</sup> under each category of economic activity<sup>5/</sup> has been presented. The figures presented in this table relate to 1961.

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<sup>4/</sup> The two concepts of 'industrial category' and 'occupation' are quite distinct. 'Industry' means that sector of economic activity in which the earner is engaged, whereas, occupation describes the exact function that an individual performs in that industrial category or economic activity. For details See Census of India 1961, District Census Handbook, Manipur, Part I, p. 36. Here it can also be noted that occupational classification refers to National classification of occupation.

<sup>5/</sup> These nine economic activities will not exactly correspond to the nine industrial categories. For, these nine economic activities are based on the categories adjusted for estimating the sectoral output in the State Domestic Product for further examination.

Table 5.7

## DISTRIBUTION OF WORKERS BY DIFFERENT OCCUPATION AND ECONOMIC ACTIVITY IN MANIPUR, 1961 :

Occupational Code No.	Name of the occupation	Economic Activity									
		A(i)	A(ii)	A(iii)	A(iv)	A(v)	A(vi)	A(vii)	A(viii)	A(ix)	I-IX
1	2	3	4	5	6	7	8	9	10	11	12
00	Architects, Engineers and Surveyors	-	-	-	-	-	12	-	-	411	423
01	Chemists, Physicists, Geologists and other Physical Scientists	-	-	-	-	-	-	-	-	5	5
02	Biologists, Veterinarians, Agronomists and Related Scientists	-	-	-	-	-	-	-	-	74	74
03	Physicians, Surgeons and Dentists	-	-	-	-	-	-	-	-	692	692
04	Nurses, Pharmacists and other Medical and Health Technicians	-	-	-	-	-	-	-	-	581	581
05	Teachers	-	-	-	-	-	-	-	-	7292	7292
06	Jurists	-	-	-	-	-	-	-	-	137	137
07	Social Scientists and Related Workers	-	-	-	-	-	-	-	-	155	155
08	Artists, Writers and Related Workers	-	-	-	-	-	-	-	-	954	954
09	Draughtsmen, and Science and Engineering Technicians(n.e.c.)	-	-	-	-	-	-	-	-	48	48
0X	Other Professional, Technical and Related Workers	-	-	-	-	-	-	-	-	883	883
10	Administrators and Executive Officials, Government	-	-	-	-	-	-	-	-	1115	1115
12	Directors, Managers and Working Proprietors, Financial Institutions	-	-	-	-	-	-	-	3	-	3
13	Directors, Managers and Working Proprietors others	-	-	-	-	1	391	-	2	537	931
20	Book-keepers and Cashiers	-	-	-	-	-	-	-	-	68	68
21	Stenographers and Typists	-	-	-	-	-	-	-	-	30	30

contd.

Table 5.7 contd.

Occupational Code No.	Name of the occupation	Economic Activity									
		A(i)	A(ii)	A(iii)	A(iv)	A(v)	A(vi)	A(vii)	A(viii)	A(ix)	I-IX
1	2	3	4	5	6	7	8	9	10	11	12
22	Office Machine Operator	-	-	-	-	-	-	-	-	6	6
28	Clerical Workers and Miscellaneous	-	-	-	-	-	-	-	-	1785	1785
29	Unskilled Office Workers	-	-	-	-	-	-	-	-	906	906
30	Working Proprietors, Wholesale and Retail Trade	-	-	-	-	-	-	2	-	-	2
31	Insurance and Real Estate Salesmen, Salesmen of Securities and Services, and Auctioneers	-	-	-	-	-	-	4	-	-	4
32	Commercial Travellers and Manufacturers' Agents	-	-	-	-	-	-	1	-	-	1
33	Salesmen, Shop-Assistants and Related Workers	-	-	-	-	-	-	11875	-	-	11875
34	Money-Lenders and Pawn-Brokers	-	-	-	-	-	-	1	-	-	1
40	Farmers and Farm Managers*	236362	-	-	-	28	-	-	-	62	236452
41	Farm Workers*	372	-	-	-	18	-	-	-	89	479
42	Hunters and Related Workers	-	-	2	-	-	-	-	-	-	2
43	Fishermen and Related Workers	-	-	265	-	24	-	-	-	-	289
44	Loggers and Other Forestry Workers	-	149	-	-	84	-	-	-	-	233
50	Miners and Quarrymen	-	-	-	17	-	-	-	-	-	17
61	Deck and Engine-Room Rating (Ship), Barge, Crews and Boatmen	-	-	-	-	-	-	-	23	-	23
64	Drivers, Road Transport	-	-	-	-	-	-	-	2866	-	2866
66	Inspectors, Supervisors, Traffic Controllers and Transport Despatchers, Transport	-	-	-	-	-	-	-	9	-	9
67	Telephone, Telegraph and Related Telecommunication Operators	-	-	-	-	-	-	-	28	-	28

contd.

Table 5.7 contd.

Occupational Code No.	Name of the occupation	Economic Activity										
		A(i)	A(ii)	A(iii)	A(iv)	A(v)	A(vi)	A(vii)	A(viii)	A(ix)	I-IX	
		3	4	5	6	7	8	9	10	11	12	
68	Postmen and Messengers	-	-	-	-	-	-	-	-	34	-	34
69	Workers in Transport and Communication Operation (n.e.c.)	-	-	-	-	-	-	-	-	40	-	40
70	Spinners, Weavers, Knitters, Dyers and Related Workers	-	-	-	-	69329	-	-	-	-	-	69329
71	Tailors, Cutters, Furriers and Related Workers	-	-	-	-	3526	-	-	-	-	-	3526
72	Leather cutters, Lasters and Sewers (except gloves and garments) and Related Workers	-	-	-	-	66	-	-	-	-	-	66
73	Furnacemen, Rollers, Drawers, Moulders, and Related Metal-making and Treating Workers	-	-	-	-	403	-	-	-	-	-	403
74	Precision Instrument Makers, Watch-makers, Jewellers and Related Workers	-	-	-	-	952	-	-	-	-	-	952
75	Tool-makers, Machinists, Plumbers, Welders, Platers and Related Workers	-	-	-	-	266	-	-	8	-	-	274
76	Electricians and Related Electrical and Electronics Workers	-	-	-	-	3	50	-	23	111	-	187
77	Carpenters, Joiners, Cabinet-makers, Coopers and Related Workers	-	-	-	-	3394	-	-	-	-	-	3394
79	Bricklayers, Plasters and Construction Workers (n.e.c.)	-	-	-	-	21	1561	-	-	-	-	1582
80	Compositors, Printers, Engravers, Book-binders and Related Workers	-	-	-	-	16	-	-	-	100	-	116
81	Potters, Kilnmen, Glass and Clay Formers and Related Workers	-	-	-	-	664	-	-	-	-	-	664

contd.

Table 5.7 contd.

Occupational Code No.	Name of the occupation	Economic Activity									
		A(i)	A(ii)	A(iii)	A(iv)	A(v)	A(vi)	A(vii)	A(viii)	A(ix)	I-IX
		3	4	5	6	7	8	9	10	11	12
82	Millers, Packers, Brew-masters and Related Food and Beverage Workers	-	-	-	-	814	-	3	-	-	817
83	Chemical and Related Process Workers	-	-	-	-	45	-	-	-	4	49
85	Craftsmen and Production Process Workers(n.e.c.)	-	-	-	-	618	-	-	-	1	619
86	Testers, Packers, Sorters and Related Workers	-	-	-	-	-	-	-	-	3	3
87	Stationery Engine and Excavating and Lifting Equipment Operators and Related Workers	-	-	-	-	-	-	-	-	1	1
89	Labourers (n.e.c.)	-	-	-	-	-	222	-	-	2006	2228
90	Fire-fighters, Policemen, Guards, and Related Workers	-	-	-	-	-	-	-	-	3452	3452
91	House-keepers, Cooks, Maids and Related Workers	-	-	-	-	-	-	-	-	743	743
92	Waiters, Bartenders and Related Workers	-	-	-	-	-	-	-	-	21	21
93	Building Care-takers, Cleaners and Related Workers	-	-	-	-	-	-	-	-	235	235
94	Barbers, Hair-dressers, Beauticians and Related Workers	-	-	-	-	-	-	-	-	79	79
95	Launders, Dry-cleaners and Pressers	-	-	-	-	-	-	-	-	96	96
96	Athletes, Sportsmen and Related Workers	-	-	-	-	-	-	-	-	8	8
97	Photographers and Related Camera Operators	-	-	-	-	-	-	-	-	72	72
99	Service, Sport and Recreation Workers(n.e.c.)	-	-	-	-	-	-	-	-	7	7
X8	Workers Reporting Occupation Unidentifiable or Unclassifiable	-	-	-	-	-	-	-	-	460	460
X9	Workers Not Reporting Occupation	-	-	-	-	-	-	-	-	94	94
<b>All Occupations</b>		<b>236734</b>	<b>149</b>	<b>267</b>	<b>17</b>	<b>80272</b>	<b>2236</b>	<b>11889</b>	<b>3033</b>	<b>23323</b>	<b>357920</b>

\* Cultivators and Agricultural Labourers are clubbed.

Note : A(i) refers to Agriculture including livestock, A(ii) refers to forestry and logging, A(iii) refers to Fishing and hunting, A(iv) refers to Mining and Quarrying, A(v) refers to household and other than household industries, A(vi) refers to construction, A(vii) refers to trade and commerce, A(viii) refers to Transport, storage and communication and A(ix) refers to other services, and I-IX refers to All Activities.

Source: Census of India 1961, District Census Handbook, Manipur, Part II, Table B V, Occupational Classification by sex of persons at work other than cultivation, pp. 44-47.



and the corresponding figures for any later year were not available so as to enable one to note the changes over time. It is also true that the classification of workers into such disaggregated occupational level was adopted for the first time in 1961 Census. Nevertheless, it serves the purpose of indicating the extent of diversified occupations that had been generated within an economic activity. The table clearly shows that economic activities such as manufacturing (though its size is very low) and other services generated demand for workers with more varied skills than those in the other activities. Between these two, other services generated still more diversified occupations.

At the broad occupational level, it can also be noted for Manipur that in 1961, farmers, fishermen, hunters, loggers and related workers (including cultivators and agricultural labourers) together accounted for 66.34 per cent<sup>6/</sup> of the total workers in all occupations while craftsmen, production process workers and labourers not elsewhere classified accounted for 23.53 per cent (Table 5.8). The rest i.e. only about 10.00 per cent was accounted for by all other occupations.

#### 5.4 Distribution of Workers by Sector :

After noting the main features of the distribution of workers among the nine industrial categories as per Census

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<sup>6/</sup> According to National Classification of Occupation, cultivators and agricultural labourers were excluded. Therefore these are clubbed with as per occupational classification, Code Nos. 40 and 41. See Table 5.7 (above).

**Table 5.8****DISTRIBUTION OF WORKERS BY MAJOR OCCUPATIONAL DIVISION  
IN MANIPUR, 1961 :**

Occupational Division Code	Name of the occupation	Number of persons employed
1	2	3
0	Professional, Technical and Related Workers	11244 (3.14)
1	Administrative, Executive and Managerial Workers	2049 (0.57)
2	Clerical and Related Workers	2795 (0.78)
3	Sales Workers	11883 (3.32)
4	Farmers, Fishermen, Hunters, Loggers and Related Workers	237455* (66.34)
5	Miners, Quarrymen and Related Workers	17 (0.01)
6	Workers in Transport, Storage and Communication	3000 (0.84)
7 & 8	Craftsmen, Production process workers and Labourers not elsewhere classified	84210 (23.53)
9	Service, Sport and Recreation Workers	4713 (1.32)
X	Workers not classified by occupation	554 (0.15)
0 - X	All occupations	357920 (100.00)

Note : Figures in parenthesis indicate percentages.

\* It includes cultivators and agricultural labourers as given in the classification of industrial category of workers.

Source: Same as Table 5.7.

classification, and also among different occupations with an economic activity, one may take a close view of the distribution of workers among the broad sectors such as Primary, Secondary and Tertiary. With this objective in view, time series data on workers in these three sectors during 1960-61 to 1970-71 have been estimated<sup>2/</sup> and presented in Table 5.9. The table clearly shows the growing importance of both Primary and Tertiary sectors as well as the declining significance of the Secondary sector as sources of employment to the workers. For example, in 1970-71, the Primary sector came to absorb 71.97 per cent of the workers as against 66.26 per cent in 1960-61 and the Tertiary sector accounted for 12.13 per cent of the total workers in 1970-71 as against 10.68 per cent in 1960-61. The increase in employment or absorption in these two sectors is matched by the falling share of the Secondary sector. In other words, shift of workers took place from the Secondary sector to the Primary and Tertiary sectors.

#### 5.5 Productivity of Sectoral Workers :

Now an attempt is made to explain this shift in terms of relative productivity per worker in these three sectors. Table 5.10 presents the relevant figures.

Examining the annual relative productivity per worker in these sectors it is found that the Tertiary sector took the lead at Rs. 1063.93 per annum per worker followed by Primary

<sup>2/</sup> The methodology adopted for estimating these data have been indicated in a note below Table 5.9.

Table 5.9

TREND OF SECTORAL WORKERS IN MANIPUR, 1960-61 TO 1970-71 :

Year	Primary	Secondary	Tertiary	Total
1	2	3	4	5
1960-61	237150 (66.26)	82525 (23.06)	38245 (10.68)	357920 (100.00)
1961-62	247429 (66.91)	82280 (22.25)	40078 (10.84)	369787 (100.00)
1962-63	258153 (67.55)	82036 (21.46)	41999 (10.99)	382188 (100.00)
1963-64	269342 (68.16)	81793 (20.70)	44012 (11.14)	395147 (100.00)
1964-65	281016 (68.76)	81550 (19.95)	46122 (11.29)	408688 (100.00)
1965-66	293196 (69.34)	81309 (19.23)	48332 (11.43)	422837 (100.00)
1966-67	305904 (69.90)	81068 (18.52)	50649 (11.57)	437621 (100.00)
1967-68	319163 (70.44)	80827 (17.84)	53077 (11.72)	453067 (100.00)
1968-69	332996 (70.97)	80588 (17.18)	55621 (11.85)	469205 (100.00)
1969-70	347430 (71.48)	80349 (16.53)	58287 (11.99)	486066 (100.00)
1970-71	362491 (71.97)	80111 (15.91)	61081 (12.13)	503683 (100.00)

Note : Figures in parenthesis indicate percentages.

The compound growth rate has been computed using the 1961 and 1971 Census reports. The time series for the in between period has been generated by using the method of interpolations.

The following combinations of Census industrial categories are made for sectoral workers :

Primary Sector comprises (i) Cultivators (ii) Agricultural labourers, and (iii) Livestock, Forestry etc.

Secondary Sector comprises (i) Mining and quarrying, (ii) Household-industry (iii) Manufacturing other than household-industry and (iv) Construction.

Tertiary Sector comprises (i) Trade and Commerce, (ii) Transport, storage and communication and (iii) Other services.

Table 5.10

**TREND OF PRODUCTIVITY OF PER-SECTORAL WORKER 1961-71  
AFTER ADJUSTING THE 1971 CENSUS WORKERS**

				(in Rs. 0.00) per annum
Year	Primary	Secondary	Tertiary	
1	2	3	4	
1960-61	280.71	144.56	1063.93	
1961-62	243.75	151.19	1083.89	
1962-63	225.64	157.98	1090.26	
1963-64	243.96	164.19	1107.20	
1964-65	234.54	171.43	1181.87	
1965-66	253.31	178.58	1181.24	
1966-67	350.89	186.14	1186.80	
1967-68	313.70	194.12	1208.24	
1968-69	360.76	202.51	1189.12	
1969-70	335.18	210.95	1177.11	
1970-71	237.74	220.94	1201.19	

**Note :** The sectoral productivities have been estimated by dividing the sectoral output (Table 2.10) by the corresponding workers (Table 5.9). To make them correspond, the year 1960-61 has been taken as 1961.

sector at Rs. 280.71 per annum per worker and Secondary sector at Rs. 144.56 per annum per worker in 1961. The relative picture had not been changed even in 1971. But when the rate of growth of productivity at constant prices is examined with reference to the period 1960-61 to 1970-71, it is noticed that the Secondary sector had taken the lead (4.20 per cent) followed by Primary sector (2.50 per cent) and Tertiary sector (1.30 per cent) thus showing an inverse relationship between the growth and the average level of productivity per worker. On the other hand, the rate of growth of workers is positively related to the average level and negatively related to the growth rate of productivity.

*Trends in  
productivity  
Needs to  
be  
explored  
further*

These observed features can be explained in the following manner. It is possible that Secondary sector, in fact, constituted mostly of the household sector in 1960-61. Over the years, some manufacturing units, construction activities etc., where productivity is likely to be higher might have emerged resulting in a higher growth of productivity. On the other hand, the average productivity level of the Secondary sector (i.e. mostly household industry) in 1960-61 being low, workers shifted from this sector to the sectors having higher productivity. Because there could be an extent of disguised unemployment in this sector, the shift of workers might have, in fact, resulted in higher productivity.

## CHAPTER VI

### FEATURES OF AGRICULTURAL DEVELOPMENT

It has already emerged in the earlier discussion that agriculture is the predominant sector in the economy of Manipur. In this chapter, the importance of agricultural sector will be examined in greater details. An attempt will also be made to examine the underlying forces that are associated with its growing importance. Finally, considering the characteristic features of the economy of Manipur and the forces that are at work therein, it will be examined whether agricultural production can meet the food requirement of the growing population.

In view of the sectoral context, at the very outset it should also be noted that agriculture constitutes only one of the components of the primary sector. The other components are livestock, forestry, fishing, plantation and other allied activities. As can be seen in the earlier chapter, the primary sector plays a very important role in the economy of Manipur. But within the primary sector, agriculture-proper<sup>1/</sup> is no doubt the most significant component. However, this

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<sup>1/</sup> Agriculture-proper implies the activity which is associated with the raising of crops. Thus workers such as cultivators and agricultural labourers engaged in raising crops are considered explicitly.

cannot be shown with the help of figures, as official statistics on net State Domestic Product do not provide information at such disaggregated information.<sup>2/</sup> Nevertheless, we know that agriculture including livestock accounted for about 89.02 per cent in 1961-62 to 95.99 per cent in 1969-70 of the total income from the primary sector (Table 6.1). Again, the distribution of workers among the different categories under primary sector bears testimony to the fact that agriculture-proper is the predominant activity within the activities of the primary sector. For example, activities other than agriculture within the primary sector together accounted for only 3.54 per cent in 1951. More important, over the years, the significance of the other activities under the primary sector has been relegated to the background. Thereby the importance of agriculture-proper was further enhanced. For example, in 1971 the activities other than agriculture-proper accounted for only 0.88 per cent of the total workers engaged in the primary sector, whereas agriculture-proper absorbed 99.12 per cent (Table 6.2).

While examining the agricultural output, vis-a-vis workers engaged in agricultural activities, it is found that the income per worker in agricultural activity increased from

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<sup>2/</sup> This is because the industrial origin as adopted by the estimate of State Domestic Product of Manipur used 'Agriculture including Livestock' as one of the individual industrial origins. See Government of Manipur, Estimates of State Domestic Product of Manipur, op.cit.



**Table 6.1****DISTRIBUTION OF INCOME FROM PRIMARY SECTOR IN DIFFERENT INDUSTRIAL ORIGIN IN MANIPUR, 1960-61 TO 1970-71 :**

<b>Year</b>	<b>Agriculture including livestock</b>	<b>Forestry and logging</b>	<b>Fishing</b>	<b>Primary Sector</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1960-61	627.0 (94.19)	24.8 (3.73)	13.9 (2.08)	665.7 (100.00)
1961-62	536.9 (89.02)	49.4 (8.19)	16.8 (2.79)	603.1 (100.00)
1962-63	538.7 (92.48)	27.0 (4.64)	16.8 (2.88)	582.5 (100.00)
1963-64	605.8 (92.19)	23.3 (3.55)	28.0 (4.26)	657.1 (100.00)
1964-65	618.7 (93.87)	16.0 (2.43)	24.4 (3.70)	659.1 (100.00)
1965-66	675.5 (90.95)	32.8 (4.42)	34.4 (4.63)	742.7 (100.00)
1966-67	1026.5 (95.63)	19.8 (1.85)	27.1 (2.52)	1073.4 (100.00)
1967-68	959.4 (95.83)	17.9 (1.79)	23.9 (2.38)	1001.2 (100.00)
1968-69	1150.7 (95.79)	24.9 (2.07)	25.7 (2.14)	1201.3 (100.00)
1969-70	1117.8 (95.99)	19.4 (1.67)	27.3 (2.34)	1164.5 (100.00)
1970-71	802.5 (93.12)	32.0 (3.71)	27.3 (3.17)	861.8 (100.00)

Note : Figures in parenthesis indicate percentages.

Source: Government of Manipur, Estimates of State Domestic Product of Manipur, 1960-61 to 1971-72, Department of Statistics, Imphal.

Table 6.2

DISTRIBUTION OF TOTAL WORKERS IN AGRICULTURE-PROPER BY  
SEX INTO CULTIVATORS, AGRICULTURAL LABOURERS AND THE  
ALLIED ACTIVITIES IN MANIPUR, 1951-1971 :

Year	Sex	Cultivators	Agricultural Labourers	Livestock, forestry, fishing, hunting, plantation orchard & allied activities	Total workers in primary sector
1	2	3	4	5	6
1951	Male	117060 (96.41)	433 (0.36)	3924 (3.23)	121417 (100.00)
	Female	67893 (95.45)	336 (0.47)	2899 (4.08)	71128 (100.00)
	Total	184953 (96.06)	769 (0.40)	6823 (3.54)	192545 (100.00)
1961	Male	141182 (98.78)	1186 (0.83)	557 (0.39)	142925 (100.00)
	Female	92996 (98.70)	998 (1.06)	231 (0.24)	94225 (100.00)
	Total	234178 (98.75)	2184 (0.92)	788 (0.33)	237150 (100.00)
1971	Male	192433 (93.98)	9979 (4.87)	2356 (1.15)	204768 (100.00)
	Female	148042 (93.86)	9140 (5.79)	541 (0.34)	157723 (100.00)
	Total	340475 (93.93)	19119 (5.27)	2897 (0.80)	362491 (100.00)

Note : Figures in parenthesis indicate percentages.

Source : Deduced from Table 5.4.

Rs. 281 in 1961 to Rs. 326 in 1971.<sup>3/</sup> This means that, the rate of growth of agricultural output outstripped the rate of growth of workers in agricultural activities. This high rate of growth of agricultural output might have been possible because of favourable change in land utilization or because of higher productivity in agriculture or a combination of both. To get an idea as to the causes of its happening, one will have to examine the characteristic features of the different aspects associated with the agricultural development in Manipur.<sup>4/</sup>

#### 6.1 Land Resources and Utilization :

The utilization of land resources forms an important variable in a predominantly agricultural economy. But the data on land utilization statistics of Manipur are not available

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<sup>3/</sup> The income of per agricultural workers has been arrived by dividing the sectoral income (State income from agriculture including livestock) by the corresponding year's total workers in agriculture (i.e. cultivators + agricultural labourers).

<sup>4/</sup> A study of agricultural situation particularly with special reference to manpower utilization therein, in a planned economy like ours is necessary and will be useful in several ways. It enables one to assess the progress of agricultural development through employment and production in a region. Also it helps in locating the weakness in the existing programme by providing a view of the future in the perspective of the past. It serves as the interrelationship between agricultural development and growth of other sectors and an overall economy at length which calls for a proper utilization of economic inputs. See, W. Arthur Lewis, The Theory of Economic Growth, London, 1955, p. 334.

uniformly for the State as a whole for the period from 1950-51 to 1970-71, due to lags in the cadastral survey. To be more specific, the cadastral survey was confined only to the valley region until 1959-60 and was extended to cover the entire State only thereafter. The other difficulty is that the concepts that had been finally used in the classification of land utilization were different in the period as compared to the former one. These difficulties inhibit the comparison on a continuous basis. Therefore it is proper to discuss land utilization statistics separately for the two periods viz., (i) 1950-51 to 1959-60 and (ii) 1960-61 to 1970-71.

#### 6.1.1 Changes in Land Utilization During 1950-51 to 1959-60:

According to the classification for the period 1950-51 to 1959-60 (Table 6.3), there were four categories of land in the reported area viz., (i) Land not available for cultivation; (ii) Cultivable waste, pastures and other cultivable land excluding fallow lands; (iii) Fallow lands and (iv) Net sown area. In all the categories of land in Manipur during this period, there were not much significant changes by the land-use pattern. Throughout the period, the reported area for classification remained constant. There was also no change in the total area under the category of land not available for cultivation. In 1950-51, out of the total reported area of 140.0 thousand hectares, 85.0 thousand hectares of 60.71 per

Table 6.3

CLASSIFICATION OF LAND RESOURCES BY DIFFERENT CATEGORY IN  
MANIPUR, 1950-51 TO 1959-60 :

(Area in '000 hectares)							
Year	Reported area	Categories of land					Total cropped area
		Not available for cultivation	Cultivable waste, pastures & other cultivable land excluding fallows	Fallow lands	Net sown area		
1	2	3	4	5	6	7	
1950-51	140.0 (100.00)	15.0 (10.71)	34.8 (24.86)	5.2 (3.71)	85.0 (60.71)	85.0 (60.71)	
1951-52	140.0 (100.00)	15.0 (10.71)	38.8 (27.71)	4.0 (2.86)	82.2 (58.71)	82.2 (58.71)	
1952-53	140.0 (100.00)	15.0 (10.71)	39.3 (28.07)	4.0 (2.86)	81.7 (58.36)	71.6 (51.14)	
1953-54	140.0 (100.00)	15.0 (10.71)	39.3 (28.07)	4.0 (2.86)	81.7 (58.36)	70.8 (50.57)	
1954-55	140.0 (100.00)	15.0 (10.71)	36.8 (26.29)	@	88.2 (63.00)	87.8 (62.71)	
1955-56	140.0 (100.00)	15.0 (10.71)	36.8 (26.29)	@	88.2 (63.00)	88.2 (63.00)	
1956-57	140.0 (100.00)	15.0 (10.71)	34.8 (24.86)	@	90.2 (64.43)	86.6 (61.86)	
1957-58	140.0 (100.00)	15.0 (10.71)	31.5 (22.50)	@	93.5 (66.79)	93.5 (66.79)	
1958-59	140.0 (100.00)	15.0 (10.71)	31.2 (22.29)	@	93.8 (67.00)	93.8 (67.07)	
1959-60	140.0 (100.00)	15.0 (10.71)	31.2 (22.29)	@	93.8 (67.00)	93.8 (67.00)	

Note : Figures in parenthesis show percentages and the figures given in terms of acres in the original data have been converted to hectares where 1 acre = 0.4047 hectares;

@ denotes negligible.

Source : Government of India, Central Statistical Organization (C. S. O.), Statistical Handbook of Agriculture.

cent was accounted for by the net sown area; whereas in 1959-60, net sown area constituted 67.00 per cent of the total reported area for land utilization. The changes in the size of the net sown area were directly related to the changes in the category of land under cultivable waste, pastures and other cultivable and fallow land. For example, from 1951-52 to 1953-54 the size of the fallow lands, which could be reduced by extending the net sown area, declined from 5.2 thousand hectares or 3.71 per cent in 1950-51 to 4.0 thousand hectares or 2.86 per cent in 1952-53 and since then to a negligible share in the reported area. Thus it reveals that the land under the category of cultivable waste, pastures and other cultivable land excluding fallow, having increased in area, the net sown area declined slightly to 82.2 thousand hectares in 1951-52 and to 81.7 thousand hectares in 1952-53 as well as 1953-54, as compared to the 1950-51 level. In 1954-55 the size of the net sown area again revived to 88.2 thousand hectares constituting 63.00 per cent of the total reported area. Then it gradually increased to 93.9 thousand hectares which accounted for 67.07 per cent of the total reported area in the year 1959-60. The annual rate of growth of net sown area was 1.67 per cent during the whole period from 1950-51 to 1959-60.

#### 6.1.2 Changes in Land Utilization During 1960-61 to 1970-71:

The classification of the reported area for the period, 1960-61 to 1970-71, was based on five main categories of land,

viz., (i) Forests, (ii) Not available for cultivation, (iii) Other uncultivated land (iv) Fallow lands and (v) Net sown area. Amongst these five categories of land, except the land under the categories of (i) and (v), there were again sub-classes of land under each category. The reported area for land utilization in the year 1960-61 was 2197.5 thousand hectares as compared to 140.0 thousand hectares in 1959-60. Between the two terminal years (1959-60 and 1960-61) the difference of reported area was 2057.5 thousand hectares. It is obvious that this bulk increase was mainly because of the inclusion of hill regions which occupy major part of the State, in the coverage of the survey conducted after 1959-60. As can be seen in Table 6.4, there was a gradual increase in the reported area showing an increase of 13.5 thousand hectares during the decade, 1960-61 to 1970-71.<sup>5/</sup>

Out of the total reported area in 1960-61, the area of land under the category of forest and not available for cultivation occupied 602.2 thousand hectares and 1408.7 thousand hectares, which constituted respectively, about 27.00 per cent and 64.00 per cent of the total reported area. The size of the forest area remained the same throughout the

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<sup>5/</sup> Increasing trend in 'Reported area' has been caused perhaps broadly by two major reasons: First, some of the areas which are not reported have become reported due to cadastral survey, de-novo or revisional and/or Institution of the reporting agency. Secondly, the village records have been corrected and brought up to date. For similar case, See R. Giri, 'Changes in Land Use Pattern in India', Journal of Agricultural Economics, Vol. XXI, No. 3, July-September, 1966, pp. 23-32.

Table 6.4

## CLASSIFICATION OF LAND RESOURCES BY DIFFERENT CATEGORY IN MANIPUR, 1960-61 TO 1970-71 :

(Area in '000 hectares)

Year	Geo-graphical area	Reporting area for land utilization	Classification of Reporting area																			
			Forest	Not available for cultivation		Permanent pastures & other grazing land	Other uncultivated land excluding fallow lands		Fallow lands			Net sown area										
1	2	3	4	Area under non-agricultural uses	Barren and unculturable land		6	7	8	Land under misc., trees & crops not included in net sown area	9		Culturable waste land	10	Total	11	Fallow lands other than current fallows	12	Current fallows	13	Total	14
1960-61	2235	2197.5 (100.00)	602.2 (27.40)	26.7 (1.22)	1382.0 (62.89)	1408.7 (64.11)	-	24.7 (1.12)	-	24.7 (1.12)	-	-	-	-	-	-	-	-	-	-	-	161.9 (7.37)
1961-62	2235	2198.2 (100.00)	602.2 (27.40)	26.7 (1.21)	1382.0 (62.87)	1408.7 (64.08)	-	19.8 (0.90)	-	19.8 (0.90)	-	-	-	-	-	-	-	-	-	-	-	167.5 (7.62)
1962-63	2235	2198.6 (100.00)	602.2 (27.39)	26.7 (1.21)	1382.0 (62.86)	1408.7 (64.08)	-	21.4 (0.97)	-	21.4 (0.97)	-	-	0.4 (0.00)	0.4 (0.00)	-	-	-	-	-	-	-	165.9 (7.55)
1963-64	2235	2198.7 (100.00)	602.2 (27.39)	26.8 (1.22)	1380.0 (62.76)	1406.8 (63.98)	-	24.2 (1.10)	-	24.2 (1.10)	-	-	0.2 (0.00)	0.2 (0.00)	-	-	-	-	-	-	-	165.3 (7.52)
1964-65	2235	2198.7 (100.00)	602.2 (27.39)	26.8 (1.22)	1380.0 (62.76)	1406.8 (63.93)	-	24.2 (1.10)	-	24.2 (1.10)	-	-	0.2 (0.00)	0.2 (0.00)	-	-	-	-	-	-	-	165.3 (7.52)
1965-66	2235	2198.7 (100.00)	602.2 (27.39)	26.8 (1.22)	1380.0 (62.76)	1406.8 (63.93)	-	24.2 (1.10)	-	24.2 (1.10)	-	-	0.2 (0.00)	0.2 (0.00)	-	-	-	-	-	-	-	165.3 (7.52)
1966-67	2235	2199.0 (100.00)	602.2 (27.39)	27.0 (1.23)	1380.0 (62.76)	1407.0 (63.98)	-	24.0 (1.09)	-	24.0 (1.09)	-	-	1.0 (0.00)	1.0 (0.00)	-	-	-	-	-	-	-	165.0 (7.50)
1967-68	2235	2211.0 (100.00)	602.2 (27.23)	26.0 (1.18)	1380.0 (62.42)	1406.0 (63.60)	-	24.0 (1.06)	-	24.0 (1.06)	-	-	-	-	-	-	-	-	-	-	-	179.0 (8.10)
1968-69	2236	2211.0 (100.00)	602.2 (27.23)	26.0 (1.18)	1380.0 (62.42)	1406.0 (63.60)	-	24.0 (1.06)	-	24.0 (1.06)	-	-	-	-	-	-	-	-	-	-	-	179.0 (8.10)
1969-70	2236	2211.0 (100.00)	602.2 (27.23)	26.0 (1.18)	1380.0 (62.42)	1406.0 (63.60)	-	24.0 (1.06)	-	24.0 (1.06)	-	-	-	-	-	-	-	-	-	-	-	179.0 (8.10)
1970-71	2236	2211.0 (100.00)	602.2 (27.23)	26.0 (1.18)	1380.0 (62.42)	1406.0 (63.60)	-	24.0 (1.06)	-	24.0 (1.06)	-	-	-	-	-	-	-	-	-	-	-	179.0 (8.10)

Note : Figures in parenthesis indicate percentages. '-' denotes negligible.  
Source: Government of India, Ministry of Food & Agriculture, Agricultural Situation in India (different volumes).



period from 1960-61 to 1970-71, and the area not available for cultivation declined to 1406.0 thousand hectares by 1963-64 and remained constant at that level in the subsequent years. However, although there was a slight increase in the reported area during the period from 1960-61 to 1970-71, the proportion of Area not available for cultivation remained more or less unchanged.

In other words, with the inclusion of the hill region in the cadastral survey the net sown area in the State almost doubled while its share in the total reported area declined enormously. This was so because the hill region occupying nine-tenth of Manipur's total geographical area had much larger share of Forest-land and Land not available for cultivation, as compared to its valley counterpart. But this observation by itself does not mean much because even before the inclusion of hill region in the cadastral survey, the Net sown area was there; only it was not reported. Yet the fact remains that the net sown area as percentage of the total reported area of the valley region was substantially higher than that of the hill region. In other words, in the hill region, because of shifting cultivation (Jhum) the ratio between net sown area and total reported area is bound to be much higher.

Further, the essential point is whether the size of net sown area in the State as a whole increased over time. As noted above and can be seen from Tables 6.3 and 6.4, the

net sown area at least in the valley region increased from 85.0 thousand hectares in 1950-51 to 93.8 thousand hectares in 1959-60. Even during the later period, i. e. 1960-61 to 1970-71, the net sown area in the State increased from 161.9 thousand hectares to 179.0 thousand hectares. An index of the trend of increase is shown in Table 6.5. It may be

Table 6.5

CHANGES IN THE NET SOWN AREA BY BASE YEAR'S INDEX

Year	Indices of net sown area	Year	Indices of net sown area
1	2	3	4
1950-51	100.00	1960-61	100.00
1951-52	96.71	1961-62	103.46
1952-53	96.12	1962-63	102.47
1953-54	96.12	1963-64	102.10
1954-55	103.76	1964-65	102.10
1955-56	103.76	1965-66	102.10
1956-57	106.12	1966-67	101.91
1957-58	110.00	1967-68	110.56
1958-59	110.47	1968-69	110.56
1959-60	110.47	1969-70	110.56
		1970-71	110.56

Sources : Deduced from Tables 6.3 and 6.4.

noted that the rate of increase in the net sown area during the later period, i.e. 1960-61 to 1970-71, resulted mainly from the expansion of coverage of the reporting area and, to a marginal extent, from the utilization of fallow land. Therefore it cannot be conclusively shown that the increase in net sown area during the period from 1960-61 to 1970-71 was real, in the sense that more area was brought under cultivation. To what extent this increase was real would depend on whether or not the additional area reported was under cultivation before reporting. In the earlier period however, as shown above, the increase in the net sown area was mainly because of bringing cultivable waste, pastures and other cultivable land including fallows under cultivation and thus the increase in the net sown area was clearly noticeable.

Thus the increase in agricultural production during the years, 1960-61 to 1970-71, could not strictly be related to the increase in the net sown area. It might however partly relate to the increase in the area sown more than once, because this type of land went up from 4.0 thousand hectares (2.41 per cent of the total cropped area) in 1960-61 to 9.0 thousand hectares (4.79 per cent) in 1970-71 (Table 6.6).

Incidentally, the discussion on net sown area leads one to the question whether there was enough scope for increasing net sown area in the State. Table 6.7 suggests

Table 6.6

DISTRIBUTION OF TOTAL CROPPED AREA BETWEEN 'NET SOWN AREA'  
AND 'AREA SOWN MORE THAN ONCE' IN MANIPUR,  
1960-61 TO 1970-71 :

(Area in '000 hectares)			
Year	Net sown area	Area sown more than once	Total cropped area
1	2	3	4
1960-61	161.9 (97.59)	4.0 (2.41)	165.9 (100.00)
1961-62	167.5 (96.49)	6.1 (3.51)	173.6 (100.00)
1962-63	165.9 (97.36)	4.5 (2.64)	170.4 (100.00)
1963-64	165.3 (95.27)	8.2 (4.73)	173.5 (100.00)
1964-65	165.3 (95.27)	8.2 (4.73)	173.5 (100.00)
1965-66	165.3 (95.27)	8.2 (4.73)	173.5 (100.00)
1966-67	165.0 (94.83)	8.2 (5.17)	174.0 (100.00)
1967-68	179.0 (95.21)	9.0 (4.79)	188.0 (100.00)
1968-69	179.0 (95.21)	9.0 (4.79)	188.0 (100.00)
1969-70	179.0 (95.21)	9.0 (4.79)	188.0 (100.00)
1970-71	179.0 (95.21)	9.0 (4.79)	188.0 (100.00)

Note : Figures in parenthesis indicate percentages.

Source : Same as Table 6.4.

Table 6.7

**CHANGES IN THE RECLAIMABLE LAND IN MANIPUR :  
1960-61 TO 1970-71 :**

(Area in '000 hectares)			
Year	Arable land	Net sown area	Reclaimable land
1	2	3	4
1960-61	186.6 (100.00)	161.9 (86.76)	24.7 (13.24)
1961-62	187.3 (100.00)	167.5 (89.43)	19.8 (10.57)
1962-63	187.7 (100.00)	165.9 (88.39)	21.8 (11.61)
1963-64	189.7 (100.00)	165.3 (87.14)	24.4 (12.86)
1964-65	189.7 (100.00)	165.3 (87.17)	24.4 (12.86)
1965-66	189.7 (100.00)	165.3 (87.14)	24.4 (12.86)
1966-67	189.8 (100.00)	165.0 (86.93)	24.8 (13.07)
1967-68	202.8 (100.00)	179.0 (88.26)	23.8 (11.74)
1968-69	202.8 (100.00)	179.0 (88.26)	23.8 (11.74)
1969-70	202.8 (100.00)	179.0 (88.26)	23.8 (11.74)
1970-71	202.8 (100.00)	179.0 (88.26)	23.8 (11.74)

Note : Figures in parenthesis indicate percentages.

Source : Deduced from Table 6.4.

that net sown area constituted about 88.26 per cent of the total arable land (i.e. net sown area + cultivable waste + fallow land) in 1970-71, thus leaving the scope of bringing about 23.8 thousand hectares under cultivation with suitable programmes of land reclamation.

*Assum  
nearly  
on P.A.S  
Growth  
GCA  
should  
have  
been  
related  
w/output*

### 6.2 Land Per Agricultural-worker :

After observing the size of the net sown area and its changes over a period of time, it may be useful to examine its size in relation to the number of workers dependent on agricultural activity. For in an underdeveloped economy like Manipur there might be a tendency to exploit the economic possibilities of extension of land under cultivation rather than of intensive scientific farming.<sup>6/</sup> The availability of net sown area per worker engaged in agriculture was 0.685 hectares in 1961 and 0.683 hectares in 1971.<sup>2/</sup> This suggests that the rate of growth of workers engaged in agricultural activity was only slightly higher than that in the net sown area. That is, the increase in net sown area kept pace more or less the same with the increase in the number of workers in agriculture during the decade, 1961 to 1971. Thus the increase in the number of workers in the agricultural sector

6/ R.N. Tiwari, Agricultural Development and Population Growth (an analysis of Regional Trends in U.P.), Sultan Chand and Son, Delhi, 1970, p. 74.

2/ These have been arrived by dividing the total net sown area by the total workers engaged in proper agriculture.

does not seem to be very much detrimental to agricultural production in this decade.

### 6.3 Distribution of Land-holdings :

The validity of the above conclusion, however, depends on the distribution of land holding. But because of a lack of data on the distribution of cultivating households by land-holding size - such data are hardly available for any year other than 1961 - it is not possible to examine this aspect with reference to a recent period. However, the examination of the data on distribution of cultivating households by size of land holding for 1961 may throw some light (Table 6.8). In 1961, 37.41 per cent of the total number of cultivating households of Manipur belonged to the size class of 2.5 - 4.9 acres and 31.75 per cent to the size class of 1.0 - 2.4 acres. In short the cultivating households belonging to the group of holding below 10 acres accounted for about 95.00 per cent of the total cultivating households. Thus it may be concluded that there was no wide disparity in the distribution of land-holding. Even in 1971 the picture does not seem to have changed as far as it can be seen from the data relating to Manipur-rural (Table 6.9).<sup>3/</sup> For example, about 98.00

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<sup>3/</sup> It should be noted that the data in the table referred to is not comparable with those in Table 6.8 in the sense that the coverage of the latter was the entire Manipur, whereas the former provided data only for Manipur-rural. Again land distribution according to asset groups as provided for 1971 was not available for 1961.

Table 6.8

DISTRIBUTION OF CULTIVATING HOUSEHOLD BY SIZE OF  
LAND-HOLDING IN MANIPUR, 1961 :

Size of land holding (in acra)	Number of Household	Percentage of household to the total
1	2	3
Less than 1.0	1423	8.80
1.0 - 2.4	5130	31.75
2.5 - 4.9	6029	37.41
5.0 - 7.4	2107	13.16
7.5 - 9.9	591	3.70
10.0 - 12.4	284	1.78
12.5 - 14.9	68	0.42
15.0 - 29.9	157	0.99
30.0 - 49.9	49	0.30
50.0 - above	49	0.30
Unspecified	226	1.39
All - size class	16113	100.00

Source : Census of India 1961, District Census Handbook, Manipur, pp. 60-66.



Table 6.9

## ESTIMATED NUMBER OF RURAL HOUSEHOLDS ACCORDING TO ASSET GROUP AND AREA OF LAND OWNED IN MANIPUR, 1971:

Asset Groups (in rupees)	Land owned in acres															Total	
	(Household in '000)																
	Nil	0.01- 0.50	0.50- 1.00	1.00- 1.25	1.25- 2.50	2.50- 5.00	5.00- 7.50	7.50- 10.00	10.00- 12.50	12.50- 15.00	15.00- 20.00	20.00- 25.00	25.00- 30.00	30.00- 50.00	50.00- & above		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
Upto 500	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
500- 1000	1	3	1	..	1	..	-	-	-	-	-	-	-	-	-	-	6
1000- 2500	1	12	4	1	9	4	..	..	-	-	-	-	-	-	-	-	31
2500- 5000	1	10	6	2	10	4	1	..	..	-	-	-	-	-	-	-	34
5000-10000	..	3	3	2	15	11	2	..	..	-	-	-	-	-	-	-	36
10000-15000	-	..	1	1	5	7	2	..	..	-	-	-	-	-	-	-	16
15000-20000	..	..	..	-	2	4	1	..	1	-	-	-	-	-	-	-	8
20000-30000	-	..	-	-	..	3	2	1	..	..	..	..	-	-	-	-	6
30000-50000	-	-	-	-	-	1	1	1	..	..	-	-	-	-	-	-	3
50000-100000	-	-	-	-	-	..	-	..	-	-	..	..	-	..	-	-	-
100000- above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>6</b>	<b>29</b>	<b>15</b>	<b>6</b>	<b>42</b>	<b>34</b>	<b>9</b>	<b>2</b>	<b>1</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>-</b>	<b>..</b>	<b>-</b>	<b>-</b>	<b>144</b>

Note : .. indicates negligible,  
- Nil.

Source : Reserve Bank of India, All-India Debt and Investment Survey, 1971-72 - Assets and Liabilities of Rural Households as on 30th June, 1971 (Statistical Tables) Vol.1, All-India and States, 1975.

per cent of the households in different asset groups owned land below 10.00 acres and there was not a single household which owned land more than 15 acres.

The main reason for this virtual absence of large sized holding was that more than forty years ago the then Manipur State Darbar passed a resolution prohibiting the acquisition of more than 10 'pari' of cultivable land (24.8 acres or 10.04 hectares) per land owner except with special permission of the Darbar.<sup>9/</sup> Moreover, cultivable land in the hill areas being scarce and its distribution being wide apart, the acquisition of large holdings might have been difficult.

It may be argued that in view of a number of policy instruments adopted in the subsequent period for arresting concentration of land in the hands of few, not much distortion in distribution of land-holding could take place and this fact was likely to have favourable impact on agricultural production for the following reasons. First, the peasant proprietors (owner-cultivators) who constituted

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9/ 'Pari' is an old local unit of land measurement in Manipur, also see;

(i) G.D. Patel, op.cit., pp. 339-340,

(ii) Government of India, The Manipur Land Revenue and Land Reforms Act, 1960, Ministry of Land, p. 44,

(iii) Census of India 1961, District Census Handbook, Manipur, Part-I, p. 16.

the overwhelming proportion of the workers engaged in agricultural activity in Manipur (the class of agricultural labourers constituted only 380 per cent of the total workers in 1971) were expected to take active interest in rising the farm outputs. Secondly, many farm management studies brought out that small farms had an edge over the last counterpart in terms of yields per acre.<sup>10/</sup> It may, therefore, be concluded that the type of land distribution that was obtained in Manipur would be positively associated with the increasing agricultural output in Manipur.

#### 6.4 Cropping Pattern :

In an attempt to understand the phenomenon of increasing agricultural output, the choice of crops and their relative productivity can be examined.

There are various types of common crops like wheat, sugar-cane, tobacco, mustard, pulses, potato etc., which are grown in different parts of the State. The climate and soil of Manipur, particularly in the hills regions, are reported as very congenial to growing a variety of agricultural crops like orange, pineapple, lemon, guava, plantain,

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<sup>10/</sup> This might be because of many reasons. For instance, (i) labour input per acre (ii) the capital investment per acre etc. are higher in the small-sized farms than the larger-sized farms. Ajit K. Dasgupta, op.cit., pp. 27-34.

plum, peas etc. Many of the crops that can be grown in other parts of the country can be also grown in the valley region. Cropping pattern that emerges in a region depends on a large number of factors such as environment, soil, topography, rainfall, and so on. But it is difficult to take into account all these criteria while examining the cropping pattern obtained in a region.

However, the suitability of environment for farming in a particular region can be ascertained on the basis of the existing comparative advantages of a crop in regard to (a) the extensiveness of the area sown under it, (b) the higher yield and (c) its greater market value. These criteria implicitly take into account the suitability of soil, supply of agricultural water and other inputs, tradition and motivations of the farmers which are all prerequisites for the optimization of the cropping pattern.

Examining the areas under different crops, it is found that the areas under foodgrains took the largest share of the total cropped area. For example it accounted for as much as 162.9 thousand hectares (98.19 per cent) of the total cropped area of 165.9 thousand hectares in 1960-61 and 144.1 thousand hectares (76.65 per cent) of the total cropped area of 188.0 thousand hectares in 1970-71 (Table 6.10). It reveals that while the total cropped area increased, the area under foodgrains decreased.

Table 6.10

DISTRIBUTION OF TOTAL CROPPED AREA INTO 'AREA UNDER FOODGRAINS' AND 'AREA UNDER NON-FOODGRAINS' IN MANIPUR, 1960-61 TO 1970-71 :

(Area in '000 hectares)			
Year	Area under foodgrains	Area under non-foodgrains	Total cropped area
1	2	3	4
1960-61	162.9 (98.19)	3.0 (1.81)	165.9 (100.00)
1961-62	162.3 (93.49)	11.3 (6.51)	173.6 (100.00)
1962-63	162.7 (95.48)	7.7 (4.52)	170.4 (100.00)
1963-64	163.1 (94.01)	10.4 (5.99)	173.5 (100.00)
1964-65	163.1 (94.01)	10.4 (5.99)	173.5 (100.00)
1965-66	163.1 (94.01)	10.4 (5.99)	173.5 (100.00)
1966-67	168.5 (96.84)	5.5 (3.16)	174.0 (100.00)
1967-68	179.0 (95.21)	9.0 (4.79)	188.0 (100.00)
1968-69	174.5 (92.82)	13.5 (7.18)	188.0 (100.00)
1969-70	150.3 (79.95)	37.7 (20.05)	188.0 (100.00)
1970-71	144.1 (76.65)	43.9 (23.35)	188.0 (100.00)

Note : Figures in parenthesis show the percentages.

Sources : (i) Government of India, Ministry of Agriculture, Indian Agricultural Statistics, 1964-65, Vol. I, and  
(ii) Area and Production of Principal Crops in India, 1971-72.

But the point to note is that while the cultivation of foodgrains still accounted for the largest share of the total cropped area, the cultivation of non-food grains was gradually picking up.

Further, among the foodgrains that are grown in Manipur, rice is the most important, so much so that, the area under rice accounted for 99.57 per cent in 1960-61, which slightly reduced to 97.50 per cent of the total area under foodgrains in 1970-71 (Table 6.11) as against the corresponding figure of 30.24 per cent for all-India (Table 6.12) which remained more or less constant during the decade under review. But the changes in the area under total foodgrains was related to the changes in the area under rice cultivation. In fact, the agricultural economy of Manipur can be called as rice economy. The only other foodgrains grown in Manipur was maize, accounting for 2.85 per cent in 1970-71. Yet as indicated above, some other crops might in fact be grown in Manipur. Because of the lack of information on the break up of the non-foodgrains due to very high units of measurement of area (in thousand hectares) and production (in thousand tonnes) as indeed adopted in the source of data itself, further disaggregated analysis of the cropping pattern would not be possible.

The reason for such a high concentration in the cultivation of rice can be found in its high yield per hectare. In fact, the yield of rice per hectare was substa-

Table 6.11

DISTRIBUTION OF AREA UNDER FOODGRAINS INTO AREA UNDER DIFFERENT FOODGRAINS IN MANIPUR, 1960-61 TO 1970-71 :

(Area in '000 hectares)				
Year	Area under rice	Area under maize	Area under wheat	Total area under foodgrains
1	2	3	4	5
1960-61	162.2 (99.57)	0.4 (0.25)	0.3 (0.18)	162.9 (100.00)
1961-62	161.5 (99.50)	0.4 (0.25)	0.4 (0.25)	162.3 (100.00)
1962-63	161.8 (99.45)	0.4 (2.25)	0.5 (0.30)	162.7 (100.00)
1963-64	160.5 (98.41)	2.3 (1.41)	0.3 (0.18)	163.1 (100.00)
1964-65	160.5 (98.41)	2.3 (1.41)	0.3 (0.81)	163.1 (100.00)
1965-66	160.5 (98.41)	2.3 (1.41)	0.3 (0.18)	163.1 (100.00)
1966-67	160.9 (95.49)	7.6 (4.51)	-	168.5 (100.00)
1967-68	174.0 (97.21)	5.0 (2.79)	-	179.0 (100.00)
1968-69	167.0 (95.70)	7.5 (4.30)	-	174.5 (100.00)
1969-70	144.0 (95.81)	0.3 (4.19)	-	150.3 (100.00)
1970-71	140.0 (97.50)	4.1 (2.85)	-	144.1 (100.00)

Note : Figures in parenthesis show the percentages.

Source : Same as Table 6.10.

**Table 6.12**

**DISTRIBUTION OF AREA UNDER FOODGRAINS INTO AREA UNDER RICE AND AREA UNDER FOODGRAINS OTHER THAN RICE FOR ALL-INDIA, 1960-61 TO 1970-71**

(Area in '000 hectares)			
Year	Area under rice	Area under foodgrains other than rice	Total area under foodgrains
1	2	3	4
1960-61	34,128 (29.53)	81,453 (70.47)	1,15,581 (100.00)
1961-62	34,694 (29.59)	82,538 (70.41)	1,17,232 (100.00)
1962-63	35,695 (30.29)	82,149 (69.71)	1,17,844 (100.00)
1963-64	35,809 (30.50)	81,612 (69.50)	1,17,421 (100.00)
1964-65	36,462 (30.87)	81,650 (69.13)	1,18,112 (100.00)
1965-66	35,273 (31.17)	77,901 (68.83)	1,13,174 (100.00)
1966-67	35,251 (30.57)	80,051 (69.43)	1,15,302 (100.00)
1967-68	36,437 (32.41)	75,984 (67.59)	1,12,421 (100.00)
1968-69	36,967 (30.70)	83,463 (69.30)	1,20,430 (100.00)
1969-70	37,680 (30.49)	85,890 (69.51)	1,23,570 (100.00)
1970-71	37,592 (30.24)	86,724 (69.76)	1,24,316 (100.00)

Note : Figures in parenthesis indicate percentages.

Source : Government of India, Ministry of Food and Agriculture, Estimates of Area and Production of Principal Crops in India, 1965-66, 1966-67, 1968-69 and 1970-71, Directorate of Economics and Statistics.



ntially higher in Manipur as compared to that for all-India (Table 6.13). More important, even though there were some fluctuations in the yield of rice per hectare, it was no doubt increasing. The rate of growth of the yield was 4.18 per cent per annum during the decade, 1960-61 to 1970-71.

The third criterion i.e. whether the crop market has greater value cannot be examined in quantitative terms because of lack of necessary information. It may be, however, argued that in the absence of a local demand for industrial raw materials - Manipur has hardly any large-scale industry - and in the face of a great demand for rice, the staple food of the people, rice may have a greater market value particularly with improvement in the intra-State and inter-State transportation system.

#### 6.5 Operational Methods of Cultivation :

It is only common knowledge that the level of production is closely associated with the methods of production. As there are certain peculiarities, the methods of cultivation as practised in Manipur may be described briefly. There are two traditional system of cultivation - one is practised in the valley region and the other at the hill region. In the valley, ploughing is almost entirely carried on by iron-tipped wooden ploughs pulled by draught cattle. The number of such ploughs was 51,007 in 1951 and it rose to

High yields close to natural average on HYV Paddy; no explain. also almost doubling over period. In next section he says had machine still on.

Table 6.13

**COMPARATIVE YIELD RATE OF RICE PER HECTARE BETWEEN  
MANIPUR AND ALL-INDIA 1950-51 TO 1970-71**

Year (1)	(Yield in Kilogrammes)		
	Manipur (2)	All-India (3)	Difference* 4 = (2-3)
1950-51	1065	668	+ 397
1951-52	837	714	+ 123
1952-53	1008	764	+ 244
1953-54	942	902	+ 40
1954-55	1516	820	+ 696
1955-56	1324	874	+ 450
1956-57	923	900	+ 23
1957-58	689	790	- 101
1958-59	653	930	- 277
1959-60	596	937	- 341
1960-61	795	1013	- 218
1961-62	669	1028	- 359
1962-63	667	931	- 264
1963-64	667	1033	- 366
1964-65	1418	1078	+ 340
1965-66	1535	862	+ 673
1966-67	1616	863	+ 753
1967-68	1414	1032	+ 382
1968-69	1796	1076	+ 720
1969-70	1611	1073	+ 538
1970-71	1316	1134	+ 182

\* (+) indicate more yield in Manipur,

(-) indicates less yield in Manipur.

Source : Government of India, Ministry of Food and Agriculture, Estimates of Area and Production of Principal Crops in India, 1961-62 and 1962-63 (Summary Tables) p. 34, 63-64 and 64-65, also 1949-50 to 1966-67, 67-68 to 1969-70 and 70-71, Directorate of Economics and Statistics.

61,333 in 1956 and 1,04,125 in 1961. Other common important agricultural implements are locally-made hoes, wooden harrows, sickles and bullock carts.

In the valley ploughing is generally done in the months of April and May after the first showers of the year soften the soil. However, more intensive ploughing is carried on in June and July when it rains.

There are three methods of cultivation in the valley (a) Punghul or dry-seeds cast on dry grounds which are properly ploughed and are allowed to grow to full stature without the seedlings being transplanted; (b) Pamphel-humba i.e. setting of seedlings. In this second method the land is ploughed in April and May. The field is further brought up in June and July by successive ploughings and harrowings into a state of liquid mud and then the seedlings are cast for getting to plants, and (c) Lingthokpa i.e. transplantation of the tender paddy plants.

Among these three methods of cultivation, two methods - Punghul and Pamphel-humba - are simpler although the third one is the most common in the valley districts of Manipur. For the Lingthokpa method, seeds are first sown for tender plants upto the height of one to one and half foot in plots carefully prepared for the purpose, preferably nearby to the field where transplantation is to be made. In the transplanting season which is generally in

late June and July, the plants are pulled up in handfuls and again inserted with care in the fields prepared for the purpose.

Before the plants reach their full stature, in general, much care is taken for their healthy growth. All these are carried on by hard manual labour in the old traditional way which is less economical in any case.

The harvesting season generally lasts from October to the early parts of December in a year. It takes about nine months to get the output in Manipur, so far as the cultivation of paddy is concerned.

In the hill areas, the system of cultivation is quite different from that practice in the valley region. As in many parts of the world inhabited by hill people, in Manipur, too there is a primitive system of cultivation, technically known as 'Panlou-Uba'<sup>11/</sup> i.e. shifting-cultivation. This system is operated as follows : a piece of land is selected, the trees or bushes are cut down, allowed to dry and then set on fire. In the plots of land which are thus cleared, seeds are sown in little holes dug in the ground which is covered by ashes. No plough is used and no animal is employed. All is done by human labour as the main

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<sup>11/</sup> This is a commonly known local terminology. But still the language of a particular tribe is different from that of another tribe in the State itself and they have different term within the community also.

input other than land and seeds. Such a field, which is not replenished by any manure naturally except the ashes obtained from firing, is subject to fast operation of diminishing returns and is practically exhausted in two or three years' time. Then the farmer moves over to a new part of forest and allows plants to grow in the abandoned field. When the abandoned fields are once more covered by adequate plants to become a bush or a forest, the farmer may return there again for cultivation. Conklin described shifting cultivation as 'any continuing agricultural system in which impermanent clearings are cropped for shorter periods in years than they are fallowed'.<sup>12/</sup> For hill region agricultural seasons and methods of operations vary from place to place. But in general, the land is cleared in the months of January and February; crops are sown during May to June and harvesting starts in October and ends at about the early part of December. According to the Commission for Scheduled-Caste and Scheduled-Tribes,<sup>13/</sup> those engaged in shifting cultivation constituted 78.50 per cent of the total tribal workers categorized as cultivators in Manipur and the per cultivator availability of land was 0.20 acres in 1961. To a small extent, permanent wet rice cultivation with the aid of

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<sup>12/</sup> N.K. Banerjee, 'An Appraisal of Shifting Cultivation in India' in M.L. Patel (Ed.) Agro-Economic Problems of Tribal India, Progress Publishers, Bhopal, 1972, p. 105.

<sup>13/</sup> Government of India, Report of the Commission for Scheduled-Caste and Scheduled-Tribes, New Delhi, 1961.

hoes on built-up flat terraces on hill sides also co-exist with shifting cultivation in the hills.

These methods of cultivation which are of traditional nature do not seem to have changed much over time. Thus they might not have helped to raise agricultural production in Manipur. This only stresses the point that, if improved methods of cultivation could be introduced, agricultural productivity which is already high, could be further increased and, perhaps, an extent of diversification in cropping patterns could be introduced.

#### 6.6 Agricultural Production and Population Growth :

The above analysis clearly indicates that the agricultural operation in Manipur was characterized by a monoculture, that of rice, and that this crop was associated with a very high yield. Again, except during the recent years, the production of non-food grains did not play an important role in the agriculture of Manipur. Thus the economy being geared to the local demand for rice, it will be worthwhile to examine whether the increasing production of rice could meet the needs of the growing population of Manipur.

The simple way of looking into this aspect is to compare the rate of growth of population with that of rice production during a particular period. Viewed from this angle, the production of rice in Manipur during the period,

1960-61 to 1970-71 compared very well with the rate of growth of population. Rice production recorded a rate of growth of 9.5 per cent per annum as compared to the population growth of 3.6 per cent per annum. But this type of measure is at times very misleading because agricultural production is subject to substantial year-to-year fluctuations, as can be seen from Table 6.14.

Another way of drawing qualitative inference regarding this aspect is to examine the change in land-man ratio over time. The land-man ratio (i.e. per capita net sown area) declined from 0.21 hectare in 1961 to 0.17 hectare in 1971. This indicates that the rate of growth of population outstripped the rate of growth of the net sown area. However, the fall in the land-man ratio was more than compensated by the rate of growth of productivity at least in the case of rice.

Land-Man  
Ratio &  
GCA  
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N.A.S.

The other way is examining the gap (shortage or surplus) between the net total rice production and the total requirement of the population. For measuring the gap there could be two criteria viz., (i) the normative requirement from the nutritional viewpoint and (ii) the actual demand for consumption of the population by different levels of expenditure class. Our main concern here being the examination of the balance between the production of the predominant crop and its local consumption, both the criteria have been applied with respect to rice alone. The

Table 6.14

PRODUCTION AND YIELD OF RICE IN MANIPUR, 1950-51 TO  
1970-71 :

Year	Area in '000 hectares	Production in '000 tonnes	Yield per hectare in kg.
1	2	3	4
1960-61	162.2	127.0	795
1961-62	161.5	107.0	669
1962-63	161.8	108.0	667
1963-64	160.5	109.0	677
1964-65	160.5	185.0	1418
1965-66	160.5	218.7	1535
1966-67*	160.9	260.0	1616
1967-68*	174.0	246.0	1414
1968-69**	167.0	300.00	1796
1969-70**	144.0	232.0	1611
1970-71**	140.0	184.2	1316

\*Partially revised; Note: Data for 1950-51 to 1960-61 which is given in terms of acres and lbs. has been converted into hectares and kgs.

\*\*Final Estimates;

Source : Government of India, Ministry of Food and Agriculture, Estimate of Area and Production of Principal Crops in India (different volumes upto 1970-71), Directorate of Economics and Statistics.



other reason for such a restrictive approach is the lack of availability of data on other agricultural production.<sup>14/</sup>

According to the first criterion,<sup>15/</sup> the norm generally adopted is 165 kilograms of cereals per annum for the rural population and 133 kilograms per annum for the urban population. Measured on this basis the total requirement of rice is worked out at 113.89 thousand tonnes as against the net production of 114.30 thousand tonnes<sup>16/</sup> in 1960-61. In 1971 the requirement stood at 156.62 thousand tonnes as against the net production of 165.60 p thousand tonnes. Thus the net production of rice in the State left considerable surplus over the total requirement, if this criterion be adopted.

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<sup>14/</sup> In the case of Manipur it should be noted that rice can be said to be the only item of cereal that figures in the food basket of the people of Manipur in the most significant way.

<sup>15/</sup> R.N. Tiwari, op.cit., pp. 44-45.

<sup>16/</sup> The 'net-foodgrain production' is the quantity of production available for consumption to the masses after deducting 10.00 per cent of the total gross production for waste, seeds, animal feeding etc. According to some studies the amount to be deducted accounts for 12.50 per cent of the total gross output of cereals. But since we examine only for 'rice', it is assumed to be more justifiable to deduct only 10.00 per cent as in this case the share of animal feeding is hardly taken into account.

Applying the second criterion<sup>12/</sup> with reference to the period, February 1963 to January 1964, for which alone the NSS data on consumption is available for the State of Manipur, the annual per capita consumption of rice in Manipur was found to be about 222 kilograms for the rural population and 238 kilograms for the urban population. It is only obvious that these figures are significantly higher than the ones adopted from the first criterion. Measured in terms of this criterion, the total requirement of rice for the total population of Manipur is worked out at 236 thousand tonnes for 1971. This figure is clearly much higher than the net production of rice in the same year. However as noted earlier the year 1970-71 was particularly a bad year for agricultural production in Manipur. Viewed in the context of the net production of rice in the preceding four or five years, the shortfall in rice requirement did not appear so alarming, as can be seen in

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<sup>12/</sup> In this criterion we use the expenditure elasticities presented in the earlier discussion. See Chapter III. We assume that per capita expenditure in specific item is a function of total expenditure. Then the demand for rice is worked out by fitting  $e_1(t) \approx e_1(0) (1 + \mathcal{L} t \beta_1)$  where  $e_1(t)$  = per capita expenditure on 1<sup>th</sup> item in the year  $t$ ,  $e_1(0)$  = per capita expenditure on 1<sup>th</sup> in the base year(0),  $\mathcal{L}$  = rate of growth of per capita total expenditure (income) and  $\beta_1$  = expenditure elasticity for 1<sup>th</sup> item.

Table 6.14. To be on the safe side, one may therefore conclude that the production of rice in the normal year seems to have met need of the growing population of the State. This should be more so, if a proper distribution system with shortage and the buffer-stocks be assumed.

It thus appears that the production of rice, at least, was commensurate with the needs of the growing population; the distribution of land holdings was relatively better in Manipur and agricultural operations were associated with quite a high productivity. Even so, 15.00 to 35.00 per cent of the rural population of Manipur, as shown in an earlier chapter, were below the poverty line. This means that, eventhough the net production of rice in the State was more or less adequate, some 15.00 to 35.00 per cent of the population - all villagers - did not get enough to eat. This was so either because they did not produce enough in the farms if they were cultivators or because they did not earn enough to buy enough cereals if they were engaged as other workers. It can be argued therefore that the traditional sectors, such as agriculture and household industry, were associated with disguised unemployment or underemployment. For the size of the two apparently vulnerable classes viz., unemployed and the agricultural labourers, as percentages of the total rural population was far below the level of poverty worked out for this region.

The unemployed category accounted for only about 0.93 per cent and the proportion of agricultural labourers (whose earnings might be low) for 0.30 per cent of the total rural population.

Thus an economy associated with somewhat a comfortable position of supply of the most important wage-good on the one hand and with the phenomenon of underemployment on the other, the economy of Manipur provides the case for evolving and implementing suitable industrial programmes that could help an optimal use of manpower. In the next chapter an attempt will be made to indicate broadly the directions in which such programmes could be undertaken.

## CHAPTER VII

### MANPOWER UTILIZATION IN NON-AGRICULTURAL SECTOR

In this chapter manpower utilization in the non-agricultural sector, consisting of the secondary and tertiary sectors and changes therein over time have been examined. At the level of disaggregation, the household industry constitutes the most significant sub-sector from the viewpoint of manpower utilization. Hence, the main focus here has been given on highlighting the industrial features of the economy of Manipur. An attempt has also been made to examine the spatial distribution of the industries that had come into existence in the State. Finally, after considering all these aspects broad strategies for industrial development have been suggested.

#### 7.1 Features of Non-agricultural Sector :

The share of non-agricultural sector in the net-State Domestic Product (at 1960-61 prices) varied from 51.37 per cent in 1970-71 to 40.71 per cent in 1968-69 (Table 7.1). These fluctuations in its share had been resulted as noted earlier from the fluctuations in income generated by the primary sector. The non-agricultural sector's share in the total employment of the State, on the other hand, had been continuously declining from 35.32 per cent in 1951 to 28.03 per cent in 1971 (Table 7.2). The point to note is that

**Table 7.1**

**SIZE AND PROPORTION OF NON-AGRICULTURAL SECTOR IN THE NET-STATE DOMESTIC PRODUCT OF MANIPUR, 1960-61 TO 1970-71 :**

Year	Net-State Domestic Products (Rs. in lakhs)		Share of non-agricultural sector (Rs. in lakhs)		Percentage share of	
	At current prices	At constant prices	At current prices	At constant prices	Col. (4) in Col. (2)	Col. (5) in Col. (3)
1	2	3	4	5	6	7
1960-61	1191.9	1191.9	526.2	526.2	44.15	44.15
1961-62	1217.2	1161.9	597.3	558.8	49.07	48.09
1962-63	1454.1	1170.0	743.4	587.5	51.12	50.22
1963-64	1698.4	1278.7	813.4	621.6	47.89	48.61
1964-65	1854.7	1344.0	914.7	684.9	49.32	50.96
1965-66	2448.4	1462.2	1069.4	719.5	43.68	49.21
1966-67	4112.9	1825.4	1225.2	742.0	29.79	41.20
1967-68	4037.7	1799.4	1429.4	798.2	35.40	44.36
1968-69	4825.4	2025.9	1679.6	824.6	34.81	40.71
1969-70	4348.3	2020.1	1738.2	855.6	39.97	42.46
1970-71	4152.9	1773.1	1963.7	911.3	47.29	51.37

Source : Government of Manipur, Estimates of State Domestic Product of Manipur, 1960-61 to 1970-71, Department of Statistics, Imphal.

Table 7.2

SIZE OF NON-AGRICULTURAL WORKING FORCE AS COMPARED  
TO THE TOTAL WORKING FORCE IN MANIPUR, 1951-1971 :

Year 1	Sex 2	Total working force 3	Non- agricultural working force 4	Percentage share of Col. 4 in Col. 3 5
1951	Male	149235	27818	18.64
	Female	148482	77354	52.10
	Person	297717	105172	35.32
1961	Male	183127	40202	21.95
	Female	174793	80568	46.09
	Person	357920	120770	33.74
1971	Male	273364	68596	25.09
	Female	230319	72596	31.52
	Person	503683	141192	28.03

Source: Deduced from Table 5.4 in Chapter V.

despite the falling share of non-agricultural sector in employment, income from this sector had been continuously increasing. This together with the examination of the relative productivity of different sectors, as shown in an earlier chapter, shows that the output per worker in the non-agricultural sector was considerably higher than that in the primary sector. This suggests that a higher rate of income could be achieved by developing the non-agricultural sector.

Examining the sex composition of the workers in this sector, it is found that the female workers constituted a significantly higher percentage of the total workers in the non-agricultural sector than the male workers. But the former's share declined from 73.55 per cent in 1951 to 51.42 per cent in 1971 (Table 7.3). The higher participation of

Table 7.3

SEXWISE DISTRIBUTION OF PERCENTAGE SHARE OF NON-  
AGRICULTURAL WORKERS IN MANIPUR, 1951-1971 :

Year	Male	Female	Total
1	2	3	4
1951	26.45	73.55	100.00
1961	33.29	66.71	100.00
1971	48.58	51.42	100.00

Source : Computed from Table 7.2.



female workers in the non-agricultural sector is explained by the fact that the household industry which is its most significant sub-sector in terms of employment is primarily female-dominated. For socio-cultural reasons, it seems that male workers are averse to working in the handloom industry which largely constitutes the household industry. The falling share of female workers also has already been explained in another context.

When the non-agricultural sector is disaggregated into two broad sub-sectors, industrial and non-industrial, the following important conclusion emerges. In terms of income contribution, the non-industrial sub-sector was far more important than the industrial sub-sector. What is more, its share in the total sectoral income of non-agricultural origin increased from 81.11 per cent in 1960-61 to 85.05 per cent in 1970-71 (Table 7.4). However, the incomes from both the sub-sectors were on the increase during 1960-61 to 1970-71. While the income from the non-industrial sub-sector increased at the annual rate of 6.20 per cent the income from the industrial sub-sector recorded growth rate of 3.16 per cent, as against the rate of growth of 5.00 per cent for the non-agricultural sector as a whole.

In terms of contribution to the total manpower utilized in the non-agricultural sector, the industrial sub-sector accounted for the largest share. Its contribution, however, declined from 71.46 per cent in 1951 to 53.38 per cent in

**Table 2.4**

**DISTRIBUTION OF NON-AGRICULTURAL SECTORAL INCOME INTO  
INDUSTRIAL AND NON-INDUSTRIAL SUB-SECTORS IN MANIPUR,  
1960-61 to 1970-71 :**

(Rs. in lakhs)			
Year	Industrial sub-sector	Non-industrial sub-sector	Total non- agriculture sector
1	2	3	4
1960-61	99.4 (18.89)	426.8 (81.11)	526.2 (100.00)
1961-62	102.8 (18.40)	456.0 (81.60)	558.8 (100.00)
1962-63	106.5 (18.13)	481.0 (81.87)	587.5 (100.00)
1963-64	109.5 (17.62)	512.1 (82.38)	621.6 (100.00)
1964-65	113.1 (16.51)	571.8 (83.49)	684.9 (100.00)
1965-66	116.5 (16.19)	603.0 (83.81)	719.5 (100.00)
1966-67	120.3 (16.21)	621.7 (83.79)	742.0 (100.00)
1967-68	124.1 (15.55)	674.1 (84.45)	798.2 (100.00)
1968-69	127.9 (15.51)	696.7 (84.49)	824.6 (100.00)
1969-70	131.6 (15.38)	724.0 (84.62)	855.6 (100.00)
1970-71	136.2 (14.95)	775.1 (85.05)	911.3 (100.00)

Note: Figures in parenthesis indicate percentages.

Source: Government of Manipur, Estimate of State Domestic Product of Manipur, 1960-61 to 1971-72, Department of Statistics, Imphal.

1971 (Table 7.5). In contrast to the non-industrial sub-sector, the industrial sub-sector utilized female manpower to a much greater extent. In fact, female workers in the industrial sub-sector accounted for 83.63 per cent of the total female workers engaged in all non-agricultural activities in 1951, and this share moved upto 88.20 per cent in 1971.

Despite the fact of its relatively low productivity in Manipur, it is proposed to analyse the industrial sub-sector in details for the following reasons : (i) its employment consequences are very high, (ii) the development of the other non-agricultural activities will greatly depend on the development of this (industrial) sub-sector next only to agriculture and (iii) the detailed examination of this sub-sector may enable us to suggest the principal line along which more diversified industrial activities could be developed.

## 7.2 Industrial Structure of Manipur :

The developmental efforts that have been made in the State in the post-independence period have not affected in a big way the industrial structure of the economy of Manipur. It is still characterised by the predominant importance of household industries. Table 7.6 clearly shows the relative importance of household industries and manufacturing other than household industries in the State economy of Manipur. In 1951 the economy had been characterized by the conspicuous

**Table 7.5**

**DISTRIBUTION OF NON-AGRICULTURAL WORKERS INTO INDUSTRIAL AND NON-INDUSTRIAL  
SUB-SECTORAL WORKERS BY SEX IN MANIPUR, 1951 - 1971 :**

Category	Males			Females			Persons		
	1951	1961	1971	1951	1961	1971	1951	1961	1971
1	2	3	4	5	6	7	8	9	10
Industrial workers	10470 (37.64)	8139 (20.25)	11346 (16.57)	64689 (83.63)	72133 (89.53)	64027 (88.20)	75159 (71.46)	80272 (66.47)	75373 (53.38)
Non-industrial workers	17348 (62.36)	32063 (79.75)	57250 (84.56)	12665 (16.37)	8435 (10.47)	85695 (11.80)	30013 (28.54)	40498 (33.53)	65819 (46.62)
Total non-agricultural workers	27818 (100.00)	40202 (100.00)	68596 (100.00)	77354 (100.00)	80568 (100.00)	72596 (100.00)	105172 (100.00)	120770 (100.00)	141192 (100.00)

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Note : Figures in parenthesis indicate percentages.

Source : Same as Table 7.2, where (i) Industrial workers = (workers in Household-Industry + Workers in Manufacturing other than household-industry),

(ii) Non-industrial workers = (Total Non-agricultural workers - total Industrial workers).

**Table 7.6**

**DISTRIBUTION OF INDUSTRIAL WORKERS BY HOUSEHOLD AND MANUFACTURING OTHER THAN HOUSEHOLD IN MANIPUR, 1951-1971 :**

Category of Industry	Sex	All Manipur			Manipur-rural		Manipur-urban	
		1951	1961	1971	1961	1971	1961	1971
Household-Industry	Male	10470 (13.93)	7291 (9.08)	6776 (8.99)	5165 (7.74)	4593 (9.21)	2126 (15.68)	2183 (8.57)
	Female	64689 (86.07)	71875 (89.54)	62486 (82.90)	60820 (91.16)	41632 (83.44)	11055 (81.57)	20854 (81.85)
	Total	75159 (100.00)	79166 (98.62)	69262 (91.89)	65985 (98.90)	46225 (92.64)	13181 (97.26)	23037 (90.42)
Manufacturing other than household-industry	Male	-	848 (1.06)	4570 (6.06)	575 (0.86)	2583 (5.18)	273 (2.01)	1987 (7.80)
	Female	-	258 (0.32)	1541 (2.04)	159 (0.24)	1087 (2.18)	99 (0.73)	454 (1.78)
	Total	-	1106 (1.38)	6111 (8.11)	734 (1.10)	3670 (7.36)	372 (2.74)	2441 (9.58)
All Industries	Male	10470 (13.93)	8139 (10.14)	11346 (15.05)	5740 (8.60)	7176 (4.38)	2399 (17.70)	4170 (16.37)
	Female	64689 (86.07)	72133 (89.86)	64027 (84.95)	60979 (91.40)	42719 (85.62)	11154 (82.30)	21308 (83.63)
	Total	75159 (100.00)	80272 (100.00)	75373 (100.00)	66719 (100.00)	49895 (100.00)	13553 (100.00)	25478 (100.00)

Note : Figures in parenthesis indicate percentages.

Sources : Deduced from Tables 5.4, 5.5 and 5.6 in Chapter V.

absence of workers in manufacturing other than household industries. In 1961 the workers who were engaged therein constituted 1.38 per cent of the total industrial workers. By 1971 however, manufacturing came to account for 8.11 per cent of the total industrial workers. In this connection one important point to note is that the number of workers engaged in manufacturing in rural areas was considerably bigger than that in the urban areas. But the number of such workers as percentage of the total number of industrial workers was higher in urban areas as compared to that of the rural areas. This suggests that the importance of the manufacturing other than household industries has increased more in urban areas.

#### 7.2.1 Manufacturing Industry :

A picture of the size and pattern of employment in manufacturing other than household industry in 1961 (Table 7.7) shows that sawing and planing of wood industry (Code 280) accounted 34.36 per cent of the total workers therein. Next to this the production of rice and atta-flour by milling (Code 200) accounted for 22.51 per cent, manufacturing of structural clay products such as bricks, tiles etc. (Code 340) for 16.37 per cent, manufacturing of medicines, pharmaceutical preparation (Code 335) for 9.40 per cent and manufacturing of iron and steel including smelting, refining, rolling, conversion into basic forms such as billets, blooms, tubes, rods etc. (Code 360) for 6.06 per cent. In that order, all the major manufacturing industries together constituted about 89.00 per cent of the total workers in manufacturing other than household industries.

**Table 7.7****DISTRIBUTION OF WORKERS IN DIFFERENT MANUFACTURING INDUSTRIES  
OTHER THAN HOUSEHOLD INDUSTRY IN MANIPUR, 1961 :**

Industry Code	Name of Manufacturing Industry*	Number of Persons Employed		
		Male	Female	Total
1	2	3	4	5
200		162 (14.65)	87 (7.86)	249 (22.51)
235		-	1 (0.09)	1 (0.09)
273		9 (0.81)	-	9 (0.81)
280		380 (34.36)	-	380 (34.36)
281		27 (2.44)	-	27 (2.44)
288		4 (0.36)	2 (0.18)	6 (0.54)
289		-	15 (1.36)	15 (1.36)
311		39 (3.53)	1 (0.09)	40 (3.62)
320		1 (0.09)	-	1 (0.09)
335		10 (0.90)	94 (8.50)	104 (9.40)
340		181 (16.37)	-	181 (16.37)
350		9 (0.81)	11 (1.00)	20 (1.81)
360		20 (1.81)	47 (4.25)	67 (6.06)
384		1 (0.09)	-	1 (0.09)
388		2 (0.18)	-	2 (0.18)
393		3 (0.27)	-	3 (0.27)
<b>Total</b>	<b>All Manufacturing Industries</b>	<b>848 (76.67)</b>	<b>258 (23.33)</b>	<b>1106 (100.00)</b>

Note: Figures in parenthesis indicate percentages.  
Source: Census of India 1961, District Census Handbook of  
Manipur, Part II, pp. 34-39.

\* For the particular name of the industry corresponding  
to the industrial code, See Table 7.10.

The rest were distributed into 11 types of manufacturing industries.

### 7.2.2 Registered Factories in the Industrial Picture of Manipur :

An examination of the data on number of registered factories and their corresponding size of employment as obtained for 1969 (Table 7.8) reveals the nature of industries that have come to existence. The factories can broadly classified into (i) agro-based, (ii) forest-based, (iii) foot-loose type such as wrapping, packing, filling of articles etc., and (iv) servicing like repairing workshops. It is found that amongst the different type of registered factories, the agro-based industries such as flour-mill, rice-mill, dal-mill, edible oil-mill together accounted for 86.44 per cent of the total number of registered factories and 26.16 per cent of the total workers engaged therein. On the other hand, foot-loose industry like wrapping packing, filling of materials, while constituting only 1.13 per cent of the total number of registered factories, accounted for as much as 35.44 per cent of the registered factory workers. In terms of employment, the servicing industry such as repairs of motor vehicles and cycles was also important. It accounted for 22.61 per cent of the total registered factory workers. Forest-based industries like saw-mill constituted 4.52 per cent of the registered factories and accounted for 5.63 per cent of the total registered factory workers. This analysis may be a little



**Table 7.6**

**DISTRIBUTION OF NUMBER OF REGISTERED FACTORIES BY DIFFERENT TYPES OF INDUSTRIES AND BY CORRESPONDING SIZE OF AVERAGE DAILY WORKERS IN MANIPUR, 1969 :**

Sr. No.	Name of Industry	Number of factories	Average daily number of workers
1	2	3	4
1	Flour-mill	30 (16.95)	67 (4.55)
2	Rice-mill	89 (50.28)	168 (11.41)
3	Dal-mill	7 (3.96)	20 (1.36)
4	Edible oil-mill	27 (15.25)	86 (5.84)
1-4	Sub-Total (Agro-based)	153 (86.44)	341 (23.16)
5	Saw-mill	8 (4.52)	83 (5.63)
6	Paper & Paper Products (others)	1 (0.57)	8 (0.54)
7	Printing of books	2 (1.13)	100 (6.79)
8	Manufacturing of structural and clay products	3 (1.69)	72 (4.89)
9	Manufacturing of metal products(except machinery and transport equipments)	2 (1.13)	12 (0.81)
10	Repairs of motor vehicles and cycle	5 (2.82)	333 (22.61)
11	Wrapping, packing, filling of articles etc.	2 (1.13)	522 (35.44)
12	Dying and dry-cleaning	1 (0.57)	2 (0.14)
<b>Total All Industries</b>		<b>177 (100.00)</b>	<b>1473 (100.00)</b>

Note : Figures in parenthesis indicate percentages.

Source : Government of India, Labour Bureau, Department of Labour and Employment, Ministry of Labour and Rehabilitation, Statistics of Factories, Simla, 1969.

misleading unless one bears in mind the fact that there were only 177 registered factories in Manipur employing in all 1473 workers.<sup>1/</sup> Over the years the position might have been a little better but no data base is available to examine the growth and structure of the industries with reference to a later period.

### 7.2.3 Household-Industry :

Outside the manufacturing other than household industries and/or the registered factories, there were however other industries which were essentially of household and cottage type. As could be noted earlier, the household industry formed a very significant sector, next only to agriculture, in the economy of Manipur. In fact, it alone formed the industrial base in 1951 (Table 7.6 above). In the later period its importance did decline but to a very small extent. For example, in 1971 this sector alone constituted 9.198 per cent of the total industrial workers. This observation is more or less equally applicable to both rural and urban areas in Manipur. The important point to note is that both in rural and urban areas, this sector absorbed predominantly a larger share of female workers. The reason for its being so can be explained in the very structure of the household industries.

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<sup>1/</sup> It should be noted that there is difference in the coverage of registered sector and that of Census data on workers in manufacturing other than household industries. Hence these data cannot be examined vis-a-vis the data for 1971 as presented in Table 7.6.

But unfortunately the data necessary for examining the structure of household-industries are not available with respect to a recent year because the relevant census report, the only source of this type of data is yet to be published. However, one can get an idea as to the structure of the household industry by examining the data for 1961.

Table 7.9 shows that eventhough there were 24 types of household-industry in Manipur, weaving industry was the only one which was ~~em~~ensely significant in terms of employment. Handloom cotton weaving alone accounted for 87.54 per cent of the total workers engaged in the household industry, while textile-based industry as a whole accounted for about 92.00 per cent. It is noteworthy that as in 1961, female workers constituted about 97.00 per cent of the total workers in the textile-based industry. Next in importance was the forest-based industry accounting for 4.15 per cent of the total workers engaged in household industry in the State. The remaining 3.64 per cent of the total workers in the household industry were distributed over the other existing household-industries.

Even in terms of the number of all industrial units (manufacturing + household) as reported to be existing in Manipur, cotton weaving in handloom industry accounted for nearly 94.33 per cent in 1961 (Table 7.10). Before the 1961 Census it was reported that, in fact, almost every house got a loom which used to provide part-time or full-time

**Table 7.9**

**DISTRIBUTION OF WORKERS BY SEX IN HOUSEHOLD INDUSTRY BY DIFFERENT TYPES OF INDUSTRIES IN MANIPUR, 1961 :**

Sr. No.	Industry Code	Name of the Industry*	Persons employed and percentages of the total workers					
			Male	Percentage of total male workers	Female	Percentage of total female workers	Person	Percentage of total number of persons
1	045		74	0.09	43	0.05	117	0.15
2	200		84	0.11	439	0.55	523	0.66
3	235		459	0.58	6884	86.96	69303	87.54
4	244		3	0.00	-	-	3	0.00
5	265		2	0.00	25	0.03	27	0.03
6	273		1786	2.26	1805	2.28	3591	4.54
7	280		79	0.01	1	0.00	80	0.10
8	281		1953	2.47	28	0.04	1981	2.50
9	288		337	0.43	88	0.11	425	0.54
10	289		792	1.00	7	0.01	799	1.01
11	301		239	0.30	1	0.00	240	0.30
12	311		67	0.08	4	0.01	71	0.09
13	335		2	0.00	1	0.00	3	0.00
14	340		43	0.05	7	0.01	50	0.06
15	350		7	0.01	47	0.56	454	0.57
16	360		417	0.53	41	0.05	458	0.58
17	372		5	0.01	-	-	5	0.01
18	384		73	0.09	-	-	73	0.09
19	388		13	0.02	-	-	13	0.02
20	389		1	0.00	-	-	1	0.00
21	393		823	1.04	94	0.12	917	1.16
22	394		5	0.01	-	-	5	0.01
23	399		27	0.03	-	-	27	0.04
<b>Total</b>			<b>7291</b>	<b>9.21</b>	<b>71875</b>	<b>90.79</b>	<b>79166</b>	<b>100.00</b>

\* For the particular name of the industry corresponding to the Industrial Code See Table 7.10.

Source: Census of India 1961, District Census Handbook of Manipur, Part II, pp. 34-39.

Table 7.10

## DISTRIBUTION OF THE TOTAL NUMBER OF INDUSTRIAL ESTABLISHMENTS WITH THE CORRESPONDING NUMBER OF PERSONS EMPLOYED IN MANIPUR, 1961\*

Industry Code No. Clustered	Name of the Industry	Number of industrial establishments	Percentage distribution of the number of industrial establishments	Number of persons employed	Percentage distribution of the number of persons employed
1	2	3	4	5	6
045	Rearing of silk worms and production of Cocoons and raw silk	1	0.01	117	0.15
200	Production of rice, atta, flour, etc. by milling dehusking and processing of crops and foodgrains	70	0.52	772	0.96
235	Cotton weaving in handlooms	12652	94.33	69304	86.34
244	Manufacture of other products like rope cordage from jute and similar fibre such as hemp, mesta	4	0.03	3	0.00
265	Printing of silk textiles	1	0.01	27	0.03
273	Making of textile garments including raincoats and headgear	144	1.07	3600	4.48
280	Sawing and planing of wood	2	0.02	460	0.57
281	Manufacture of wooden furniture and fixtures	146	1.09	2008	2.50
288	Manufacture of materials from cork, bamboo, cane, leaves and other allied products	2	0.02	431	0.54
289	Manufacture of other wood and allied products not covered above	2	0.02	814	1.01
301	Printing and publishing of books	14	0.10	240	0.30
311	Manufacture of shoes and other leather footwear	26	0.19	111	0.14
320	Manufacture of tyres and tubes	3	0.02	1	0.00
335	Manufacture of medicines pharmaceutical preparations perfumes, cosmetics and other toilet preparations except soap	1	0.01	107	0.13
340	Manufacture of structure clay products such as bricks, tiles etc.	17	0.13	231	0.29
350	Manufacture of earthenware and earthen pottery	7	0.05	474	0.59
360	Manufacture of iron and steel including smelting refining, rolling, conversion into basic forms such as billets, blooms, tubes, rods	89	0.66	525	0.65
372	Manufacture of machine tools	2	0.02	5	0.01
384	Repairing and servicing of motor vehicles	30	0.22	74	0.09
388	Repairing of bicycles and tricycles	84	0.63	15	0.02
389	Manufacture of other transport equipment not covered above such as animal drawn and hand drawn vehicles	3	0.02	1	0.00
393	Manufacture of jewellery, silver wares and ware using gold and other precious metals	101	0.75	920	1.15
394	Manufacture and tuning of musical instruments	4	0.03	5	0.01
399	Manufacture and repair work of goods not assignable to any other	7	0.05	27	0.03
Total	All Industries	13412	100.00	80272	100.00

\* Some of the industries are clubed from the original data according to the affinity of nature and the industrial code numbers are related to the Standard Industrial Classification code number as per Census follows.

Source: Census of India 1961, District Census Handbook of Manipur, Part II, B-IV, Part-C, pp. 34-38 and 122.

employment to about three lakhs of population in the State.<sup>2/</sup> According to the All-India Handloom Board in 1958, Manipur had 200 looms for every 1,000 persons as compared to 6 looms for the same number of persons for India as a whole. But of the total of 2,00,249 looms in the State, 1,13,433 or 56.65 per cent were of the loom-loom type.<sup>3/</sup> As noted above, the pattern of employment as obtained in this industry was very much biased in favour of female manpower primarily because of the hereditary nature of passing on to the successive generation where daughter learns from mother the technique of production distinguished by unique designs and craftsmanship.<sup>4/</sup> The skill and craftsmanship which were of original nature commanded recognition both within and outside the State. However, this industry has been characterized by a low-level of division of labour which might be responsible for its comparatively low productivity.

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<sup>2/</sup> Government of Manipur, Second Five Year Plan for Manipur, p. C-II.

<sup>3/</sup> Government of India, Programme Evaluation Organization (PEO) Study of Handloom Development Programme, Planning Commission, 1967, p. 17. It is to be noted that these figures will not be comparable with the earlier figures, because these included both full-time and part-time workers whereas, the other figures were based on the Census Classification.

<sup>4/</sup> It is interesting to note that such hereditary nature is contrast in the case of the all-India where the son learns from the father the techniques. Another characteristic is that such occupation confining to a particular community in the case of the all-India is not conformity with that of Manipur where weaving is carried on irrespective of caste, creed, religion etc. Ibid.

### 7.3 Spatial Distribution of Industry :

After examining the industrial structure obtained in Manipur, it may be of some interest to take account of the spatial distribution of the industries that came into existence. The aspect has also assumed importance in view of increasingly higher emphasis being laid on the balanced development of the sub-regions within a region.

There were ten sub-regions known as sub-divisions in Manipur.<sup>5/</sup> It may be noted that despite socio-economic heterogeneity between one sub-divisions and another, there each of them is more or less homogeneous in character. The specific enquiry that will be conducted is how the industrial structure in a sub-division differed from that of the region as a whole and which are the industries in which each of the sub-divisions specialized.

For a study of this type, a disaggregated industry classification is considered essential so that the detailed information on industry is not subsumed away through aggregation.<sup>6/</sup> Therefore the data requirement for this aspect of the present study includes the number of industrial units with their corresponding size of employment for each industry in each sub-division.

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5/ Census of India 1961, District Census Handbook of Manipur.

6/ D. T. Lakdawala, Yoginder K. Alagh, Atul Sarma, Regional Variations in Industrial Development, Sardar Patel Institute of Economic & Social Research, Monograph Series-2, Ahmedabad, 1974, p. 11.

Generally, the main source of this type of information is Annual Survey of Industries (ASI).<sup>7/</sup> But this source is not much useful to us for the type of data we require. In the first instance, the industrial disaggregation at which the regional data were reported in this source was confined only to registered factories employing on an average 50 or more workers if they used power and 100 or more if they did not. Secondly, the information on all union territories (Manipur was one of them until 1971) except Delhi, was presented in this source along with that on the adjoining States.<sup>8/</sup> Above all this source does not provide information on such sub-regional level, as we are interested in the present context. Eventually our source of the required data has to be Census reports which provide information at the sub-divisional level for Manipur. Yet, unfortunately the concerned volumes of 1971 Census reports are not yet available. This is what has compelled us to conduct the present enquiry on the basis of the data available for 1961. There might be some changes in the industrial structures of the sub-divisions in the State over time. Nevertheless, given the data limitation, there is no way of capturing them. Thus we had to be satisfied with the picture that emerges regarding the spatial distribution of industries as in the 1961 Census.

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<sup>7/</sup> Government of India, Central Statistical Organization (CSO), Industrial Statistics Wing, Annual Survey of Industries, Delhi, Manager of Publications.

<sup>8/</sup> Usually the concerned data of Manipur are aggregated with Assam's, Ibid.



Even the Census reports do not provide the data in the required form for analysing the spatial distribution of the industries in Manipur. What the reports provided are : (a) the number of various industrial establishments in each sub-division, but not the corresponding number of workers engaged in each of them and (b) the total number of the industrial workers for each sub-division. What is really needed is the number of workers corresponding to different industrial establishment in each sub-division.

In the absence of the industry-wise employment data for each sub-division, the given industry-wise establishment data (Table 7.11) have not been matched up with the employment data in Table 7.12. As a result, it stimulates an estimate of the unknown spatial employment data in a given matrix with the sub-divisions as columns and the industries as rows wherein the row and column totals are already known. In other words, the unknown inner cells of this matrix have to be filled in so that it yields a complete industry-wise and sub-region-wise picture of the employment situation. Hence, we have found out the average size of employment in each industry in respect of the total of all industries i.e., the industry-wise total employment divided by the industry-wise total number of establishments. We assume that these average sizes will be the same for each of the sub-regions. Then, each average size of employment is multiplied by the corresponding number of industrial establishment in each sub-division. This method has been carried out

Table 7.11

## SUB-REGIONWISE DISTRIBUTION OF INDUSTRIAL ESTABLISHMENTS BY TYPE OF INDUSTRY IN MANIPUR, 1961

Industry Code No.	Imphal West	Imphal East	Bishempur	Thoubal	Ukhrul	Chura-chandpur	Tameng-long	Tengnoupal	Jiribam	Mao & Sardar Hills	All Manipur
1	2	3	4	5	6	7	8	9	10	11	12
045	-	1	-	-	-	-	-	-	-	-	1
200	39	19	2	10	-	-	-	-	-	-	70
235	7947	1990	2288	195	4	115	62	3	3	45	12652
244	4	-	-	-	-	-	-	-	-	-	4
265	1	-	-	-	-	-	-	-	-	-	1
273	25	63	3	45	2	-	-	-	-	6	144
280	2	-	-	-	-	-	-	-	-	-	2
281	39	81	3	5	2	-	-	11	1	4	146
288	-	2	-	-	-	-	-	-	-	-	2
289	2	-	-	-	-	-	-	-	-	-	2
301	12	2	-	-	-	-	-	-	-	-	14
311	20	4	-	2	-	-	-	-	-	-	26
320	2	1	-	-	-	-	-	-	-	-	3
335	1	-	-	-	-	-	-	-	-	-	1
340	8	7	-	2	-	-	-	-	-	-	17
350	7	-	-	-	-	-	-	-	-	-	7
360	47	30	3	6	2	-	-	-	-	1	89
372	2	-	-	-	-	-	-	-	-	-	2
384	24	6	-	-	-	-	-	-	-	-	30
388	57	10	-	17	-	-	-	-	-	-	84
389	-	3	-	-	-	-	-	-	-	-	3
393	48	66	1	11	-	-	-	-	-	5	101
394	2	2	-	-	-	-	-	-	-	-	4
399	5	-	-	-	2	-	-	-	-	-	7
All Industries	8264	2287	2300	293	12	115	62	14	4	61	13412

Note : For the particular name of the industry, refer Table 7.10.

Source : Census of India, 1961, District Census Handbook of Manipur, Part II Village Industrial Establishment, pp. 122-124.

Table 7.12

DISTRIBUTION OF INDUSTRIAL WORKERS BY SUB-REGION AND BY DIFFERENT INDUSTRIES IN MANIPUR, 1961 :

Industry Code No.	Imphal West	Imphal East	Bishenpur	Thoubal	Ukhrul	Chura- chandour	Tameng- long	Tengnoupal	Jiribam	Mao & Sardar Hills	All Manipur
1	2	3	4	5	6	7	8	9	10	11	12
045	-	-	-	-	-	-	-	-	-	-	117
200	-	-	-	-	-	-	-	-	-	-	772
235	-	-	-	-	-	-	-	-	-	-	69304
244	-	-	-	-	-	-	-	-	-	-	3
265	-	-	-	-	-	-	-	-	-	-	27
273	-	-	-	-	-	-	-	-	-	-	3600
280	-	-	-	-	-	-	-	-	-	-	460
281	-	-	-	-	-	-	-	-	-	-	2008
288	-	-	-	-	-	-	-	-	-	-	431
289	-	-	-	-	-	-	-	-	-	-	814
301	-	-	-	-	-	-	-	-	-	-	240
311	-	-	-	-	-	-	-	-	-	-	111
320	-	-	-	-	-	-	-	-	-	-	1
335	-	-	-	-	-	-	-	-	-	-	107
240	-	-	-	-	-	-	-	-	-	-	231
350	-	-	-	-	-	-	-	-	-	-	474
360	-	-	-	-	-	-	-	-	-	-	525
372	-	-	-	-	-	-	-	-	-	-	5
384	-	-	-	-	-	-	-	-	-	-	74
388	-	-	-	-	-	-	-	-	-	-	15
389	-	-	-	-	-	-	-	-	-	-	1
393	-	-	-	-	-	-	-	-	-	-	920
394	-	-	-	-	-	-	-	-	-	-	5
399	-	-	-	-	-	-	-	-	-	-	27
<b>All Industries</b>	<b>27590</b>	<b>24430</b>	<b>7139</b>	<b>16923</b>	<b>1003</b>	<b>938</b>	<b>694</b>	<b>94</b>	<b>1052</b>	<b>409</b>	<b>80272</b>

Note : Same as Table 7.11

Source : Same as Table 7.11.

for all the industries in Manipur.

By adopting the same procedure, ultimately we have found out that, in the matrix, the column total will necessarily tally when we add up the generated different size-groups of employment in each sub-division while it vitiates the individual row totals. Some adjustments for these differences (plus or minus) in the row totals are, therefore, warranted in such a way that the row totals are also not affected. Such a procedure no doubt involves some arbitrariness. Nevertheless, considering the constraints imposed by the given column totals and row totals and the degree of freedom, the extent of arbitrariness can be given due allowance. It is through this procedure that we have obtained the number of employment in each of the regions in respect of each industry (Table 7.13).

A comparative picture of sub-divisionwise total industrial establishments and the corresponding size of employment thereof is also presented in Table 7.14. This table reflects that the highest number of industrial establishment is found in Imphal West. The number amounted to 8264 accounting for 61.62 per cent of the total number of industrial establishment in Manipur. Next to it, Imphal East and Bishenpur had 2287 (17.05 per cent) and 2300 (17.15 per cent) respectively. These three sub-divisions apart, only Thoubal had 293 industrial establishments or 2.18 per cent of the total. Thus the number of industrial establishments in the remaining sub-

Table 7.13

DISTRIBUTION OF THE NUMBER OF PERSONS EMPLOYED IN DIFFERENT INDUSTRIES BY REGION IN MANIPUR, 1961 :

Industry Code No.	Imphal West	Imphal East	Bishenpur	Thoubal	Ukhrul	Chura- chandpur	Temeng- long	Tensnoupal	Jiribam	Mao & Sardar Hills	All Manipur
1	2	3	4	5	6	7	8	9	10	11	12
045	-	117	-	-	-	-	-	-	-	-	117
200	120	168	6	479	-	-	-	-	-	-	772
235	24933	21569	7103	12511	335	938	694	20	699	302	69304
244	3	-	-	-	-	-	-	-	-	-	3
265	27	-	-	-	-	-	-	-	-	-	27
273	83	443	9	2859	167	-	-	-	-	40	3600
280	460	-	-	-	-	-	-	-	-	-	460
281	189	964	9	283	309	-	-	74	153	27	2008
288	-	431	-	-	-	-	-	-	-	-	431
289	814	-	-	-	-	-	-	-	-	-	814
301	193	47	-	-	-	-	-	-	-	-	240
311	30	18	-	63	-	-	-	-	-	-	111
320	-	1	-	-	-	-	-	-	-	-	1
335	107	-	-	-	-	-	-	-	-	-	107
340	27	75	-	129	-	-	-	-	-	-	231
350	474	-	-	-	-	-	-	-	-	-	474
360	75	38	9	229	167	-	-	-	-	7	525
372	5	-	-	-	-	-	-	-	-	-	5
384	35	39	-	-	-	-	-	-	-	-	74
388	4	2	-	9	-	-	-	-	-	-	15
389	-	1	-	-	-	-	-	-	-	-	1
393	8	514	3	362	-	-	-	-	-	33	920
394	2	3	-	-	-	-	-	-	-	-	5
399	2	-	-	-	25	-	-	-	-	-	27
All Industries	27590	24430	7139	16923	1003	938	694	94	1052	409	80272

Source : Census of India, District Census Handbook of Manipur, Part II, pp. 36-43.

Table 7.14

**TOTAL INDUSTRIAL ESTABLISHMENTS AND CORRESPONDING SIZE  
OF EMPLOYMENT BY SUB-DIVISION IN MANIPUR, 1961 :**

<u>Sub-Division</u>	<u>Number of Industrial Establishment</u>	<u>Number of persons employed</u>
1	2	3
Imphal West	8264 (61.62)	27590 (34.37)
Imphal East	2287 (17.05)	24430 (30.43)
Bishenpur	2300 (17.15)	7139 (8.89)
Thoubal	293 (2.18)	16923 (21.08)
Ukhrul	12 (0.09)	1003 (1.25)
Churachandpur	115 (0.86)	938 (1.17)
Tamenglong	62 (0.46)	694 (0.86)
Tengnoupal	14 (0.10)	94 (0.12)
Jiribam	4 (0.03)	1052 (1.31)
Mao & Sardar Hills	61 (0.45)	409 (0.51)
<b>All Sub-Divisions</b>	<b>13412 (100.00)</b>	<b>80272 (100.00)</b>

**Note:** Figures in parenthesis indicate percentages.  
**Source:** Deduced from Table 7.11 and Table 7.12.

divisions was negligible. Jiribam e.g., had only four industrial establishments accounting 0.03 per cent of the total number of the industrial establishments in Manipur.

More or less similar feature emerges even in terms of employment. The four sub-divisions - Imphal West, Imphal East, Bishenpur and Thoubal - all in the valley region occupied the most important places. The number of persons employed in industrial sector in each of these sub-divisions were 27590, 24430, 7139 and 16923, respectively. The corresponding percentages were 34.37, 30.43, 8.89 and 21.08, together accounting for 94.78 per cent of the total industrial workers in the State. However it shows that, compared to the size of industrial establishments against each sub-division, Imphal East and Thoubal sub-division had relatively a larger size of employment than that of Imphal West and Bishenpur. Except these regions, others had almost negligible size of employment i.e., 5.22 per cent of the total industrial sector. Tengnoupal with 94 industrial workers, e.g., accounted for 0.12 per cent of the total industrial workers in the State as a whole.

#### 7.4 Location Quotients and Specialization Coefficients of Industries :

Now, it would be interesting to find out the industries in which those each sub-division specialized and the extent of diversification/concentration that had taken place in different sub-divisions. This can be done by computing the location quotients and specialization coefficient as follows.

The location quotient is a device for comparing a region's percentage share of a particular industrial activity with its percentage share of some basic aggregate.<sup>9/</sup> The location quotient can be expressed in terms of employment percentage ratio where the numerator of the ratio indicates the percentage of the given region's total industrial employment accounted for by the given industry. The denominator of the ratio indicates the percentage of the overall system's (State(s) total industrial employment accounted for by the given industry.<sup>10/</sup> The interpretation of location quotient is simple. Where the location quotient is less than unity, the given region has less than its 'fair' share of the industry in question. Where the location quotient exceeds unity, the given region has more than a proportionate share of the industry in question.<sup>11/</sup>

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9/ Walter Israd (et. al.) Methods of Regional Analysis - an Introduction to Regional Science, The MIT Press, Cambridge, Massachusetts, and London, (England) 1960 p. 125 also Chapter VII.

10/ The location quotient can be computed by adopting the following definitional equations as : If  $e_{ij}$  is the employment in the  $i$ th industry in the  $j$ th region ( $i = 1, 2 \dots n$ ),  $j = 1, 2 \dots m$ ),  $E_j$  is the total industrial employment in the  $j$ th region ( $E_j = \sum_{i=1}^n e_{ij}$ ),  $E_i$  is the employment in the  $i$ th industry in all the regions ( $E_i = \sum_{j=1}^m e_{ij}$ ), and  $E$  is the total industrial employment in all the regions ( $E = \sum_{i=1}^n \sum_{j=1}^m e_{ij}$ ), then the location quotient for the  $i$ th industry in the  $j$ th region would be  $L_{ij} = \frac{e_{ij}}{E_j} / \frac{E_i}{E}$

11/ Walter Israd., Ibid.



It would also be useful to examine whether the industrial system in a sub-division, as compared to other sub-divisions, shows a concentrated or a diversified pattern. This can be done by calculating the coefficient of specialization.<sup>12/</sup> The limits of the value of this coefficient are 0 and 1. If the region has a proportional mix of industry identical with the State's (national) system the value of the coefficient will be zero. Contrary to this, if all the employment of the region is concentrated in a single industry its value will be unity.<sup>13/</sup> The coefficient thus measures the extent to which the distribution of employment by different industry in the given region deviates from such distribution for the overall system or the industrial system for the State as a whole. Therefore the coefficient can be helpful in devising a policy for diversification<sup>14/</sup> in the right perspective.

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<sup>12/</sup> The coefficient of specialization for j th region,  $S_j$  is defined as  $S_j = \frac{\sum_{i=1}^n \frac{e_{ij}}{E_i} 100 - \frac{E_j}{E} 100}{100}$  (where the summation is carried through either for positive or negative differences). The value of  $S_j$  ( $0 \leq S_j \leq 1$ ) measures the degree of a specialization or diversification of a region. If  $S_j$  is zero the j th region has the same industrial mix as the State's (National) economy; and if it is unity the region specializes entirely in one industry.

<sup>13/</sup> Walter Israd, Ibid.

<sup>14/</sup> For similar exercise See Yoginder K. Alagh, K.K. Subrahmanian and S.P. Kashyap, Preliminary Results on the Structure of Manufacturing Industries in Gujarat, Reprints Series 1, Sardar Patel Institute of Economic and Social Research from Quarterly Bulletin of Economics and Statistics, Vol. IX, No. 4, October-December, 1970, p. 2.

The location quotients of employment, as computed on the basis of the above methodology, have been presented in Table 7.15. The Table itself is explanatory. However the broad conclusions that emerge are as follows. Industrial Code - 235, 244, 265, 280, 289, 301, 335, 350, 372, 384 and 394 are the industries in which Imphal West sub-division specialized, location quotients being relatively high. On the other hand, industrial Code 045, 235, 281, 288, 320, 340, 384, 389, 393 and 394 show high location quotients in Imphal East sub-division indicating that these are the industries in which Imphal East specialized. These are the two sub-divisions in which the industries were relatively wide-spread. Among the rest of the sub-divisions, Bishenpur specialized in industry Code 235; Thoubal in 200, 273, 311, 340, 360, 388 and 393; Ukhrul in 273, 281, 360 and 399; Tengnoupal and Jiribam both in 281; Mao and Sardar Hills in 273, 281, 360 and 393; Churachandpur and Tamenglong had only one industry each i.e., 235. This analysis clearly indicates that there was a good deal of variation in the industrial structure of the sub-divisions.

*It would have been better to work out coeff of # of units rather than emp on a/c of ability needs*

Table 7.16 presents a picture of the diversification of industries in Manipur for different regions according to their rank. It reveals that in Imphal East and Imphal West the industries were diversified to the extent that their value of specialization coefficients are 0.0601 and 0.0897, respectively. For the rest, the degree of diversification was much less. In sub-divisions like Tengnoupal and Churachandpur, only one industry (i.e., cotton weaving in handloom) was existing.

Table 7.15

LOCATION QUOTIENTS OF INDUSTRIAL EMPLOYMENT BY DIFFERENT INDUSTRIES AND BY REGION IN MANIPUR, 1961 :

Industry Code	Imphal West	Imphal East	Bishenpur	Thoubal	Ukhrul	Chura-chandour	Tensnoul	Tamenglong	Jiribam	Mao & Cardar Hills
1	2	3	4	5	6	7	8	9	10	11
045	-	3.2858	-	-	-	-	-	-	-	-
200	0.4522	0.7150	0.0874	2.9369	-	-	-	-	-	-
235	1.0467	1.02226	1.1524	0.8563	0.3869	1.1583	1.1583	0.2464	0.9898	0.8552
244	2.9142	-	-	-	-	-	-	-	-	-
265	2.9099	-	-	-	-	-	-	-	-	-
273	0.0671	0.4043	0.0281	3.7670	3.7126	-	-	-	-	2.1807
280	2.9095	-	-	-	-	-	-	-	-	-
281	0.2738	1.5774	0.504	0.6685	12.3157	-	-	31.4706	5.8140	2.6390
288	-	3.2858	-	-	-	-	-	-	-	-
289	2.9095	-	-	-	-	-	-	-	-	-
301	2.3397	0.6151	-	-	-	-	-	-	-	-
311	0.7864	0.5328	-	2.6923	-	-	-	-	-	-
320	-	3.2984	-	-	-	-	-	-	-	-
335	2.9096	-	-	-	-	-	-	-	-	-
340	0.3401	1.0668	-	2.6489	-	-	-	-	-	-
350	2.9095	-	-	-	-	-	-	-	-	-
360	0.4156	0.2378	0.1927	2.0690	25.4580	-	-	-	-	2.6169
372	2.9132	-	-	-	-	-	-	-	-	-
384	1.3761	1.7317	-	-	-	-	-	-	-	-
388	0.7757	0.4379	-	2.8469	-	-	-	-	-	-
389	-	3.2984	-	-	-	-	-	-	-	-
393	0.0253	1.8358	0.0367	1.8664	-	-	-	-	-	7.0400
394	1.1640	1.9727	-	-	-	-	-	-	-	-
399	0.2153	-	-	-	74.1160	-	-	-	-	-

Note : For methodology see the text.

Source : Computed on the basis of Table 7.13.

Table 7.16

SPECIALIZATION COEFFICIENTS OF INDUSTRIES BY REGION  
IN MANIPUR, 1961 :

Serial Number	Region	Specialization Coefficients	Rank in order of decreasing diversification
1	2	3	4
1	Imphal West	0.0897	(ii)
2	Imphal East	0.0601	(i)
3	Bishenpur	0.1316	(iv)
4	Thoubal	0.1671	(vii)
5	Ukhrul	0.5893	(ix)
6	Churachandpur	0.1366	(v)
7	Tamenglong	0.1366	(vi)
8	Tengnoupal	0.7622	(x)
9	Jiribam	0.1204	(iii)
10	Mao & Sardar Hills	0.1737	(viii)

Note : For methodology, see the text.

Source : Calculated from Table 7.13.

It is also apparent that there was a wide disparity between the hill region and the plain region. The fact is that, the value of specialization coefficient for the sub-divisions in the hill region was higher than that of the plain's.<sup>15/</sup> Within the valley-region, Imphal West and Imphal East alone showed a significantly diversified pattern.

### 7.5 Strategy for Development of Industries :

In the light of the above discussion, one may try to organize the thought as to the strategies of industrial development in Manipur. While doing so, one has to take into account of the major constraints in regard to such overheads as the lack of developed transport and communication system, both intra-State inter-State. In other words, the internal economy of Manipur has to be well integrated before any schemes of industrial development could be fruitfully launched. Then, assuming that overhead facilities are provided, what are the types of industries that could be developed in Manipur?

Broadly speaking, the industrial development of Manipur can be looked upon from the angle of resource availability and local demands generated in the developmental process. It should be noted that any sensible scheme of industrialization in Manipur has to be viewed in close integration with the markets and economic potentials of the wider region that is

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<sup>15/</sup> The Valley region comprises the sub-division of Imphal West, Imphal East, Thoubal and Bishempur. The rests are in the hill region.

north-east India. Since the scope of the study is not directed to such broader issues, we will have to be contented with indicating broadly what can be done within the State of Manipur.

#### 7.5.1 Forest-based Industries :

As the things stand now, the resource endowments of Manipur distinctly constitute of its vast forest. In 1969-70, out of the total geographical area of 22347 square kilometres, forests accounted for as much as 14365 square kilometres or 64.28 per cent. The fact that forestry and logging contributed only Rs. 32.00 lakhs or 1.84 per cent of the State-income in 1970-71 (at 1960-61 prices) shows that the exploitation of forest resources was still at its infancy.<sup>16/</sup> It is, however, well recognized that the State as a whole is rich not only in forest resources but also in their variety of species.<sup>17/</sup> In terms of this variety, the forest area of the State is classified into four distinct and well defined zones, viz., (i) Burma-border forests, (ii) Ukhrul pine forests, (iii) Forests over-looking the valley and (iv) Barak drainage forests.

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<sup>16/</sup> The total forest area can be classified into three, (i) Reserved forests, (ii) Protected forests and (iii) Unclassified forest. It is reported that given the area in 1969-70, reserved forests accounted for only 9.29 per cent, protected forest 29.03 per cent and unclassified forests 61.68 per cent. See Government of Manipur, Statistical Outline of Manipur, Department of Statistics, Imphal, 1970.

<sup>17/</sup> Census of India, District Census Handbook of Manipur, Part-1, p. 9.

The Burma-border forests, lying along the Indo-burma border, are very congenial to the growth of Teak, Oak Eng, Cane etc., because of the alluvial banks of a number of streams which rise from the hills of this area. Besides, being interspersed with bamboo plants, these forests appear evergreen.

The Ukhrul pine forests are scattered almost all over the hills of the Ukhrul sub-division in the north-eastern side of the State. These consist of pure khasi pine, interspersed with Oak and mixed evergreen forests on hill tops.

Forests overlooking the valley are scattered all over the hills surrounding the valley. Various species of Oak are found in these mixed evergreen forests.

The most extensive and sizeable forests of the State are the Barak-Drainage forests. They are situated in the hills to the West of the valley, along the course of the Barak river and its numerous tributaries and along the Manipur-Cachar border. Uningthon (*Phoibe Hainesiana*), Sahi (*Castanopsis* Spp.) Khok (*Albizia* Spp.), Tera (*Salmalia Malabarica*), Agor (*Aquilaria Agallocha*), Usci (*Schima Wallichii*), and Uthao (*Mesua Ferrea*) are some of the important trees that grow in these forests. There are also vast tracts of 'mulii' bamboos intermixed with trees in these evergreen forests.<sup>18/</sup>

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<sup>18/</sup> Census of India, 1961, op.cit., pp. 9-10.

It can, therefore, be noted that all hill sub-divisions contain substantial forest areas. In these forests bamboos, cane, pine and varieties of timber are available as main products. Among them bamboo constitutes the major product accounting for about 42.00 per cent of the total forest produce.

Even in the valley region, bamboos are available. The supply is adequate to meet the local demand for constructing thatched houses in which bamboo constitutes an important input working as a substitute for iron-nails, iron rods etc.

The forest-based industries that can be developed in Manipur are, paper industry, medicinal plants, manufacturing of cane and bamboo products, furniture manufacturing, plywood products, safety-match and photoframe making, timber-treatment-cum-seasoning plants etc. The exploitation of forest resources in this manner will involve as a precondition the development of an adequate road net-work integrating the hill economy with the valley economy.

#### 7.5.2 Mineral-based Industries :

Mineral resource is one of the most important inputs of modern industrial development. But so far, no systematic network of official records through proper survey of mineral resources in Manipur is available. However, in this direction the Techno Economic Survey of Manipur<sup>19/</sup> highlights some information. It reports that according to the Geological Survey of

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<sup>19/</sup> National Council of Applied Economic Research, op.cit., pp. 48-49.



India, the State is rather poor in this particular aspect.<sup>20/</sup> That, only copper, nickel, tale chromite and asbestos may be available in Manipur in a limited quantity. Besides, brine from salt springs,<sup>21/</sup> limestone and bog iron are reported to have been worked in the past to meet the local demands. Among them salt and limestone which are locally excavated are found comparatively in large quantities mainly in the eastern and southern parts of the State near the foot-hills. These can be used for making lime and cement to meet the increasing local demand in the State. What is more, coal is reported, rather recently, to occur in some parts of the Jiribam sub-division.

What therefore emerges is that the launching of a detailed survey of mineral resources in Manipur may be immensely helpful in sizing up the availability of mineral resources. Under the given situation, however, limestone is the only mineral resource which holds out industrial possibility for lime and cement manufacturing.

But from the foregone accounts it is apparent that except agricultural base and forest base, the industrial

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<sup>20/</sup> In this context the present backwardness of this resources may also be transpired by the fact that in 1951 Census only 322 workers were engaged in mining and quarrying which lessen to 17 workers in 1961 and to 90 workers in 1971, and the contribution of this sector in the State Income of Manipur was negligible at 0.01 per cent.

<sup>21/</sup> Salt is extracted by evaporating the water from the brine-wells and springs. This has been carried on in the age-old indigenous way by burning the fuel which has become costlier hence uneconomical.

resource endowment in Manipur is very poor and limited. In the absence of a thorough survey, even the limited resources are not exploited.

### 7.5.3 Agricultural-based Industries :

In an earlier chapter it was clearly shown that agricultural production in the State essentially centers around rice and that, given the cropping pattern, Manipur agriculture will be able to meet the need of rice for the growing population. It implies that the diversification of the cropping pattern, i.e., a shift from the mono-culture of rice to the production of other food crops which can be used as industrial raw materials will be possible if intensive cultivation be introduced in a big way in agricultural operations. Alternative crop possibilities are said to exist in respect of sugarcane, cotton, jute, fruits etc. and maize which is indeed grown to some extent even now.

If such crops are grown in large scale, now industrial possibilities will open up. Apart from rice milling and husking, hand-pounding of rice, oil-milling and pressing, flour milling, atta-chakki and alike which are all in fact, existing at present, there will appear new industries like fruit-preservation plants, confectionary and bakery, jute mills, sugar industry etc. Horticulture is also said to have considerable scope in the State.

#### 7.5.4 Textile-based Industries :

Though handloom is by far the largest single industry of Manipur that accounted for 95.45 per cent of the total industrial establishments and 91.00 per cent of the total industrial employment in 1961, this is not a resource based industry<sup>22/</sup> For its major input, yarn, is not locally made as the State is extremely poor in raw cotton resources. It is reported that only a small quantity of short-staple cotton of very poor quality is produced in some regions of the State. Again, despite the favourable climate and soil for rearing silk and cultivating the food plants for the silk worms as indicated by the Fact Finding Survey of Manipur, these activities to a limited extent are confined only to the hill areas.<sup>23/</sup>

It was noted in an earlier chapter that the household-industry, virtually a handloom industry, was associated with relatively low productivity. It was also noted that its employment consequences were nevertheless very important in the context of Manipur. It follows, therefore, that any scheme which raises the productivity in this industry will contribute

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<sup>22/</sup> But it can be regarded as a resource based industry in that the skill required for the growth of this industry is available in plenty in the State.

<sup>23/</sup> United Bank of India, Research Division, Research and Development Department, Report of the Fact Finding Survey on Manipur, Calcutta, 1972, p. 7.

substantially both in income generation as well as favourable income distribution. One way of raising productivity of this industry could be the introduction of powerlooms in place of existing loom-looms and fly-shuttle looms. The introduction of power looms has two additional advantages. One is that, the industries producing powerloom accessories by utilizing the forest products can be developed. The other is that, power which is reportedly to be surplus in Manipur can be profitably utilized. Yet, still another advantage is that the transition from the traditional loom-looms and fly-shuttle looms to powerlooms can be expected to act as an intermediate stage of technological progress.

Taking note of the changing taste of the people, Synthetic cloths can gradually be produced. Once the textile-based industry becomes more profitable, a series of subsidiary industries like dyeing, spinning etc. may come into existence.

The replacement of handloom by powerloom may have one difficulty. The capital cost that powerlooms involve may be too high and not within the reach of the present handloom operators. Similarly, the use of synthetic inputs in place of cotton yarn may also be too expensive for them. As a result there might emerge a situation where relatively rich handloom operators might own powerlooms and employ the poor operators to work for them. This development, if it takes place, will affect the income distribution adversely. It will, therefore, be necessary for the State Government to play an active role in arresting

such a development.

#### 7.5.5 Demand-based Industries :

As the local economy is more and more integrated into the national economy, a varied range of industrial goods will figure in consumption baskets of the people of Manipur. If some of these, if not most of them, are not produced locally, the term of trade may move against Manipur vis-a-vis the rest of the country. But as the resource endowments may not permit the production of all the items within Manipur, - more so when bulk inputs are involved - the possibilities for producing selective items, considering the transport cost, should be explored. The following could be the industries which Manipur may be able to develop profitably.

Tailoring for readymade garments, builders' hardware, hand-tools, chalk-pencils, aluminium utensils, bicycle parts and accessories, improved agricultural implements, phenyle, washing soap, mirror, cotton and woollen hosiery, radio assembly etc. At the same time handloom accessories secure quite a good scope. Among the industries suggested by the Small Industries Service Institute, Government of India, special mention of the following may be made.

(i) Woollen and cotton hosiery, (ii) Bicycle accessories, tyres and tubes, (iii) powerlooms and plastic goods units, (iv) leather footwear (v) poultry and feed, and (vi) tiles and bricks making. The industries as indicated

above can be developed in Manipur. But major snag lies in respect of lack of entrepreneurial skill, capital and overhead facilities in the State. In all these matters, the State Government has to take major initiative. Only then would follow a smooth transition from the present, somewhat self-sufficient economy with its limited output and limited demand to a modern industrial economy.

While industrialization brings in course of time large manufacturing units, large industry co-exists with relatively small industry. In fact, the importance of small-scale industries is gaining increasing recognition even in the most highly industrialized countries.<sup>24/</sup> In the context of Manipur, it has an added advantage; in that, encouragement of growth and modernization of handicrafts and small industry establishments will help in building up a strong foundation for a new industrial structure consisting of small factories which are sufficiently modern and viable in the State. Thus fostering transformation of the existing small industries and at the same time introducing new types of small industries on considerations of the complementarity with the existing ones will pave the way for the total economic transformation of the State. Examples of both are also found in the studies of various efforts in India towards it.<sup>25/</sup>

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<sup>24/</sup> Engene Staley and Richard Morse, Modern Small Industry for Developing Countries, Stanford Research Institute, International Student Edition, McGraw-Hill Book Company, New York, London, Sydney, Toronto, Kogakusha Company Ltd., Tokyo, 1965, p. 16.

<sup>25/</sup> S. Nanjudan, H. E. Robison and Engene Staley, Economic Research for Small Industry Development (illustrated by India's experience), International Industrial Development Centre (IIDC), Stanford Research Institute, Menlo Park, California, U. S. A., Asia Publishing House, New York, 1962, p. 13.

## CHAPTER VIII

### DEMAND FOR AND SUPPLY OF MANPOWER IN MANIPUR FOR 1981

Having examined the developmental process in the sectoral context, it will be useful to present an exercise in projection of demand for and supply of manpower in Manipur. The results of the exercise will be presented in the following manner. First, the demand for manpower projected for 1981 along with the methodologies of such projection will be presented. Secondly, the methodology and the results of the projected supply of manpower for the corresponding year will be presented, so that finally, the results of both the projections will be compared.

In studies of this sort it is being realised more and more that, for fulfilling the physical targets in the planning process, the field of manpower planning cannot be over emphasized as a critical area where the future requirements will have to determine the current decisions.<sup>1/</sup> Further, once the likely requirements in future are estimated and compared with the anticipated resources, it can be very helpful to identify the imbalances if any, and even in making policies for skill formation.<sup>2/</sup>

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1/ Government of India, Planning Commission, The Fourth Five Year Plan, 1969-74 (Draft), Delhi, 1969, p. 43.

2/ F.H. Harbison, 'The Strategy of Human Resource Development in Modernising Economics' in Wystral Ronal (Ed.) Education and the Economics of Human Capital, The Free Press, New York, 1971, p. 224.

### 8.1 Demand for Manpower :

While projecting the manpower requirement for the targeted year i.e. 1981, the following methodology<sup>3/</sup> has been adopted. In the first instance, manpower coefficients vector Table 8.1 showing the manpower requirement for a unit of output has been worked out.<sup>4/</sup> This manpower coefficients vector relates to the year 1961. One problem which is encountered while working out these coefficients is that the data available on manpower sectorization do not correspond to the information available on output sectorization. As a result, certain adjustments have to be made so as to make them conformable. Accordingly, nine sectors<sup>5/</sup> have been made as the data on working manpower (workers) are available only for nine sectoral classification. It may also be noted that for workers in

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3/ A number of methods may be available for such projection. However, in the present exercise the fixed coefficient method which is a simple extension of the so called Leontief Production Function in which inputs are assumed to be used in fixed proportions in the production of output has been used. For details, See Bashir Ahmed and Marg Blaug (et.al), The Practice of Manpower Forecasting - a collection of case studies, Amsterdam, Elsevier, 1973, p. 11.

4/ To work out the labour output coefficients vector two economic variables, viz., the working force data and the sectoral output data have been used. The data on working force by different occupations in different economic activities have been collected from the population Census of 1961 and the data on output of the corresponding sectors are collected from the Estimates of State Domestic Product of Manipur. To make the years also correspond the data of sectoral output in the year 1960-61 have been taken as the output in the year 1961.

5/ These nine sectors relate to Table 2.13 which has been discussed in Chapter II.



Table 8.1

## MANPOWER COEFFICIENTS VECTOR BY DIFFERENT ECONOMIC ACTIVITY AND OCCUPATION IN MANIPUR, 1961:

Occupational Code No.	Name of the occupa- tion*	Economic Activities*								
		A(i)	A(ii)	A(iii)	A(iv)	A(v)	A(vi)	A(vii)	A(viii)	A(ix)
1	2	3	4	5	6	7	8	9	10	11
00		-	-	-	-	-	0.0000060	-	-	0.0000314
01		-	-	-	-	-	-	-	-	0.0000003
02		-	-	-	-	-	-	-	-	0.0000056
03		-	-	-	-	-	-	-	-	0.0000530
04		-	-	-	-	-	-	-	-	0.0000444
05		-	-	-	-	-	-	-	-	0.0005584
06		-	-	-	-	-	-	-	-	0.0000104
07		-	-	-	-	-	-	-	-	0.0000118
08		-	-	-	-	-	-	-	-	0.0000729
09		-	-	-	-	-	-	-	-	0.0000036
0X		-	-	-	-	-	-	-	-	0.0000675
10		-	-	-	-	-	-	-	-	0.0000853
12		-	-	-	-	-	-	0.0000001	-	-
13		-	-	-	-	-	0.0001975	-	0.0000010	0.0000410
20		-	-	-	-	-	-	-	-	0.0000048
21		-	-	-	-	-	-	-	-	0.0000022
22		-	-	-	-	-	-	-	-	0.0000004
28		-	-	-	-	-	-	-	-	0.0001365
29		-	-	-	-	-	-	-	-	0.0000692
30		-	-	-	-	-	-	0.0000001	-	-
31		-	-	-	-	-	-	0.0000001	-	-
32		-	-	-	-	-	-	0.0000001	-	0.0000001
33		-	-	-	-	-	-	0.0004609	-	-

contd.

Table 8.1 contd.

Occupational Code No.	Name of the occupation*	Economic Activities*								
		A(1)	A(11)	A(111)	A(1v)	A(v)	A(v1)	A(v11)	A(v111)	A(1x)
1	2	3	4	5	6	7	8	9	10	11
34		-	-	-	-	-	-	0.0000001	-	-
40		0.0037377	-	-	-	0.0000028	-	-	-	0.0000047
41		0.0000379	-	-	-	0.0000018	-	-	-	0.0000068
42		0.0000000	-	-	-	-	-	-	-	0.0000001
43		-	-	0.0001906	-	0.0000024	-	-	-	-
44		-	0.0000600	-	-	0.0000084	-	-	-	-
50		-	-	-	0.0017000	-	-	-	-	-
61		-	-	-	-	-	-	-	0.0000125	-
64		-	-	-	-	-	-	-	0.0015492	-
66		-	-	-	-	-	-	-	0.0000049	-
67		-	-	-	-	-	-	-	0.0000151	-
68		-	-	-	-	-	-	-	0.0000183	-
69		-	-	-	-	-	-	-	0.0000216	-
70		-	-	-	-	0.0069747	-	-	-	-
71		-	-	-	-	0.0003547	-	-	-	-
72		-	-	-	-	0.0000066	-	-	-	-
73		-	-	-	-	0.0000405	-	-	-	-
74		-	-	-	-	0.0000957	-	-	-	-
75		-	-	-	-	0.0000267	-	-	0.0000043	-
76		-	-	-	-	0.0000003	0.0000253	-	0.0000125	0.0000084
77		-	-	-	-	0.0003414	-	-	-	-
79		-	-	-	-	0.0000021	0.0007883	-	-	-
80		-	-	-	-	0.0000016	-	-	-	0.0000076
81		-	-	-	-	0.0000668	-	-	-	-
82		-	-	-	-	0.0000818	-	0.0000001	-	-

cont d.

Table 8.1 contd.

Occupational Code No.	Name of the occupa- tion*	Economic Activities*								
		A(1)	A(11)	A(111)	A(1v)	A(v)	A(v1)	A(v11)	A(v111)	A(1x)
1	2	3	4	5	6	7	8	9	10	11
83		-	-	-	-	0.0000045	-	-	-	0.0000003
85		-	-	-	-	0.0000621	-	-	-	0.0000001
86		-	-	-	-	-	-	-	-	0.0000002
87		-	-	-	-	-	-	-	-	0.0000001
89		-	-	-	-	-	0.0001121	-	-	0.0001534
90		-	-	-	-	-	-	-	-	0.0002639
91		-	-	-	-	-	-	-	-	0.0000568
92		-	-	-	-	-	-	-	-	0.0000017
93		-	-	-	-	-	-	-	-	0.0000180
94		-	-	-	-	-	-	-	-	0.0000060
95		-	-	-	-	-	-	-	-	0.0000073
96		-	-	-	-	-	-	-	-	0.0000006
97		-	-	-	-	-	-	-	-	0.0000055
99		-	-	-	-	-	-	-	-	0.0000005
X8		-	-	-	-	-	-	-	-	0.0000352
X9		-	-	-	-	-	-	-	-	0.0000071
All Occupations		0.0037756	0.0000600	0.0001906	0.0017000	0.0080756	0.0011292	0.0004615	0.0016394	0.0017831

Note : To work out the coefficients  $\frac{L}{O}$  (where 'L' is labour and 'O' is output), we use data on workers presented in Table 5.7 and data on output presented in Table 2.13.

\* For names of the particular Economic Activity and Occupation refer Table 5.7 in Chapter V.

each of the sectors, informations on 64 occupations are available and they have been used while working out the coefficients.

### 8.1.1 Methodology and Projected Demand for Manpower :

The following methodology has been adopted in projecting the demand for manpower in Manipur for the year 1981.

$$L_{1j}^* = \frac{L_{1j}}{Y_1} Y_1^* \quad \dots (1),$$

$$\text{and } L_1^* = \sum_j L_{1j}^* \quad \dots (2),$$

where

$L_{1j}$  = manpower utilization in the  $i^{\text{th}}$  activity and the  $j^{\text{th}}$  occupation in the base year.

$Y_1$  = output of the  $i^{\text{th}}$  activity in the base year,

$Y_1^*$  = projected output of the  $i^{\text{th}}$  activity,

$L_{1j}^*$  = projected manpower in the  $i^{\text{th}}$  activity and the  $j^{\text{th}}$  occupation,

$L_1^*$  = projected manpower in the  $i^{\text{th}}$  activity.

It is assumed that  $\frac{L_{1j}}{Y_1}$  (the labour output ratio of the  $j^{\text{th}}$  occupation in the  $i^{\text{th}}$  activity) is constant during the projection period.

As can be seen above, the projection of manpower for the targeted year involves the use of output level. In other words, before projecting manpower requirements, it is necessary

to project the output level for different activities/sectors. These projections have been made under three alternative assumptions.

The first assumption relates to the historical growth rate of the output level of each of the sectors during the period 1960-61 to 1970-71. A close look into these growth rates make one feel that they are rather very optimistic as the growth rates of this period were very high.<sup>5/</sup>

Under the second alternative projection (feasible), land has been introduced as constraints while projecting output. This is necessary because about 90 per cent of the cultivable land<sup>6/</sup> has already been brought under cultivation by 1970-71. Therefore, according to our earlier computation, if the cultivated land grows at the rate of 1.10 per cent during 1969-70 to 1980-81 (i.e. 11 years), the remaining 10.00 per cent of the total cultivable land will be brought under plough by 1980-81. Assuming the historical growth of yield per hectare that is observed during 1950-51 to 1970-71 (i.e. 3.00 per cent) will also hold good for the period 1970-71 to 1980-81, then the agricultural sector will grow at the rate of 4.10 per cent (i.e. area growth 1.10 per cent + productivity growth 3.00 per cent) during the period 1969-70

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5/ The growth rates of different sectors as referred here have been discussed in an earlier chapter of the present study i.e. Chapter II.

6/ For detailed discussion on concepts and coverage, See Chapter VI.

to 1980-81. In order to eliminate seasonal fluctuations, particularly the unusual fall of agricultural production in 1970-71, we have taken the average of the agricultural output of 1969-71. This has been used as the base of the projection of agricultural output for 1980-81. At this rate agricultural output would be Rs. 1595.00 lakhs during 1980-81 as against the figure of Rs. 2622.00 lakhs under the optimistic assumption. All other sectors are assumed to be unaffected.

In the third alternative, we assume that there is no growth in productivity beyond 1969-70 i.e. the growth rate of productivity will be zero during 1970-71 to 1980-81. But land will grow at the same rate as above i.e. 1.10 per cent. In this case the total growth rate of agricultural output would be same as the growth rate of land i.e. 1.10 per cent. Under this assumption viz., (lower bound assumption) the agricultural output will reach the level of Rs. 1156.00 lakhs in the year 1980-81. All other sectors will grow at the rate registered during 1960-61 to 1970-71.

The above method still assumes lack of interactions between agricultural growth and other sectors. However, in Chapter II we have concluded that the agricultural sector plays a crucial role and influences other sectors' output in Manipur. This we have examined by fitting the following regression equation.

$$\log Y_{it} = \alpha + \beta \log X_t + Y_t$$

where  $X$  is agricultural output, 't' is time with base 1960-61 (i.e.  $t = 1$  for 1960-61), ' $Y_i$ ' is the output level in the  $i^{\text{th}}$  sector. Putting the outputs of the agricultural sector estimated under the above three alternative assumptions i.e., Rs. 2622.00 lakhs, Rs. 1595.00 lakhs and Rs. 1156.00 lakhs according to the above equation and putting 't' as 21, the three sets of output levels for the other sectors have been arrived at. Thus six output levels under three different assumptions - one set (Table 8.2) assuming lack of interactions between the agriculture sector and the other sectors, and the other set (Table 8.3) assuming the inference of agriculture on the other sectors have been used for the projection of manpower demand for 1981.

*Neat only  
GCA may  
JWS  
had  
nl.*

Multiplying these projected output levels for different sectors by the corresponding manpower coefficient of each occupation, sectoral manpower requirement by occupation has been estimated. By adding the estimated manpower requirement of all the occupations by activity we have arrived at manpower requirement belonging to that occupation for the State as a whole. Putting all the manpower requirements together will give us the total likely manpower requirement in Manipur in the year 1981 (Tables 8.4, 8.5, 8.6 and 8.7).

#### 8.1.2 Changes in Pattern of Manpower Demand :

The shift of manpower demand by different economic activities in 1981 as compared to that of 1961 (Table 8.8) reveals

**Table 8.2**

PROJECTED SECTORAL OUTPUT BASED ON THE TIME TREND  
GROWTH RATE BY DIFFERENT ASSUMPTIONS FOR MANIPUR,  
1980-81 (SET I)

		(Rs. in lakhs)		
Cate- gory	Name of Activity	Assumption		
		Optimi- stic	Feasible	Lower bound
1	2	3	4	5
I	Agriculture including Livestocks	2622.00	1595.00	1156.00
II	Forestry and Logging	14.56	14.56	14.56
III	Fishing	44.34	44.34	44.34
IV	Mining and Quarrying	0.01	0.01	0.01
V	Small-scale and Household- Industry	185.30	185.30	185.30
VI	Construction	83.88	83.88	83.88
VII	Trade and Commerce	631.10	631.10	631.10
VIII	Transport and Communi- cation	61.29	61.29	61.29
IX	Other services	680.60	680.60	680.60
I-IX	All Activities	4323.08	3296.08	2857.08

Source : This projection based on the figures of  
output by different sectors that have  
been presented in Table 2.13 in Chapter II.



Table 8.3

PROJECTED SECTORAL OUTPUT BASED ON THE MODEL WHERE  
 AGRICULTURAL SECTOR IS AN INDEPENDENT VARIABLE FOR  
 MANIPUR, 1980-81 (SET II)

Cate- gory	Name of Activity	(Rs. in lakhs)		
		Assumption		
		Optimi- stic	Feasible	Lower bound
1	2	3	4	5
I	Agriculture including Livestocks	2622.00	1595.00	1156.00
II	Forestry and Logging	14.76	21.15	26.69
III	Fishing	53.69	60.16	64.74
IV	Mining and Quarrying	0.02	0.06	0.12
V	Small-scale and Household- Industry	185.80	186.20	186.40
VI	Construction	83.10	83.10	83.10
VII	Trade and Commerce	626.50	628.20	629.40
VIII	Transport and Communi- cation	64.90	66.50	67.60
IX	Other services	720.70	715.30	711.90
I-IX	All Activities	4371.47	3355.67	2925.95

Source : Same as Table 8.2

Table B.4

PROJECTED MANPOWER DEMAND IN 1961 BY ECONOMIC ACTIVITY AND BY OCCUPATION, MANIPUR (SET I)

Code No.	Occupation	Activity											All Activities	All Activities	All Activities	
		A-i*	A-ii**	A-iii***	A-iv	A-v	A-vi	A-vii	A-viii	A-ix						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
00	-	-	-	-	-	-	-	-	50	-	-	-	2137	2187	2187	2187
01	-	-	-	-	-	-	-	-	-	-	-	-	20	20	20	20
02	-	-	-	-	-	-	-	-	-	-	-	-	381	381	381	381
03	-	-	-	-	-	-	-	-	-	-	-	-	3607	3607	3607	3607
04	-	-	-	-	-	-	-	-	-	-	-	-	3022	3022	3022	3022
05	-	-	-	-	-	-	-	-	-	-	-	-	38005	38005	38005	38005
06	-	-	-	-	-	-	-	-	-	-	-	-	708	708	708	708
07	-	-	-	-	-	-	-	-	-	-	-	-	803	803	803	803
08	-	-	-	-	-	-	-	-	-	-	-	-	4962	4962	4962	4962
09	-	-	-	-	-	-	-	-	-	-	-	-	245	245	245	245
0X	-	-	-	-	-	-	-	-	-	-	-	-	45941	45941	45941	45941
10	-	-	-	-	-	-	-	-	-	-	-	-	5806	5806	5806	5806
12	-	-	-	-	-	-	-	-	-	-	6	-	6	6	6	6
13	-	-	-	-	-	-	-	-	1657	-	-	-	6	6	6	6
20	-	-	-	-	-	-	-	-	-	-	-	-	2790	4453	4453	4453
21	-	-	-	-	-	-	-	-	-	-	-	-	327	327	327	327
22	-	-	-	-	-	-	-	-	-	-	-	-	150	150	150	150
28	-	-	-	-	-	-	-	-	-	-	-	-	27	27	27	27
29	-	-	-	-	-	-	-	-	-	-	-	-	9290	9290	9290	9290
30	-	-	-	-	-	-	-	-	-	-	-	-	4710	4710	4710	4710
31	-	-	-	-	-	-	-	-	-	6	-	-	6	6	6	6
32	-	-	-	-	-	-	-	-	-	6	-	-	6	6	6	6
33	-	-	-	-	-	-	-	-	-	6	-	-	7	13	13	13
34	-	-	-	-	-	-	-	-	-	29087	-	-	6	29087	29087	29087
40	-	980025	596163	432078	-	-	-	52	-	-	-	-	6	6	6	6
41	-	9937	6045	4381	-	-	-	33	-	-	-	-	320	980397	596535	432450
42	-	-	-	-	-	-	-	-	-	-	-	-	463	10433	6541	4877
43	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	7
44	-	-	-	-	87	845	-	44	-	-	-	-	889	889	889	889
50	-	-	-	-	-	-	-	156	-	-	-	-	243	243	243	243
61	-	-	-	-	-	-	2	-	-	-	-	-	2	2	2	2
64	-	-	-	-	-	-	-	-	-	-	-	77	77	77	77	77
66	-	-	-	-	-	-	-	-	-	-	-	9495	9495	9495	9495	9495
67	-	-	-	-	-	-	-	-	-	-	-	30	30	30	30	30
68	-	-	-	-	-	-	-	-	-	-	-	93	93	93	93	93
69	-	-	-	-	-	-	-	-	-	-	-	112	112	112	112	112
70	-	-	-	-	-	-	-	-	-	-	-	132	132	132	132	132
71	-	-	-	-	-	-	-	129241	-	-	-	-	129241	129241	129241	129241
72	-	-	-	-	-	-	-	6573	-	-	-	-	6573	6573	6573	6573
73	-	-	-	-	-	-	-	122	-	-	-	-	122	122	122	122
74	-	-	-	-	-	-	-	750	-	-	-	-	750	750	750	750
75	-	-	-	-	-	-	-	1773	-	-	-	-	1773	1773	1773	1773
76	-	-	-	-	-	-	-	495	-	-	-	-	521	521	521	521
77	-	-	-	-	-	-	-	6	212	-	26	-	867	867	867	867
79	-	-	-	-	-	-	-	6326	-	-	77	572	6326	6326	6326	6326
80	-	-	-	-	-	-	-	39	6612	-	-	-	6651	6651	6651	6651
81	-	-	-	-	-	-	-	30	-	-	-	-	547	547	547	547
82	-	-	-	-	-	-	-	1238	-	-	-	-	1238	1238	1238	1238
83	-	-	-	-	-	-	-	1516	-	6	-	-	1522	1522	1522	1522
85	-	-	-	-	-	-	-	83	-	-	-	-	103	103	103	103
86	-	-	-	-	-	-	-	1151	-	-	-	-	1158	1158	1158	1158
87	-	-	-	-	-	-	-	-	-	-	-	-	14	14	14	14
89	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	7
90	-	-	-	-	-	-	-	-	940	-	-	-	10440	11380	11380	11380
91	-	-	-	-	-	-	-	-	-	-	-	-	17961	17961	17961	17961
92	-	-	-	-	-	-	-	-	-	-	-	-	3866	3866	3866	3866
93	-	-	-	-	-	-	-	-	-	-	-	-	116	116	116	116
94	-	-	-	-	-	-	-	-	-	-	-	-	1225	1225	1225	1225
95	-	-	-	-	-	-	-	-	-	-	-	-	408	408	408	408
96	-	-	-	-	-	-	-	-	-	-	-	-	497	497	497	497
97	-	-	-	-	-	-	-	-	-	-	-	-	41	41	41	41
99	-	-	-	-	-	-	-	-	-	-	-	-	374	374	374	374
X8	-	-	-	-	-	-	-	-	-	-	-	-	34	34	34	34
X9	-	-	-	-	-	-	-	-	-	-	-	-	2396	2396	2396	2396
All Occupations		989962	602208	436459	87	845	2	149628	9471	29123	10048	162706	1351872	964118	798369	798369

\* Optimistic assumption

\*\* Realistic assumption

\*\*\* Lower bound assumption

Table 8.5

PROJECTED MANPOWER DEMAND BASED ON A MODEL WHERE AGRICULTURAL OUTPUT IS THE INDEPENDENT VARIABLE (SET II)

(Optimistic Assumption)

Code No.	Occupation*	A-i	A-ii	A-iii	A-iv	A-v	A-vi	A-vii	A-viii	A-ix	A-i to A-ix
1	2	3	4	5	6	7	8	9	10	11	12
00		-	-	-	-	-	50	-	-	2263	2313
01		-	-	-	-	-	-	-	-	22	22
02		-	-	-	-	-	-	-	-	404	404
03		-	-	-	-	-	-	-	-	3820	3820
04		-	-	-	-	-	-	-	-	3200	3200
05		-	-	-	-	-	-	-	-	40244	40244
06		-	-	-	-	-	-	-	-	750	750
07		-	-	-	-	-	-	-	-	850	850
08		-	-	-	-	-	-	-	-	5254	5254
09		-	-	-	-	-	-	-	-	259	259
0X		-	-	-	-	-	-	-	-	4865	4865
10		-	-	-	-	-	-	-	-	6148	6148
12		-	-	-	-	-	-	6	-	-	6
13		-	-	-	-	-	1641	-	6	2955	4062
20		-	-	-	-	-	-	-	-	346	346
21		-	-	-	-	-	-	-	-	159	159
22		-	-	-	-	-	-	-	-	29	29
28		-	-	-	-	-	-	-	-	9838	9838
29		-	-	-	-	-	-	-	-	4987	4987
30		-	-	-	-	-	-	6	-	-	6
31		-	-	-	-	-	-	6	-	-	6
32		-	-	-	-	-	-	6	-	-	6
33		-	-	-	-	-	-	28875	-	7	28875
34		-	-	-	-	-	-	6	-	-	6
40		980025	-	-	-	52	-	-	-	339	980416
41		9937	-	-	-	33	-	-	-	490	10460
42		-	-	-	-	45	-	-	-	7	7
43		-	-	1023	-	156	-	-	-	-	1068
44		-	89	-	-	-	-	-	-	-	245
50		-	-	-	3	-	-	-	-	-	3
61		-	-	-	-	-	-	-	81	-	81
64		-	-	-	-	-	-	-	10054	-	10054
66		-	-	-	-	-	-	-	32	-	32
67		-	-	-	-	-	-	-	98	-	98
68		-	-	-	-	-	-	-	119	-	119
69		-	-	-	-	-	-	-	140	-	140
70		-	-	-	-	129590	-	-	-	-	129590
71		-	-	-	-	6590	-	-	-	-	6590
72		-	-	-	-	123	-	-	-	-	123
73		-	-	-	-	752	-	-	-	-	752
74		-	-	-	-	1778	-	-	-	-	1778
75		-	-	-	-	496	-	-	28	-	524
76		-	-	-	-	6	210	-	81	605	902
77		-	-	-	-	6343	-	-	-	-	6343
79		-	-	-	-	39	6551	-	-	-	6590
80		-	-	-	-	30	-	-	-	548	578
81		-	-	-	-	1241	-	-	-	-	1241
82		-	-	-	-	1520	-	6	-	-	1526
83		-	-	-	-	84	-	-	-	-	106
85		-	-	-	-	1154	-	-	-	22	1161
86		-	-	-	-	-	-	-	-	7	14
87		-	-	-	-	-	-	-	-	14	14
89		-	-	-	-	-	932	-	-	7	7
90		-	-	-	-	-	-	-	-	11056	11988
91		-	-	-	-	-	-	-	-	19019	19019
92		-	-	-	-	-	-	-	-	4094	4094
93		-	-	-	-	-	-	-	-	123	123
94		-	-	-	-	-	-	-	-	1297	1297
95		-	-	-	-	-	-	-	-	432	432
96		-	-	-	-	-	-	-	-	526	526
97		-	-	-	-	-	-	-	-	43	43
99		-	-	-	-	-	-	-	-	396	396
X8		-	-	-	-	-	-	-	-	36	36
X9		-	-	-	-	-	-	-	-	2537	2537
		-	-	-	-	-	-	-	-	512	512
All Occupations		989962	89	1023	3	150032	9384	28911	10639	128510	1318553

Table 8.6

PROJECTED MANPOWER DEMAND BASED ON A MODEL WHERE AGRICULTURAL OUTPUT IS THE INDEPENDENT VARIABLE (SET II)

(Feasible Assumption)

Code No.	Occupation*	A-i	A-ii	A-iii	A-iv	A-v	A-vi	A-vii	A-viii	A-ix	A-i to A-ix
1	2	3	4	5	6	7	8	9	10	11	12
00		-	-	-	-	-	50	-	-	2246	2296
01		-	-	-	-	-	-	-	-	21	21
02		-	-	-	-	-	-	-	-	401	401
03		-	-	-	-	-	-	-	-	3791	3791
04		-	-	-	-	-	-	-	-	3176	3176
05		-	-	-	-	-	-	-	-	39942	39942
06		-	-	-	-	-	-	-	-	744	744
07		-	-	-	-	-	-	-	-	844	844
08		-	-	-	-	-	-	-	-	5215	5215
09		-	-	-	-	-	-	-	-	258	258
0X		-	-	-	-	-	-	-	-	4828	4828
10		-	-	-	-	-	-	-	-	6102	6102
12		-	-	-	-	-	-	6	-	-	6
13		-	-	-	-	-	1641	-	7	2933	4581
20		-	-	-	-	-	-	-	-	343	343
21		-	-	-	-	-	-	-	-	157	157
22		-	-	-	-	-	-	-	-	29	29
28		-	-	-	-	-	-	-	-	9764	9764
29		-	-	-	-	-	-	-	-	4950	4950
30		-	-	-	-	-	-	6	-	-	6
31		-	-	-	-	-	-	6	-	-	6
32		-	-	-	-	-	-	6	-	-	6
33		-	-	-	-	-	-	6	-	7	13
34		-	-	-	-	-	-	28954	-	-	28954
40		596163	-	-	-	-	-	6	-	-	6
41		6045	-	-	-	52	-	-	-	336	596551
42		-	-	-	-	34	-	-	-	486	6565
43		-	-	1147	-	45	-	-	-	7	7
44		-	127	-	-	156	-	-	-	-	1192
50		-	-	-	10	-	-	-	-	-	283
61		-	-	-	-	-	-	-	83	-	10
64		-	-	-	-	-	-	-	10302	-	83
66		-	-	-	-	-	-	-	-	-	10302
67		-	-	-	-	-	-	-	33	-	33
68		-	-	-	-	-	-	-	100	-	100
69		-	-	-	-	-	-	-	122	-	122
70		-	-	-	-	-	-	-	144	-	144
71		-	-	-	-	129869	-	-	-	-	129869
72		-	-	-	-	6605	-	-	-	-	6605
73		-	-	-	-	123	-	-	-	-	123
74		-	-	-	-	754	-	-	-	-	754
75		-	-	-	-	1782	-	-	-	-	1782
76		-	-	-	-	497	-	-	29	-	526
77		-	-	-	-	6	210	-	83	601	900
79		-	-	-	-	6357	-	-	-	-	6357
80		-	-	-	-	39	6551	-	-	-	6590
81		-	-	-	-	30	-	-	-	544	574
82		-	-	-	-	1244	-	-	-	-	1244
83		-	-	-	-	1523	-	6	-	-	1529
85		-	-	-	-	84	-	-	-	21	105
86		-	-	-	-	1156	-	-	-	7	1163
87		-	-	-	-	-	-	-	-	14	14
89		-	-	-	-	-	-	-	-	7	7
90		-	-	-	-	-	932	-	-	10973	11905
91		-	-	-	-	-	-	-	-	18877	18877
92		-	-	-	-	-	-	-	-	4063	4063
93		-	-	-	-	-	-	-	-	122	122
94		-	-	-	-	-	-	-	-	1288	1288
95		-	-	-	-	-	-	-	-	492	492
96		-	-	-	-	-	-	-	-	522	522
97		-	-	-	-	-	-	-	-	43	43
99		-	-	-	-	-	-	-	-	393	393
X8		-	-	-	-	-	-	-	-	36	36
X9		-	-	-	-	-	-	-	-	2518	2518
		-	-	-	-	-	-	-	-	508	508
All Occupations		602208	127	1147	10	150356	9384	28990	10903	127546	930671

Table 8.2

PROJECTED MANPOWER DEMAND BASED ON A MODEL WHERE AGRICULTURAL OUTPUT IS THE INDEPENDENT VARIABLE (SET II)

(Lower Bound Assumption)

Code No.	Occupation	A-i	A-ii	A-iii	A-iv	A-v	A-vi	A-vii	A-viii	A-ix	A-i to A-ix
1	2	3	4	5	6	7	8	9	10	11	12
00							50			2235	2285
01										21	21
02										399	399
03										3773	3773
04										3161	3161
05										39752	39752
06										740	740
07										840	840
08										5190	5190
09										256	256
0X										4805	4805
10										6073	6073
12								6			6
13							1641		7	2919	4567
20										342	342
21										157	157
22										28	28
28										9717	9717
29										4926	4926
30											6
31								6			6
32								6			6
33								6		7	13
34								29009			29009
40		432078				52					6
41		4381				34				335	432465
42										484	4899
43				1234		45				7	7
44			160			157					1279
50					20						317
61											20
64									85		85
66									10473		10473
67									33		33
68									102		102
69									124		124
70									146		146
71						130008					130008
72						6612					6612
73						123					123
74						755					755
75						1784					1784
76						498					527
77						6	210		29		899
79						6364			85	598	6364
80						39	6551				6590
81						30				541	571
82						1245					1245
83						1525		6			1531
85						84					21
86						1158					105
87											1165
89											14
90							932				7
91										10921	11853
92										18787	18787
93										4044	4044
94										121	121
95										1281	1281
96										427	427
97										520	520
99										43	43
X8										392	392
X9										36	36
										2506	2506
										505	505
All Occupations		436459	160	1234	20	150519	9384	29045	11084	126938	764843

Table 8.8

COMPARATIVE PICTURE OF PERCENTAGE DISTRIBUTION OF DEMAND FOR MANPOWER IN  
DIFFERENT ECONOMIC ACTIVITIES IN MANIPUR FOR THE YEAR 1961 AND 1981

Category 1	Economic Activity 2	1961 (base) 3	1981					
			Set I			Set II		
			Opti- mistic 4	Fea- sible 5	Lower bound 6	Opti- mistic 7	Fea- sible 8	Lower bound 9
(i)	Agriculture including Livestocks	66.14	73.23	62.46	54.67	75.08	64.71	57.07
(ii)	Forestry and Logging	0.04	0.01	0.01	0.01	0.01	0.01	0.02
(iii)	Fishing	0.07	0.06	0.09	0.11	0.08	0.12	0.16
(iv)	Mining and Quarrying	0.01	0.00	0.00	0.00	0.00	0.00	0.00
(v)	Small-scale Household and Industry	22.43	11.07	15.52	18.74	11.38	16.16	19.68
(vi)	Construction	0.62	0.70	0.98	1.19	0.71	1.01	1.23
(vii)	Trade and Commerce	3.32	2.15	3.02	3.65	2.19	3.11	3.80
(viii)	Transport and Communi- cation	0.85	0.74	1.04	1.26	0.81	1.17	1.45
(ix)	Other Services	6.52	12.04	16.88	20.38	9.75	13.70	16.60
(i)-(ix)	All Activities	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source : Arrived from Tables 5.7, 8.4, 8.5, 8.6 and 8.7.

that the predominance of agriculture will continue ranging from 75.08 per cent in Set II (optimistic assumption) to 54.67 per cent in Set I (lower-bound assumption) of the total manpower demand in the economy of Manipur. The importance of small-scale and household-industry which was next to agriculture in 1961 also retains according to the estimate of Set II (with all the three assumptions). But this has been replaced by the other services (which occupies third position both in 1961 and 1981 in Set II) in all the estimates of Set I bringing down small-scale and household activity in the third place.

### 8.2 Supply of Manpower :

Having examined the likely demand for manpower in 1981 we may now pass on to examine the likely supply of manpower for the same year in order to compare them. This has been done with the objective of presenting the likely picture as to the adequacy or otherwise of the manpower supply in Manipur. As in demand projection, so in supply forecast, there are severe data limitations which stand in the way of making the projection on the basis of any sophisticated methodologies. Nevertheless, keeping in view the data constraints, these projections may enable one to get an idea as to the shape of things to come in future. They may also be helpful in taking policy decision because there is distinct interrelationship between the demand for and supply of manpower. In other words, the very process of generating the supply of manpower is influenced

to a certain extent by demand and vice-versa.

### 8.2.1 Methodology of Projecting Manpower Supply :

The methodology that has been adopted for the projection of supply of manpower for 1981 is as follows. The supply of labour force in 1981 can be worked out by deducting the number of students and disabled persons in the age-group 15-59 from the projected level of population in the age-group 15 to 59. This means that as a first step, the level of population in different age-groups has to be projected for the terminal year. Then, the number of students and disabled persons in the age-group 15 to 59 have to be estimated.

For the purpose of projecting population level for 1981, the census data of 1961 and 1971 have been used. To be more specific, the compound growth rates of population by sex during 1961 and 1971 as registered in different age-groups in rural and urban areas separately, have been worked out. These growth rates have been used to project the level of population by sex and age-group separately for rural and urban areas. These projected population have been presented in Tables 8.9, 8.10 and 8.11. It may be noted that the population level of Manipur as a whole is also available in one of the publications of the Planning Commission.<sup>2/</sup> But these

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<sup>2/</sup> See Government of Manipur, Fact Book on Manpower in Manipur, Department of Statistics, Imphal, 1967.



**Table 8.9**

**PROJECTED POPULATION BY SEX AND AGE-GROUP FOR 1981  
ON THE BASIS OF GROWTH RATE OF POPULATION DURING  
1961 AND 1971, MANIPUR-RURAL :**

<b>Age-Group</b> 1	<b>Male</b> 2	<b>Female</b> 3	<b>Total</b> 4
0 - 14	259200	259800	519000
15 - 19	68500	68840	137340
20 - 24	62010	48340	110350
25 - 29	35130	37980	73110
30 - 39	64160	66680	130840
40 - 49	59070	47080	106150
50 - 59	35800	30430	66230
60 + above	44080	36680	80760
Age not stated	2	-	2
<b>All Ages</b>	<b>627952</b>	<b>595830</b>	<b>1223782</b>

**Sources :** For population by specific age and sex in 1961 and 1971, See Census of India 1961, District Census Handbook, Manipur and Census of India 1971, Paper No. 3 of 1972, Economic Characteristics of Population.

**Table 8.10**

**PROJECTED POPULATION BY SEX AND AGE-GROUP FOR 1981  
ON THE BASIS OF GROWTH RATE OF POPULATION DURING  
1961 AND 1971, MANIPUR-URBAN :**

<b>Age-Group</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
0 - 14	56800	57180	113980
15 - 19	13220	21290	34510
20 - 24	12000	14350	26350
25 - 29	12070	8851	20921
30 - 39	18330	15590	33920
40 - 49	17720	13030	30750
50 - 59	11270	7216	18486
60 + above	9194	10740	19934
Age not stated	-	-	-
<b>All Ages</b>	<b>150604</b>	<b>148247</b>	<b>298851</b>

**Sources : Same as Table 8.9.**

**Table 8.11**

**PROJECTED POPULATION BY SEX AND AGE-GROUP FOR 1981  
ON THE BASIS OF GROWTH RATE OF POPULATION DURING  
1961 AND 1971, MANIPUR :**

<b>Age-Group</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
0 - 14	316000	316980	632980
15 - 19	81720	90130	171850
20 - 24	74010	62690	136700
25 - 29	47200	46831	94031
30 - 39	82490	82270	164760
40 - 49	76790	60110	136900
50 - 59	47070	37646	84716
60 + above	53274	47420	100694
Age not stated	2	-	2
<b>All Ages</b>	<b>778556</b>	<b>744077</b>	<b>1522633</b>

**Sources : Same as Table 8.9.**

estimates which were made in late 1960 are found to be very much on the higher side as compared to the actual figures that are available in the Census reports of 1971. It was, therefore, felt that the population estimate made by the Planning Commission should be adjusted after considering the actual population as given in the Census report of 1971. The age-groupwise difference between the estimates by the Planning Commission and the actuals has been adjusted on the basis of proportionality while presenting the population estimate of 1981, based on the Planning Commission estimates (Table 8.12). Thus we have two sets of population projection - one is the projection based on the compound growth rates, and the other of adjusted Planning Commission estimates. It may be observed that the estimates made on the basis of growth rates were a little on the lower side as compared to the other set.

The main two components of population - viz. students numbering 29801 (23103 males and 6698 females) and disabled persons numbering 28192 (15106 males and 1386 females) - which need to be eliminated from the total population in the age-group 15-59, have been estimated for 1981 on the basis of the ratios of the respective category of population by sex in 1971<sup>8/</sup>

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<sup>8/</sup> While carrying out the estimate of students, rural urban break-up could not be made because of the non-availability of data. However, in the case of disabled person such case has been taken.

**Table 8.12**

**PROJECTED POPULATION BY SEX AND AGE-GROUP FOR 1981  
ON THE BASIS OF PLANNING COMMISSION FIGURE, MANIPUR:**

<b>Age-Group</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
0 - 14	311679	300235	611914
15 - 19	82043	80980	163023
20 - 24	72567	73195	145762
25 - 29	60060	60633	120693
30 - 39	86932	94216	181148
40 - 49	62769	64518	127287
50 - 59	48662	49049	97711
60 + above	51705	52105	103810
<b>All Ages</b>	<b>776417</b>	<b>774931</b>	<b>1551348</b>

**Note :** Planning Commission projected the population of Manipur for 1971-1976 and 1981 on the basis of 1951-1961 growth. Since the Planning Commission's population figure for 1971 was slightly different from the actual of the 1971 Census figure, adjustment has been made which has been discussed in the text itself.

### 8.2.2 Projected Supply of Manpower and its Limitations:

Now, the level of manpower supply as projected following the above methodologies are presented in Table 8.13. But it can be noted that the level of supply as projected above is subject to two major limitations. One is that, the extent of voluntary unemployed other than students, such as persons engaged in household duties could not be eliminated from the projection of labour force because of the complex nature of the phenomenon. The other limitation relates to the fact that, some among the students eliminated from the labour force, may in fact join the labour force if suitable jobs are available.

### 8.3 Demand for and Supply of Manpower Compared :

The gaps between demand for and supply of manpower as projected under different assumptions for the year 1981 are also presented in Table 8.13. It can be observed that, except for the projection under assumption of lower bound growth rate in Set II there will be shortage of manpower in Manipur by 1981. This conclusion should, however, be qualified by the fact that there is an element of overestimation in demand generation because of the inclusion of periphery workers and underemployed in the computation of labour-output coefficients that have been used for demand projection. It also follows that given the feasible or optimistic assumptions there may arise an economic environment which will at least absorb the periphery types of workers and underemployed more gainfully.

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Table 8.13

A COMPARATIVE PICTURE OF DEMAND FOR AND SUPPLY OF  
MANPOWER IN MANIPUR FOR 1981

SET I			
Assumption (1)	Demand (2)	Supply* (3)	Difference (4) = (2-3)
Optimistic	1351872	730964	620908
Feasible	964118	730964	233154
Lower-bound	798369	730964	67405
SET II			
Optimistic	1318553	730964	587589
Feasible	930671	730964	199707
Lower-bound	764843	730964	33879
SET I			
Assumption (1)	Demand (2)	Supply** (3)	Difference (4) = (2-3)
Optimistic	1351872	777631	574241
Feasible	964118	777631	186487
Lower-bound	798369	777631	20738
SET II			
Optimistic	1318553	777631	540922
Feasible	930671	777631	153040
Lower-bound	764843	777631	- 12788

Sources : For demand for manpower, Tables 8.4, 8.5 and 8.6 and For supply of manpower, Tables 8.11 and 8.12.

\* Refers to the population projected on the basis of growth rates.

\*\* Refers to the adjusted population on the estimates of Planning Commission.

## CHAPTER IX

### CONCLUSION

Geographically an isolated and difficult terrain, Manipur attained its full-fledged statehood in India's federal set-up only in 1972.

It is through a motorable road - the only one of that kind - that the State is linked with the rest of India on surface. There is not a mile of railways in Manipur, and even the nearest rail-head is at a distance of 144 miles from Imphal. Too obviously Manipur is not endowed with the advantages of direct link with India's sprawling railway network. Even within the State, the hills and the valley, two regions distinct from each other both as regards social and economic interactions, highlight all the more the need for better inter-State communications. Accounting for as much as 92.00 per cent of the total area, the hill region contains only 32.23 per cent of Manipur's total population. Thus the density of population there stands at only 17 per square kilometre as against the figure of 406 per square kilometre for the valley region and 48 per square kilometre for the State as a whole. These two regions are again distinct from each other from the angle of development of internal roads and communications. The valley region accounts for 51.8 per cent of the total road length in Manipur as in 1969. The level of urbanization too is poor as compared to



the rest of India. What is more noteworthy is that urbanization was completely absent in the hill region till 1961; it was only in 1971 that a small township appeared there accounting for 6.00 per cent of Manipur's total urban population. There are many other characteristics which distinguish one region from the other, and Manipur from the rest of the country. All these characteristics point up to the fact that Manipur is almost a closed economy - primitive and nearly self-sufficient, yet hardly integrated with its own small components.

Considered in a sectoral context, it is found that the sinews of the State economy lie mostly in the agricultural and handloom sectors. The distinct features that are obtained in these two sectors are as follows. Agricultural sector is characterized by the overwhelming importance of a single crop, i.e. rice. Double-cropping and other concomitance of modern technology are not widely prevalent. Irrigation facilities, largely natural, are confined to the valley region that too, on a moderate scale. All these suggest that any fluctuations in agricultural output, virtually in the production of rice, are as a matter of course reflected in the State-income.

Household sector, confined mostly to the handloom industry, has, on the other hand, given rise to high workers' participation rate particularly amongst the females. In fact,

the handloom industry has come to occupy a prized place in the cultural life of the people of Manipur. But this industry, as expected, has not generated a second layer of activities mostly because of the fact that its major input, that is yarn, is procured from outside the State. More important, this inter-regional trade which is very important in the overall trade of Manipur has been monopolised by a small body of merchants who are by and large outsiders viz., Marwaris. The effect has been that even this sector, which plays a very important role in the determination of the State income, has not helped create an entrepreneurial class within the region. However the household industry has built up in the course of time a specific skill by dint of which a specific market has been created even outside the region. It may also be noted that there is, to an extent, product differentiation between the products of rural areas and the urban areas depending mainly on the type of looms that have been used in the respective regions. The inroads of power-looms - till now to a very limited extent - are of recent origin. Yet another feature of this industry is that the products of the rural areas, which are mostly loin-cloths cater to the local needs whereas the products of the urban areas, in addition to meeting their own needs, get an outlet through inter-regional trade. This characteristic of marketing products has given rise to a differentiated skill formation. That is, the products of the rural areas are of

traditional type and these meet home demand, whereas, those of the urban areas are oriented to commercial purposes.

The characteristics associated with these two major sectors have set the lifestyle of the people in the absence of massive exposure to the rest of the world. The agricultural sector, by and large, meets food needs of the region rather than of industrial raw materials. In fact, food-grains, i.e. rice, together with a good supply of fish, provide the people a food-basket that enables them to be above the poverty line as measured in terms of nutritive norms. Among the non-food items, cloths, and fuel etc. are most predominant. Both these items of consumption are produced locally as noted above. In other words, the handloom industry meets the substantial needs of cloths and the vast expanse of forest in the State meets the requirement of fuel. Further, the inputs which go into the construction of houses are also largely provided by the forests. All these facts clearly indicate that Manipur's traditional economy is geared to the traditional requirements of its people. In substance, the outputs produced on the basis of a relatively modern technology do not figure in the overall consumption requirement of the State. This pattern of consumption also largely explains the survival of the traditional sector.

The most crucial question that arises at this stage is whether the traditional character of the State economy

has affected adversely the social welfare. One of the criteria of examining the welfare is comparison of the level of per capita income. But the per capita income criterion can be a better index of social welfare only when price differentials between different regions are properly weighted. This type of approach to per capita income comparison is rather difficult because of a lack of such estimates. Even if they are available, per capita income as an index of social welfare is constrained by the fact that they ignore income distribution. If the distribution of income is explicitly incorporated in the social objective function, one of the criteria could be to compare the level of living enjoyed by the poorest section of the society. Operationally, the poverty line can be defined in terms of nutritive norms, and then the size of the poor can be estimated. It can be compared with the corresponding figure for the country as a whole. In fact, this type of approach has been made in many recent studies. Even the Planning Commission has introduced this in its plan approach. Further the level of employment has also been introduced in the objective function. It is argued that given the same level of per capita income as also the same income distribution for two economies, the level of welfare would be higher in the economy which provides for a higher level of employment or lower size of unemployment. In other words, it is not only the size of the cake and its distribution but also the level of employ-

ment in relation to the economic activity which goes into the production of the cake that determines the extent of welfare.

Predominance of the traditional sector or rather a total absence of the modern sector affects both income distribution as well as the consumption pattern. To elaborate, a complete preponderance of the traditional sector generates income rather in an even manner. As a result there occurs a sort of uniformity in the consumption pattern across the classes. In other words, what is produced through the modern sophisticated technology does not figure substantially in the consumption basket. In contrast, given the operation of the large scale organized sector, which is of course conspicuous by its absence in Manipur, a shift takes place in favour of capital-intensive techniques. The limited section of labour force which is absorbed in such a sector enjoys much higher remuneration and perquisites which enable them to consume in a large way commodities produced in sophisticated sectors. These workers, though limited in number, set a life style quite distinct from those associated with traditional sectors to be emulated by the latter. This tendency is further reenforced by the massive selling costs that are borne by the modern sectors so as to promote their sales (i.e. it sows its seeds for consumer alienated economy). Thus, in ultimate analysis, there is a distinct difference between the employment pattern as also income distribution

that is generated by modern sectors and those by traditional sectors. Essentially, these differences are also reflected in the social welfare of the economy. In this context it may be mentioned that the redeeming feature of the overwhelming importance of the traditional sector in the State of Manipur is that the degree of inequality in the distribution of income is found considerably low.

In this specific framework, the criteria of per capita income, per capita expenditure, workers' participation rate and the extent of unemployment as obtained in Manipur can be examined vis-a-vis, the corresponding level for the country as a whole. This comparative picture can be first had in a static situation as in 1961 and then extended to comparative static picture over a decade.

In 1961 the annual per capita income in Manipur (Rs. 154.8) was substantially lower than that of all India (Rs. 306.0). Viewed from the level of per capita expenditure as in 1963-64, it is found that the average level of per capita monthly expenditure in Manipur-rural (Rs. 25.13) was considerably high as compared to the corresponding figure of all-India (Rs. 20.37). On the other hand, the average per capita monthly expenditure was considerably lower in Manipur-urban (Rs. 28.16) than that of all-India urban (Rs. 32.96). As noted above, the price differentials over space which has to be taken into consideration so as to arrive at a more realistic comparison, are not incorporated in the above estimates.

More important, there was an element of contradiction between the behaviour of per capita income and per capita expenditure in Manipur. The genesis of such contradiction has been explained in an appropriate place (chapter three). Another important conclusion that emerges is that the proportion of people living below the poverty line in Manipur-rural as measured under three alternative calorie norms varied between 35.00 per cent to 15.00 per cent depending on the postulated measure of poverty estimation. In Manipur-urban, however, there was none below the poverty line as measured through any one of the postulated calorie norms. Thus both in rural and urban areas the extent of poverty is much less than that in India as a whole. For example, the proportion of people living below the poverty line in rural areas of all-India stood at 40.00 per cent and that for urban areas of all-India at 55.00 per cent.

Similarly, other indicators relating to welfare such as workers' participation rate and open unemployment, when examined in a comparative sense, bring out the fact that Manipur had a great edge over the country as a whole. For example, the workers' participation rate in Manipur was 46 per cent as compared to 43 per cent for all-India. Again the extent of open unemployment in Manipur was only 0.44 as compared to 2.43 for all-India. Even the extent of under employment appeared to be relatively low in Manipur as a whole.

The contradictions that emerge between the level of per capita income, on the one hand, and the other indicators of social welfare, on the other, could be resolved only when better income distribution and better spread of employment be considered. The reasons underlying better income distribution and better spread of employment can be traced out in the sources.

The specific questions that are to be answered are:

- (a) What are the factors that have contributed to the somewhat equitable distribution of income in Manipur ? And
- (b) how did the level of living of the poorest, in a situation where per capita income was relatively low, settle at a higher plane (or how is it that even the average per capita expenditure in Manipur does not have much relative disadvantage) ?

The answer to these questions can be had by analysing the structure of the economy, asset distribution and the availability of wage goods. That agriculture including livestock (53.00 per cent), tertiary sector (34.00 per cent) and household sector (8.00 per cent) - these together contributed to the extent of 95.00 per cent of the State-income of Manipur. It should be noted that the modern sector, in the form of large-scale manufacturing industries, was totally absent. The tertiary sector, second importance in terms of contribution to the State-income, had traditional characteristics since



it served only the traditional sectors like agriculture and household-industry. This pattern of predominant sectors also generated a distinct employment pattern which partly explains the income distribution of even nature. The other factor which also contributed to better income distribution is asset distribution in the dominant sector. In this particular case, land distribution - agriculture being a very predominant sector - represents largely asset distribution.

It is also found that agriculture accounted for 66.00 per cent of the total employment in Manipur. More important, above 96.00 per cent of the total workers in agriculture was peasant proprietors (cultivators). The most striking feature of the agricultural operation in Manipur was that agricultural labourers were almost non-existent (0.61 per cent of the total workers). These features when examined with asset distribution indicate the type of income distribution that is obtained in Manipur. This aspect will be discussed later in an integrated manner. Household sector which accounted for 22.00 per cent of the total employment in Manipur in 1961 was characterized by the predominance of female workers. Tertiary sector including trade and commerce, transport, storage and communication and other services which ranked second in terms of contribution to the State-income accounted for only 10.68 per cent of the total workers in Manipur.

This fact indicated roughly the higher productivity of workers in this sector. It should be noted that this higher productive sector was largely confined to urban areas. This partly explains the phenomenon of non-existence of poverty in urban areas. As obtained in Manipur in 1961, these are the only sectors which have employment consequence worth noting.

Considering the relative importance of different sectors in a regional sense, that is urban and rural areas, it is found that the importance of tertiary sector in urban areas was on the increase. Next in importance in urban areas was the household sector. In the rural areas, however, agricultural activity was still growing in importance. Employment peculiarities, that are noticed with respect to these predominant sectors, were as follows. In the urban areas the tertiary sector absorbed about 73.00 per cent of the total male and the household-industry about 81.00 per cent of the total female workers. Between sub-sectors within the tertiary sector, service sector absorbed the largest proportion of male workers.

Examining agricultural sector par-se, some distinguishing feature are obtained in relation to land-utilization, cropping pattern and asset distribution. Of the total geographical area of Manipur, about 64.00 per cent was not available for cultivation because of the existence of a large hilly tract. At the same time, 27.00 per cent

of the total area was under forests while the net sown area was only 8.00 per cent. It may be noted that 87.00 per cent of the cultivable area was brought under cultivation by 1961. The area under foodgrains accounted for as much as 98.00 per cent of the net sown area. More important, 98.00 per cent of the total area under foodgrains was accounted for by rice alone. Double-cropping had not yet become a part of agricultural practice. The other feature that is observed is that the estimated yield of rice per hectare was 667 kgs. (1962-63) at its lowest and 1796 kgs. (1968-69) at the highest which compared favourably with that for the country as a whole. In passing it may be noted that in the valley region there continued to be three different methods of operation in cultivation; on the other hand, in the hilly tracts jhum cultivation was largely practised.

The fact of traditional character of the sector and the better spread of employment, coupled with equitable distribution of land suggests that the resultant income distribution was also of equitable nature. Another noteworthy conclusion that emerges is that, not only was an equitable distribution of income generated by the traditional pattern of agricultural operations and the equitable land distribution, but the level of living was also ensured at a fairly high level. This was chiefly because of the availability of foodgrains. Larger area

under foodgrains, together with the higher productivity, ensured the people of Manipur at least the calorie requirements.

The conclusion that emerges from this study of agriculture would have been drastically affected had the industrial sector occupied a more predominant place in the economy of Manipur. But as noted earlier, large-scale manufacturing units were totally absent there. Even the small-scale and household-industries were more or less an extension of rural activities confined to the valley region, more precisely mostly to the Imphal area. The particular industries that developed in urban centres were handloom, manufactures of textile garments, wooden furniture, flour-mills and alike. These industries are of traditional character having limited capacity of generating distortion in income distribution, as determined by the agricultural sector for the State as a whole. Even a larger concentration of these industries in Imphal hardly produced any general spatial imbalances. The fact is that the compass of industrial sector was so small and its method of organization so traditional that no major consequences of income distribution could be expected. In fact, a higher level of income as reflected in the total absence of poverty in urban areas was mainly because of the preponderance of the tertiary sector catering mostly to agriculture and household consumption sector.

Isolation of Manipur both geographically, as also in terms of economic exposure in the form of insignificant importance of products produced through relatively sophisticated methods further enabled the State to maintain this feature.

Against this backdrop of the major features obtained in 1961, the dynamics of the new developments that took place during the decade 1961 to 1971 may be examined. Over the decade net-State Domestic Product at constant prices registered the growth rate of 6.40 per cent. Even the per capita income has grown at the rate of 3.10 per cent per annum. These growth rates were obviously far above the corresponding all-India growth rates. This high level of growth resulted from substantially high annual growth rates in several sectors, such as, agriculture including livestock (7.40 per cent), electricity and water supply (14.20 per cent), public services (13.00 per cent) and small-scale and cottage industries (3.10 per cent). Considering the bigger base of agriculture and small-scale industries, the growth rates obtained for them - though they appear to be lower - were far more material than those for electricity and water supply and public services which have small base in the economy. In any case,

agriculture still maintained a rate of growth which was considerably higher than that of the net-State Domestic Product.

When the relative importance of different sectors is viewed from the angle of employment consequences, the picture emerges as follows. Among the various sectors, agriculture and household industries were still predominant in providing employment. But while agriculture provided employment to a higher proportion of people, as compared to 1961 (71.40 per cent in 1971 and 66.14 per cent in 1961), household-industry though it retained its second position in providing employment, provided employment to a lesser extent (13.75 per cent in 1971 and 22.12 per cent in 1961). This feature indicates that the extent of dependency of people on land increased considerably over the years and that household-industry as source of employment was declining. Another new development, already noticed, was that agricultural labourers were increasing both in an absolute and relative sense. The decline in employment in household-industries was accompanied by an increase in trade and commerce, manufacturing and other services. Yet, the fact remains that these growing sectors were yet to grow if they have to have major employment consequences.

Such relative importance of the different sectors when examined in their rural and urban breakup shows certain important departures from the picture that emerged in 1961. In urban areas the tertiary sector maintained more or less similar position in 1971 whereas the household industry was declining. The decline in the household sector in urban areas was accompanied by an increase in employment in agricultural activities. Manufacturing industry, mostly confined to urban areas, expanded its employment over the decade. For example, it accounted for only 1.30 per cent of the total employment in urban areas in 1961 as against 6.50 in 1971. Separate comments for the rural pattern are not necessary as, by virtue of its overwhelming importance, the picture that emerges for the State as a whole also holds good for rural areas. To put it the other way round, the pattern that emerges for rural areas shapes the pattern for the State as a whole, the extent of urbanization being still low despite its high growth during the decade.

Examining employment aspect of the household industry it is found that the extent of female workers substantially declined. The shift of the female workers was at least partially in favour of agriculture both in rural and urban areas. It may be pointed out in this connection that trade and commerce, which used to absorb relatively a high proportion of female workers, was characterized in 1971 by

their withdrawal. The fact of falling participation rate of females both in household industries and trade and commerce which really might have brought down total participation rate in the State can be interpreted in the following manner. It is possible that the household industry, which once used to absorb very high proportion of female workers was no longer a growing industry, rather it was declining over the years. In the case of trade and commerce, it is possible that job requirements that are associated with these sectors shifted in favour of male workers.

The above discussion on the employment of the most predominant sector drives the point home that agricultural sector was becoming more predominant than ever. Therefore a closer look into the dynamics of this sector will be quite in order. With a rapid growth of population unaccompanied by corresponding expansion in other sectors, increasingly a higher pressure on land was generated. As a result land-man ratio declined from 0.21 in 1961 to 0.17 in 1971. The natural consequence of this development of an increasing population depending on limited extent of land ought to have been a fall in the level of living. More so, because of the fact that there was also a slight diversification of the cropping pattern. For example, the area under foodgrains declined from 98.00 per cent of the total net sown area in 1961 to 77.00 per cent in 1971. But because of a higher yield of foodgrains, the supply of foodgrains matched the demand even in 1971. To illustrate, the per hectare yield



of rice was more than double by 1971, the average per hectare yield of 660 kg. in the period 1961-1964 being increased to 1574 kg. in the period 1968-71. In view of dearth of the right type of data the reasons underlying such high productivity could not be identified. Higher increase in agricultural production could be partly because of increasingly higher practice of double cropping. Incidentally, the practice of double cropping might have some employment consequence.

Thus the analysis of the dynamics operating during the decade 1961-1971 focusses on the following broad conclusions. Agriculture as a source of employment and food supply assumed still greater importance in the State of Manipur. It also contributed substantially to the rapid growth of income. Examining the working of agriculture in depth, it is found that while the net sown area increased only slightly, there was a substantial increase in productivity to the extent it was borne out by the production of rice cultivation. In fact it was only increased productivity that matched the supply of and the demand for food-grains. Another very important conclusion is that the manufacturing industry as a source of employment showed some potentials. The sector which absorbed a larger proportion of working force in urban areas was the tertiary sector in general, and other services in particular. In fact, this sector as a whole, occupied first position in urban areas

as a source of employment. The productivity of this sector at constant prices increased from Rs. 1063.93 in 1961 to 1201.19 in 1971. Another new development in urban areas was that agriculture as a source of employment displayed an increasing trend. It could not perhaps be otherwise because rural areas declared as new urban centres continued to maintain much of their rural character. The importance of household industries both in rural and urban areas declined in its employment consequence. What is more, the shift that had taken place in favour of agriculture was perhaps because of the fact that productivity was slightly higher in agriculture than in the household industry.

The most crucial question that follows is that, given the situation of 1961 and the economic trends noticed during the decade beginning that year, can one look ahead the scenario that is expected to show up in the year 1980-81. An attempt in this direction has been made as follows.

Estimating the level of population on the basis of the growth rate that was registered during 1961 to 1971, it is found that the population would reach the level of 15.22 lakhs in 1981 - of that 12.23 lakhs in rural areas. Out of this level of population, 7.09 lakhs would be the able-bodied people (5.81 in rural area and 1.28 in urban areas) in the labour force.

Next, the question whether the economy would generate employment opportunities for this level of labour force has

been examined. For this purpose three different alternative growth rates - Optimistic, Lower-bound and Feasible have been postulated as follows.

The variant of optimistic growth rate is based on the assumption that the growth rates which have been registered by different sectors would be maintained even in 1981. This assumption seems rather optimistic for the simple reason that almost all the sectors, atleast agriculture which is very important, have registered very high growth rates during this decade. The realization of this fact has made us to introduce certain crucial constraints while estimating the growth rates.

The variant of lower bound is based on the constraint that the areas under different crops can grow only subject to the limit of the total availability of arable land and productivity of the agricultural sector will not improve beyond 1971. The later constraint implies that the optimal level of productivity in agricultural sector has already been achieved and the potential of double-cropping has been assumed away.

In the feasible alternative, while the constraint on land has still been retained the assumption on productivity has been relaxed to the extent that the growth rate observed during 1951-1971 would tend to prevail even in 1971-1981. In the last two variants, it should be noted that sectors other

than agriculture have not been included while making the assumptions.

The per capita incomes for the State of Manipur that has been estimated under three variants are Rs. 260 under optimistic variant, Rs. 190 under lower bound variant and Rs. 220 under the feasible variant (all at 1960-61 prices).

The income level that has been generated under these three variants has differential economic consequences. Income and its sectoral component under variant one would generate employment to the tune of 11.0 lakhs out of which 8.31 lakhs in agriculture alone, 1.28 lakhs in service sector, 1.51 lakhs in small scale and household industry and so on. The variant of lower bound, on the other hand, generates employment to the extent of 7.66 lakhs of which agriculture itself can absorb 4.36 lakhs of the people in the labour force. The variant on the feasible growth path suggests that the economy can absorb 9.31 lakhs of the labour force. Of this aggregate level agriculture alone can provide employment opportunities of 6.02 lakhs.

The examination of the projected demand and supply balances suggests that there may be shortage of labour in 1981 even under the variant on lower bound. This conclusion can however be qualified in the following manner. In the first instance, if there is labour shortage it is possible that the situation of under-employment might improve which

might have really happened during 1961-1971. It is also possible that a substantial chunk of population estimated have been in the labour force, (the age group 15 to 59 being used for its estimation) may not really be available as the people in the bottom age groups are likely to go for education. Again if shift in production function takes place in a big way, the demand for labour may decline. Even if all these happen it is most unlikely that the projected demand for labour under the opposite variant can be achieved. With all those qualifications, the projected demand for labour under the feasible variant may really be attained.

To reiterate, on a long range perspective the study has brought out the following important features which should be maintained perhaps with a difference. During the period under review, the economy of Manipur displays a sort of full-employment situation. Because of somewhat equitable distribution of asset on the one hand and traditional character of the economy with higher spread of employment, on the other, there is an extent of evenness in income generation and its distribution. These again, coupled with the fact of the State's limited exposure to the developed packets of the country, have resulted in a lesser extent of poverty and a consumption basket more heavily loaded with locally available items of consumption, both food and non-food.

This healthy picture, however desirable, is likely to be disturbed as the economy's openness becomes larger

and larger. In the first instance, disturbance may be set in motion by an inroad of factory goods in consumption basket. If this happens, it will give a shattering blow to the traditional household industries which are catering to the local needs of the State. Inroad of factory goods in consumption basket either through imports (from the rest of India) or through superimposed factory sector may not only create new taste for factory goods but may also introduce distortion in income distribution. Thus all those healthy pictures that have been observed during the period under review may very well become a thing of the past.

A long range projection as to the ways things would shape would be an exercise in futility, given the data base we put on our hand. A short term projection, as we have indeed made for 1981, brings out two important features. One is that, given the present technology, the economy of Manipur is expected to face serious shortage of manpower even under the most realistic assumption. The other is that, given the present path of growth, the economy may face shortage of land. Both these features suggest that it is almost inescapable for Manipur to go without diversification of economic activities as also introduction of capital intensive techniques of production as far as long range planning is concerned.

If that is so, what should be the growth strategy for the State of Manipur? One that is certain is that the State

would have to play a more active role both in building entrepreneur skill and participate in larger economic activities. It will also have to avoid implantation of factory sector in hedge. Broadly speaking the State would have to provide larger infrastructure for the development of factory sector in future for the simple reason that as the things stand now the economy of Manipur provides but limited externalities in the sense of capital base, extent of market etc.

This study indicated that income elasticities of some of the items of consumption such as clothing, milk and milk products, sugar and gur, tobacco, meat and fish and other non-food items, are very high. This fact suggests that there is scope for developing industries centering around these items of consumption. It should be noted that all these items are at present i.e., in the period under review, fairly low; they are still very significant indicators. For one thing, these items of consumption have not yet figured in the consumption basket in a larger way partly because of the low level and equitable distribution of income. They will grow as income expands. For the other, these items of consumption baskets of the relatively richer section come from elsewhere. With more and more exposure to the rest of the country, they are expected to make significant inroad in the consumption basket of the people in Manipur. All these indicate that these items of consumption have to be produced locally if the dependence on import is to be avoided. Looking from the

angle of the resource endowments, it is found that agro-based and forest based industries have shown considerable potential. Again the industries that have grown in the household industry may have to be adopted so as to cater to the taste of consumers that are likely to show up. Thus the long range growth strategy for the development of the economy will have to take explicitly into consideration several such factors as consumer preferences, resource endowments and the historically evolved industrial structure. Needless to add, these strategies will have to take into account the constraints on account of manpower and land.

It is possible that there may arise some conflicts between the suggested growth path and likely crucial constraints. This brings us to the question of choice of techniques of production for the economy. Major implantation of factory sector without paving the way for smooth transition may give rise to a number of problems as indicated earlier. If on the other hand the introduction of modern technology is deferred indefinitely, terms of trade are likely to go against the State. Because change in consumer taste in favour of factory goods is inevitable with more and more exposure to the rest of the country, substitution of locally produced goods by the factory goods imported from elsewhere is likely to take place making thereby terms of trade adverse for the State. What should be proper, therefore is to consider only intermediate and complimentary technology by way of smoothing the transi-



tion. This approach would help planning for proper manpower that will be necessitated by the long range growth path.

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