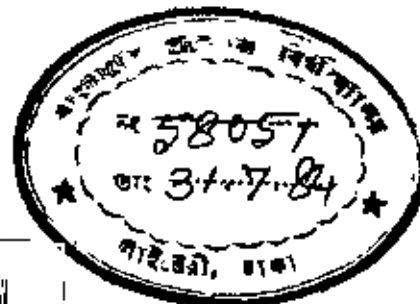


AN EVALUATION OF RURAL INDUSTRIES PROGRAMME
AND ITS IMPACT ON EMPLOYMENT GENERATION

THESIS

Submitted to the Department of Urban & Regional
Planning, Bangladesh University of Engineering
& Technology, Dhaka in partial fulfilment of the
requirements for the degree of
MASTER OF URBAN AND REGIONAL PLANNING.

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DHAKA.

APRIL, 1984.

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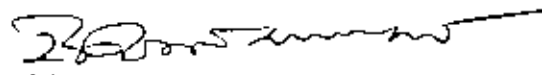
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A C K N O W L E D G E M E N T

This study is based on socio-economic surveys of the rural Industries project undertaken by Bangladesh Institute of Development Studies (BIDS) and a field survey conducted by the author. For this purpose, the author formed a questionnaire to cross-examine the conclusions of the BIDS arrived at. The author gratefully acknowledged the help of Mrs. Razia S. Ahmad, Assistant Professor, Department of Urban & Regional Planning, Bangladesh University of Engineering & Technology for all the troubles she undertook to guide and supervise the thesis. Particular thanks are due to Mr. Ajmal M. Ahmad, Head of the Department of Planning, Bangladesh University of Engineering & Technology for help, advice and processing the author to widen the scope of the study.

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A B S T R A C T

Bangladesh is a typical less developed country having rural characteristics with widespread unemployment and poverty.

The dominant sector of the economy is agriculture but this sector is beset with a multitude of problems. Moreover, the land-man ratio in Bangladesh is so low that scope of expansion of employment in this sector, even if there is an appropriate agrarian reform, is likely to be rather limited.

The possibility of employment expansion in the modern industrial sector is also limited. This sector currently employs less than 2 percent of the civilian labour force. Therefore, to fill-up the lacuna to generate employment for the rural mass, rural industries can play one of the major roles.

The present study was carried out with this end in view. Four Unions of Narsingdi, Kotwali Thana in Dhaka District were selected for this purpose. According to the findings, about 50 percent of the workers are involved in non-agricultural occupations, out of them 43 percent are engaged in small and cottage type of industries.

On the basis of information collected by questionnaire survey and secondary sources from DIDS, BSCIC and other organisations, the study concentrates on three major aspects, namely: (a) review of the small industries sector (b) survey of socio-economic characteristics of the study area and (c) an analysis of the cost and returns of selected industries.

The study suggests that adequate financial assistance should be provided to build up the rural entrepreneurship, because 67

percent of the entrepreneurs are facing capital problem ,
as indicated by the study.

It also indicated that surplus rural unemployed labourer
should be given training to acquire skill and technical
knowledge.

Emphasis should be given on the promotion of agro-based and
agro-support industries. The study suggests creation of lin-
kage/sub-contracting industries which will operate as ski-
llary to big industries.

Improved tools and equipments should be supplied because
75 percent of the rural entrepreneurs are using manual or
semi-mechanized technology as indicated by the present study.

The study proposes that relevant public sector agencies, such
as BSCIC should assist in the marketing of small and cottage
industries products by disseminating market information and
provide direct link between artisans and the different marke-
ting organizations, both in the country and abroad. Thus it
is hoped that proper policies and their implementation will
vitalize the rural industries programme which will eventually
help to generate gainful employment to unemployed labour.

Title of the Thesis : An Evaluation of Rural Industries
Programme and Its Impact on
Employment Generation.

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Department of Urban & Regional Planning
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C O N T E N T S

	Page No-
Acknowledgement	i
Abstract	ii
List of Contents	iv
 <u>CHAPTER- I :</u>	
1.0 INTRODUCTION	01
1.1 The problem setting	01
1.2 Definition of rural industry	02
1.3 Objectives and scope of the study	04
1.3.1 Objectives	04
1.3.2 Scope of the study	06
1.4 Methodology & selection of the study area	07
 <u>CHAPTER-II :</u>	
2.0 GENERAL DESCRIPTION OF THE THANA UNDER STUDY	
2.1 Introduction	10
2.2 Accessibility of the Thana	13
2.3 Area and population	13
2.4 Roads and Railways	15
2.5 Electricity	17
2.6 Schools, colleges & enrolments	18
2.7 Economic activities	19
2.8 Major Agricultural crops	20
2.9 Miscellaneous information	21
 <u>CHAPTER - III :</u>	
3.0 ROLE OF RURAL INDUSTRIES FOR EMPLOYMENT GENERATION	
3.1 Introduction	22
3.2 Occupational structure	23
3.2.1 Participation in economic activities	23
3.2.2 The incidence of multiple occupations	24
3.2.3 Rural occupations	25
3.3 Rural Industrial employment	26
3.4 Sizes type and duration of employment	29
3.4.1 Size of employment	29
3.4.2 Type of works	30
3.4.3 Duration of employment	31
3.5 Employment linkage between industries and other rural occupation	32
3.6 Wage rates	33
3.7 Place of rural industry in the national economy	35

CHAPTER - IV :

4.0	INPUTS FRAME WORK: PROBLEMS AND POLICIES	
4.1	Introduction	37
4.2	Rural Industrialization: A conceptualization	39
4.3	Policies	42
4.3.1	Supply of entrepreneurship	42
4.3.1(1)	Supply of capital	44
4.3.1(2)	Raw materials	47
4.3.1(3)	Appropriate technology	49

CHAPTER - V :

5.0	SOCIO-ECONOMIC CHARACTERISTICS OF THE STUDY AREA	
5.1	Introduction	51
5.2	Sex and occupation	52
5.3	Age and occupation	53
5.4	Educational level and occupation	54
5.5	Landholding and occupation	57

CHAPTER- VI :

6.0	EVALUATION OF BSCIC'S PROJECT	
6.1	Introduction	60
6.2	Capital & technology used in rural industries	61
6.3	Capital requirement	62
6.3.1	Fixed Asset	62
6.3.2	Working capital	64
6.3.3	Technology	64
6.4	Inputs, value added and productivity	70
6.4.1	Input structure	70
6.4.2	Value added	76
6.4.4	Productivity	78
6.4.4(i)	Labour productivity	78
6.4.4(ii)	Capital productivity	80
6.4.4(iii)	Total productivity ratio	82
6.5	Entrepreneurship applied	82
6.5.1	Initiative	83
6.5.2	Management	85
6.5.3	Innovation	87
6.6	Financing status	88
6.6.1	Entrepreneur's perception about the financial constraints	89
6.6.2	Initial and current capital requirement	93
6.7	Marketing facilities	94
6.7.1	Import content of raw material	95
6.7.2	Sources and availability of raw materials	96

	Page No-
6.7.3 Agents and organisation of marketing	97
6.7.4 Export of rural industry products	97
6.7.5 Market structure and competition	98
6.8 Employment generation	98
6.9 Analysis of financial viability	104

CHAPTER - VII :

7.0 DEMAND FOR RURAL INDUSTRIAL PRODUCTS	
7.1 Introduction	112
7.2 The pattern of income distribution	113
7.3 Description of expenditure pattern	115
7.4 Expenditure elasticities and marginal propensity to consume	117
7.5 The factor intensity of rural consumption patterns	120

CHAPTER - VIII:

8.0 CONCLUSION: POLICIES AND RECOMMENDATIONS	
8.1 CONCLUSION	123
8.2 POLICIES AND RECOMMENDATION	126

APPENDIXES:

Appendix- A : Tables	
Appendix- B : Questionnaire	
Appendix- C : Bibliography & References	

LIST OF TABLES

<u>Sl. No.</u>	<u>Name</u>	<u>Page No-</u>
2.1	Area and population in the four Unions, Surveyed	13
2.2	Roads and Railways in four unions, 1983	15
2.3	Number of villages electrified and distribution lines (in miles) in the Thana, 1983	17
2.4	Number of Schools, Colleges and enrolment in 4-unions	18
2.5	Sources of income in the union	19
2.6	Acres of Major agricultural crops in the study area	20
3.1	Participation of labour in economic activities	23
3.2	Rural occupational structure	25
3.3	Value of monthly output per enterprise, Feb/79-Jan/80	28
3.4	Distribution of enterprises according to size of employment	29
3.5	Composition of different types of workers	30
3.6	Proprietors own perception of the nature of employment in rural industry	31
4.1	Sources of initial capital	45
4.2	Capital at the starting period of the enterprise	46
5.4	Educational Status of the entrepreneur	56
5.5	Age of the entrepreneur	57
6.1	Value of fixed capital per enterprise at the end of 1979 (value in Taka)	63
6.3	Amount of capital at the starting period of the enterprise	66
6.4	Technology used in the rural industry	69
6.6	Rural industries consumption of Major Agricultural products as percentage of other production	74
6.7	Importance of intermediate and capital goods in rural industry products	75

Sl.No.	Name	Page
6.8	List of products according to the size of value added per enterprise	77
6.9	List of products according to the size of labour productivity	79
6.10	Product type according to level of capital productivity	81
6.11	Distribution of enterprises fby founder type	83
6.12	Founder of the enterprise	84
6.13	Percentage distribution of enterprises by organisation	85
6.14	Legal status of the enterprises	86
6.15	Distribution of enterprises by nature of innovation under taken	87
6.16	Problem faced in starting the business	90
6.17	Assistance received from private lenders	91
6.18	Sources of initial money as loans of entrepreneur	91
6.23	Sources of raw material for the enterprises	96
6.25	Number of workers at the starting level	101
6.28	Present number of employees working in the enterprise	103
6.27	Total value of sales of products in the previous year(1982-83)	106
6.28	Profit or loss from the enterprise in the previous year (1982-83)	107
6.29	Relationship of size of industry with financial viability(profit or loss)	108
6.30	Cost of various items in handloom industry	109
6.31	Cost of various items in dairy farm	110
6.32	Cost of various items in Silk industries	110
7.1	The pattern of income distribution	114
7.2	Subsidiary income	115
7.8	Average factor requirement per taka of consumption expenditure by income groups	122

LIST OF MAPS

		Page
MP- 1	Location map	10
MP- 2	Base map	12
MP-3	Railway map	14
MP- 4	Road map	16

CHAPTER - I

1.0 INTRODUCTION

1.1 The problem setting:



With widespread unemployment and poverty Bangladesh is a typical less developed country; the annual per capita income is just over US \$ 110 and unemployment is estimated at a staggering 42 percent.⁻¹

The dominant sector of the economy is agriculture but this sector is beset with a multitude of problems. Moreover the land-man ratio in Bangladesh is already so low that scope of expansion of employment in this sector, even if there is an appropriate agrarian reform, is likely to be rather limited.

The possibility of employment expansion in the modern industrial sector is also limited. This sector currently employs less than 2 percent of the civilian labour-force and no conceivable rate of growth in this sector can make a dent in the prevailing unemployment and under-employment situation. Moreover, Bangladesh's experience with modern industrialization has been as disappointing as those of other countries. During the Pakistan era industrialization was pursued with primary emphasis on the promotion of large-scale capital

-1 BSCIC, 1978 "suggestions for taking measure to improve BSCIC" Page-7-9.

intensive, urban based, private sector industries. The result has been worsening unemployment situation, skewed income distribution, increased rural urban income differentials and gross inefficiency in resource use.

1.2 Definition of rural Industry:

In the present study, the term industry has been defined to include manufacturing activity as well as repairing of manufactured goods operating on a commercial basis. The study covers only small and cottage type industries and leaves out those that belong to the large-scale category. In distinguishing small and cottage industries from large scale ones, however, one is faced with definitional problems since no unique set of definition of these industry categories exist. For example- in Bangladesh there are three different definitions of small industry given by 3 different Government agencies, thus: (a) BSCIC defines small industry as a manufacturing unit which has 10 or more worker if power is used or 20 or more workers if no power is used and whose fixed investment is valued at a maximum of Tk.2.5 million, (b) The Bureau of statistics on the otherhand, identifies those industries as small which are covered by section 5(i) and 2(f) of the Factories act of 1954, i.e. registered factories using 10 or more workers and not using power or using power and having between 10 and 20 workers, (c) Finally, the Department of Industry defines small industry as a unit having

fixed assets upto Tk.1.0 million excluding the cost of land.

Thus the criteria used by these agencies in distinguishing small industries are one or more of the following:

(a) technology or mechanization (b) number of workers employed (c) value of fixed assets.

For research purpose only the employment criterion has been used to differentiate small and cottage industries from large ones. Small and cottage industries together have been defined in this study to include all enterprises with employment size upto 50 persons.

The justification for using the employment criterion is two-fold (i) there are well known definitional and measurement problems associated with each criterion; but of those, the employment criterion is operationally somewhat simpler as it is easier to collect information on the size of employment (ii) present study focuses mainly on industries located in the rural areas; these industries would use relatively simple technologies and hence the more visible differences between these enterprises arise with respect to employment size rather than technology or size of capital.

To distinguish cottage from small industry, again various criteria are found in use. In general, these criteria emphasize two basic characteristics of cottage industry, namely predominance of family labour and extreme smallness of size.

Incorporating these two features, cottage industry has been defined in the present study as (i) any industrial establishment with three or four workers or (ii) any establishment with 10 or fewer workers employing at most 2 hired workers.

As mentioned earlier, the present study focuses mainly on small and cottage industries located in rural areas. Hence to refer to all the enterprises covered in this study the general term rural industry has been used. However, the study is not confined to rural areas only; some urban areas have been included as well. This has been done to take note of small and cottage industries which are mainly or wholly located in urban areas due to demand pattern in urban areas/or infrastructural facilities available in those areas and also to capture possible differences in the nature and extent of problems faced by small and cottage industries in rural and urban areas.

1.3 Objectives and scope of the Study:

1.3.1 Objectives:

The objective of the present study is to evaluate, the rural industries programme, particularly in relation to its potential for employment generation. The study in the process, aims at appraising the rural industries programme taken by the government and analyzing its performance so far, particularly, its important on employment. It will also assess the role and

performance of the BSCIC. Finally, the study aims at formulating some policies regarding a more effective rural industries programme.

1. The aim of the study is to evaluate the rural industries programmes in general in Bangladesh.
2. To evaluate the performance and effectiveness of rural industries in employment generation.
3. To study the setting of rural industrial enterprises with a view to ascertain their potential for growth to fill-up the lacuna in the knowledge base regarding rural industries in Bangladesh.
4. To analyze the nature of income of small farmers and landless labourers and their socio-economic and occupational characteristics in rural Bangladesh.
5. To analyse the demand and market value of rural industrial products.
6. Finally, the aim of the study is to provide recommendations to formulate policies of institution building conducive to promotion of rural industries, as a result to increase the employment generation.

* Information has been taken from the thesis title and from Bangladesh small and cottage Industries Corporation(BSCIC)

1.3.2 Scope of the Study:

In the view of above problem setting(Chapter 1.1) considerations, increasing attention is being focused in this country as well as elsewhere on the role that rural small-scale and cottage industries might play in the development process in general and creation of employment opportunities in particular. The argument in policy planning concerning small scale and cottage industries involve whole of social, economic, and technical issues, labour intensity, labour productivity, capital productivity, use of domestic resources, reduction of social and economic inequality, geographical dispersal of investment, mobilization of small private savings, development of appropriate technology, demand for the project etc. All these issues are essential and related no doubt but it will not be possible to deal with all these aspects. The proposed study will concentrate mainly on the nature of employment generation in the small scale industries sector.

Unfortunately very little information is available on small and cottage industries in Bangladesh for both meaningful policy formulations and effective project development. The first comprehensive survey of this sector is the East Pakistan Small Industries Corporation(EPSIC) survey of 1964. In 1969 the then Pakistan Central Statistics Organization conducted a Survey on the basis of nine urban centres. In 1975 BSECIC conducted a survey of small industries in the

Rajshahi Division only. In 1976 BBS (Bangladesh Bureau of Statistics) carried out a small survey on small industries. At the latest BSCIC has conducted a survey all over the country in 1978.

In the light of above studies, detailed survey for research purpose is not necessary. But for the evaluation study of the nature and growth of rural industries and employment generation, statistical and attitudinal surveys of the leaders and the entrepreneurs would be necessary in order to determine their priorities for improving the industries and to generate employment opportunities. The primary activity of the research will be to try to formulate policies and propose some tentative solution for the specific problems of this sector. Some major problems, such as ignorance of entrepreneurs appropriate technology, marketing problem, inputs will require major points involving important political and economic decisions.

1.4 Methodology and selection of the study area:

1. Secondary data would collect from Bangladesh Small and Cottage Industries Corporation (BSCIC) and the final report of Rural Industrial Survey Project (RISP) from Bangladesh Institute of Development Studies (BIDS) library.
2. Data on employment generation has been collected at two levels.

(a) field level: through field survey in the study area of Narsingdi Thana.

(b) literature survey : through census reports and other statistical materials.

3. Reconnaissance survey of the study area by observation of the infrastructural condition and the data on accessibility, area and population, roads and railways, power supply and Electricity, schools and colleges, economic activities and miscellaneous information has been collected from the local circle officer's (C.O.) Office.

4. Sampling:

(i) Questionnaire Survey was conducted in Narsingdi Kotwali Thana on the basis of the list of borrowers from whose loan has been taken from BSCIC to investigate the nature of rural industries.

(ii) Among the list 50 percent sample of total 225 has been taken interview and the sample was selected purposively.

(iii) Four unions were selected deliberately for study which were representative to rural industries and its characteristics.

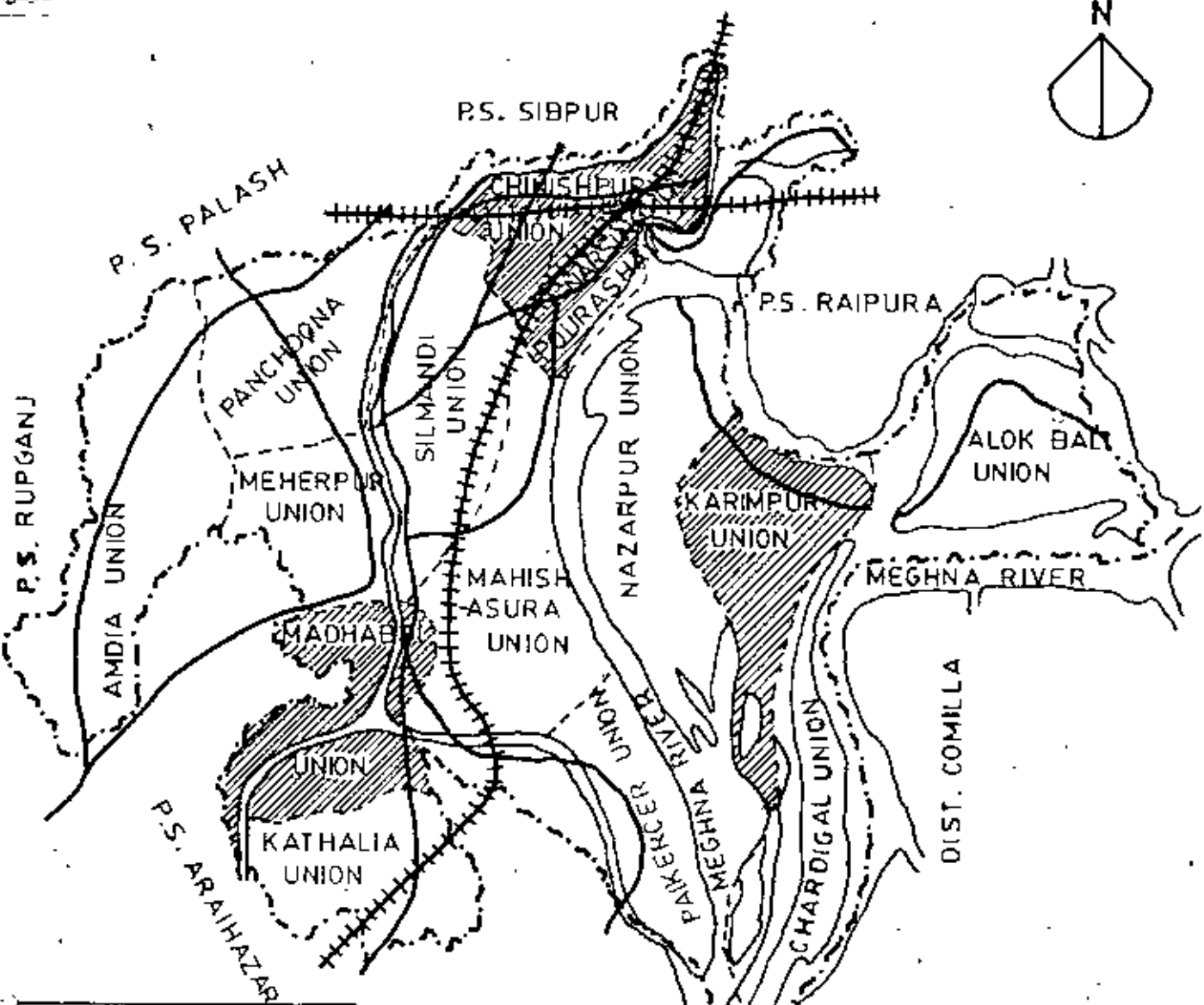
BSCIC has surveyed 10 thanas of Bangladesh in 1978. Also the 10 thanas were proposed to be deliberately selected primarily on the basis of concentration of rural industrial activities and also taking into consideration variations in product type, product quality, technique and organization of product.

Because of the purposive nature of selection, the sample so selected is not representative of the economy as a whole, hence it will be difficult to obtain estimation of material parameters such as employment, output, value added, investment, income, size etc. in the rural industries sector of Bangladesh.

LOCATION MAP

NARSINGHDI THANA

SCALE: 1" = 1 MILE



<u>INDEX</u>	
THANA BOUNDARY	= - - - - -
UNION BOUNDARY	= - - - - -
RAILWAY	= + + + + +
RIVER & CANAL	= ~ ~ ~ ~ ~
C & B ROAD	= ~ ~ ~ ~ ~
STUDY AREA	= [Hatched Box]

MAP NO.-1

CHAPTER - II

2.0 GENERAL DESCRIPTION OF THE THANA UNDER STUDY

2.1 Introduction

In this chapter a brief description of the thana⁻¹ under study with respect to land and people, infrastructural facilities, economic activities etc. has been presented. The purpose is to introduce the thana for the concept of rural industries, for this study.

The data for this chapter have been assembled by interviewing local officials, chairman and members of union parishad and other key informers in the localities and have been supplemented by personal observation from the field by questionnaire surveying. The variables on which informations have been collected include the following:

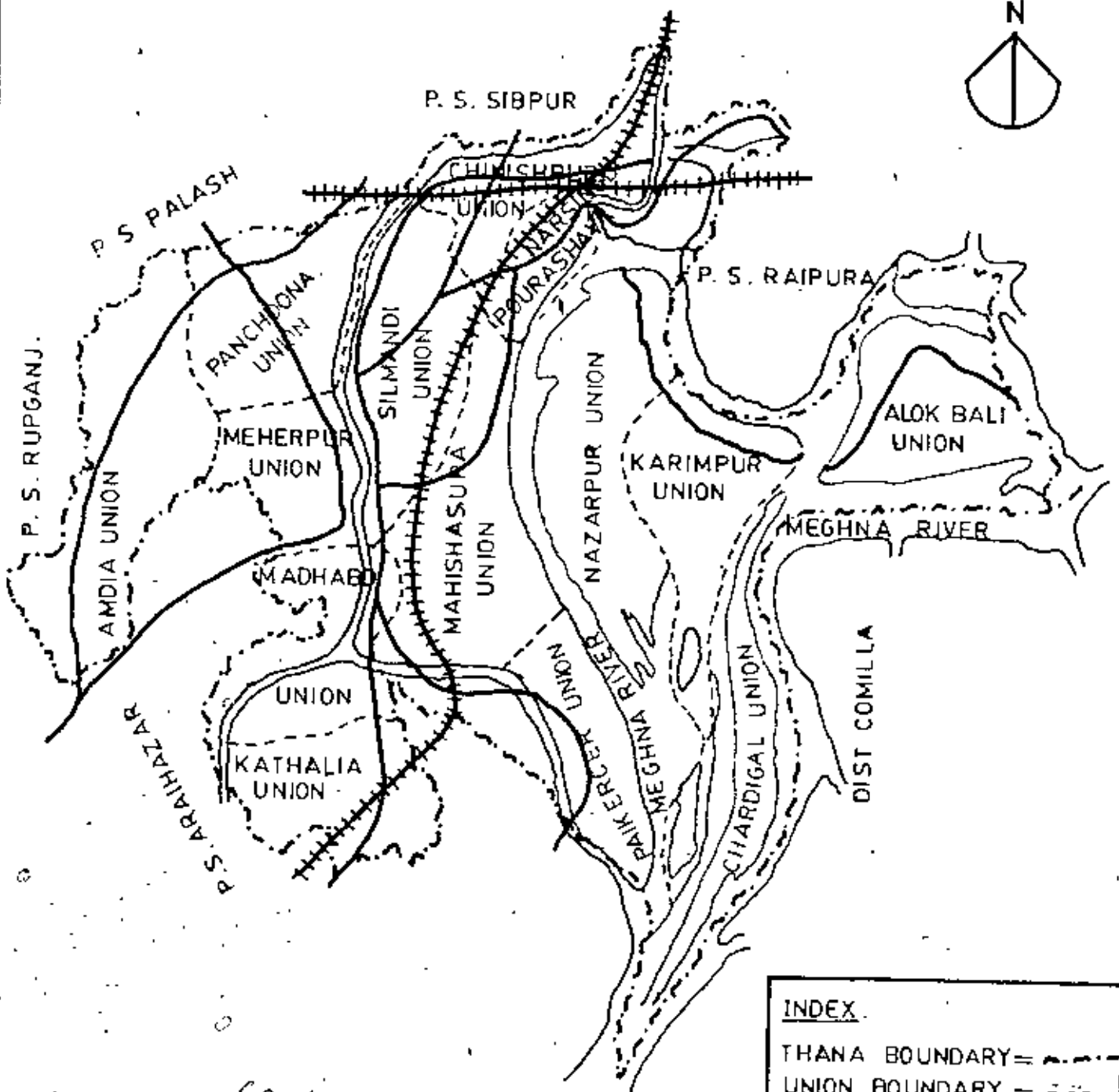
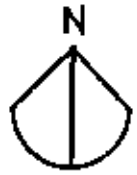
- (a) Accessibility
- (b) Area and population
- (c) Roads and Railways
- (d) Supply of electricity
- (e) Schools and Colleges
- (f) Economic activities
- (g) Major agricultural crops, and
- (h) Miscellaneous items.

-1. Information has been given in this chapter on the whole of Marshingdi Kotwali Thana.

BASE MAP.

NARSINGHDI THANA

SCALE: 1" = 1 MILE



INDEX.

- THANA BOUNDARY = - - - - -
- UNION BOUNDARY = - - - - -
- RAILWAY = + + + + +
- RIVER & CANAL = ~ ~ ~ ~ ~
- C & B ROAD = — — — — —

2.2 Accessibility of the Thana:

Narsingdi Thana headquarter is accessible by metal roads and railways from the capital city of Dhaka. Among the 14 unions, 4 of them were studied, three of them is well connected by road from the thana headquarters, they are: (a) Narsingdi Paurashava (b) Chinishpur (c) Madhabdi and the rest (d) Karimpur Union is isolated from thana quarter by the river Meghna and the communication is only by Launch from Narsingdi.

The study area has been shown on the Map- 1. In the Map the study unions and the thana headquarter have been shown.

2.3 Area and population:

Table 2.1

Area and population in the four unions, surveyed

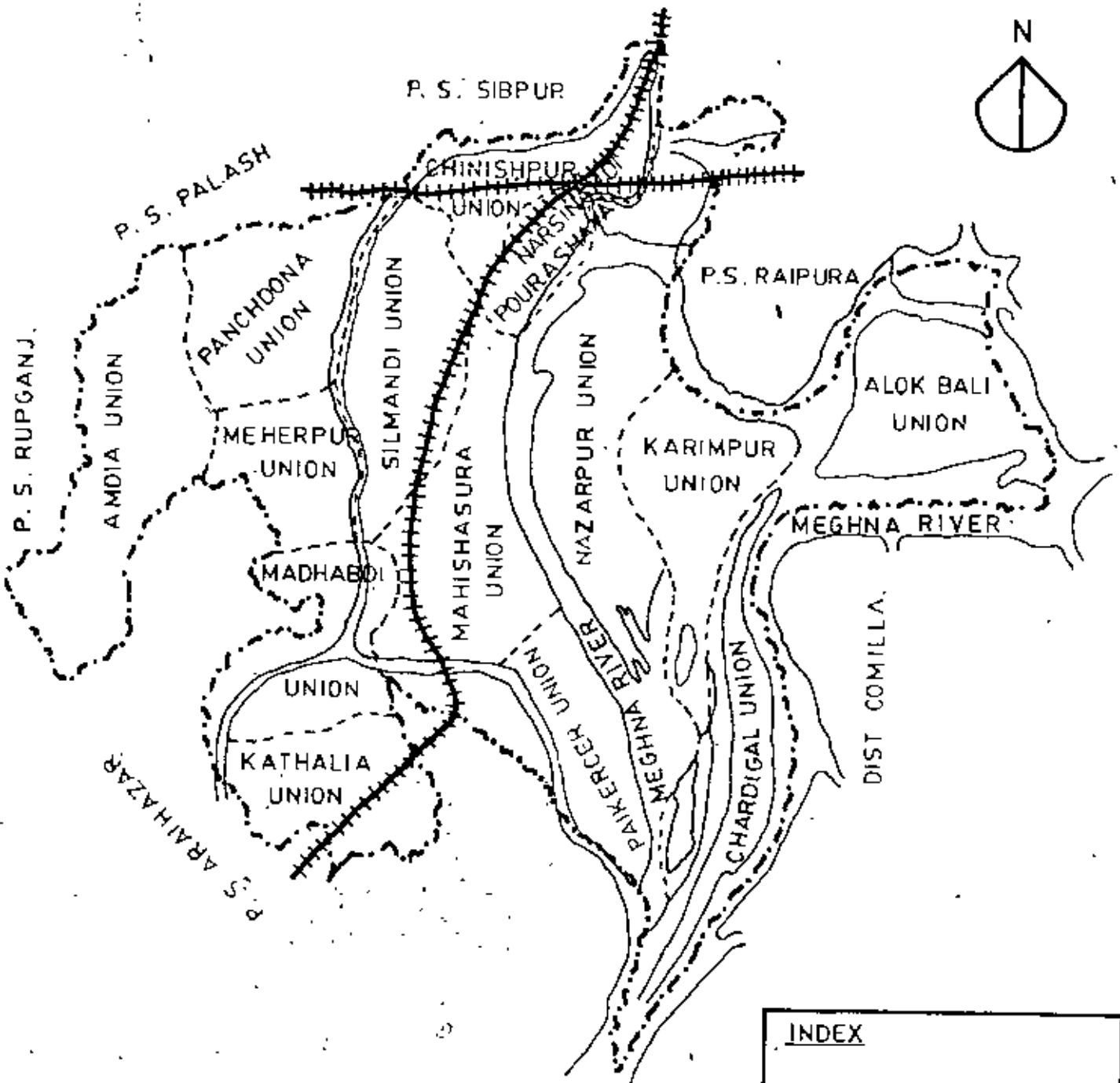
Name of the Unions	Population in number	Area square mile	Population density	Natural increase
Narsingdi paurashava	35,275	-	-	-
Chinishpur	22,461	-	-	-
Madhabdi	24,360	-	-	-
Total: Narsingdi Thana	327,000	86	3802	3.32%

Questionnaire survey, 1983.

NARSINGDI THANA

RAILWAY MAP

SCALE : 1" = 1 MILE



INDEX	
THANA BOUNDARY	= ~~~~~
UNION BOUNDARY	= - - - - -
RAILWAY	= # # # # #
RIVER & CANAL	= ~~~~~

MAP NO. 3

Table 2.1 shows the data on area and population in each sample unions under the thana Narshingdi. As can be seen from the table, total area of the thana is 86 square miles and the population is about 3,27,000 people according to 1981 census report. The density of population is 3805 persons per square mile and it is the highest to national average (1675 persons per square mile as of 1981 census report) and the natural increase is 3.32 percent, which is the highest to national increase (2.36 percent according to 1981 census).

2.4 Roads and Railways:

Improved transportation facilities are essential prerequisites for growth and expansion of economic activities in general and industrial activity.

Table 2.2

Roads and Railways in four unions, 1983

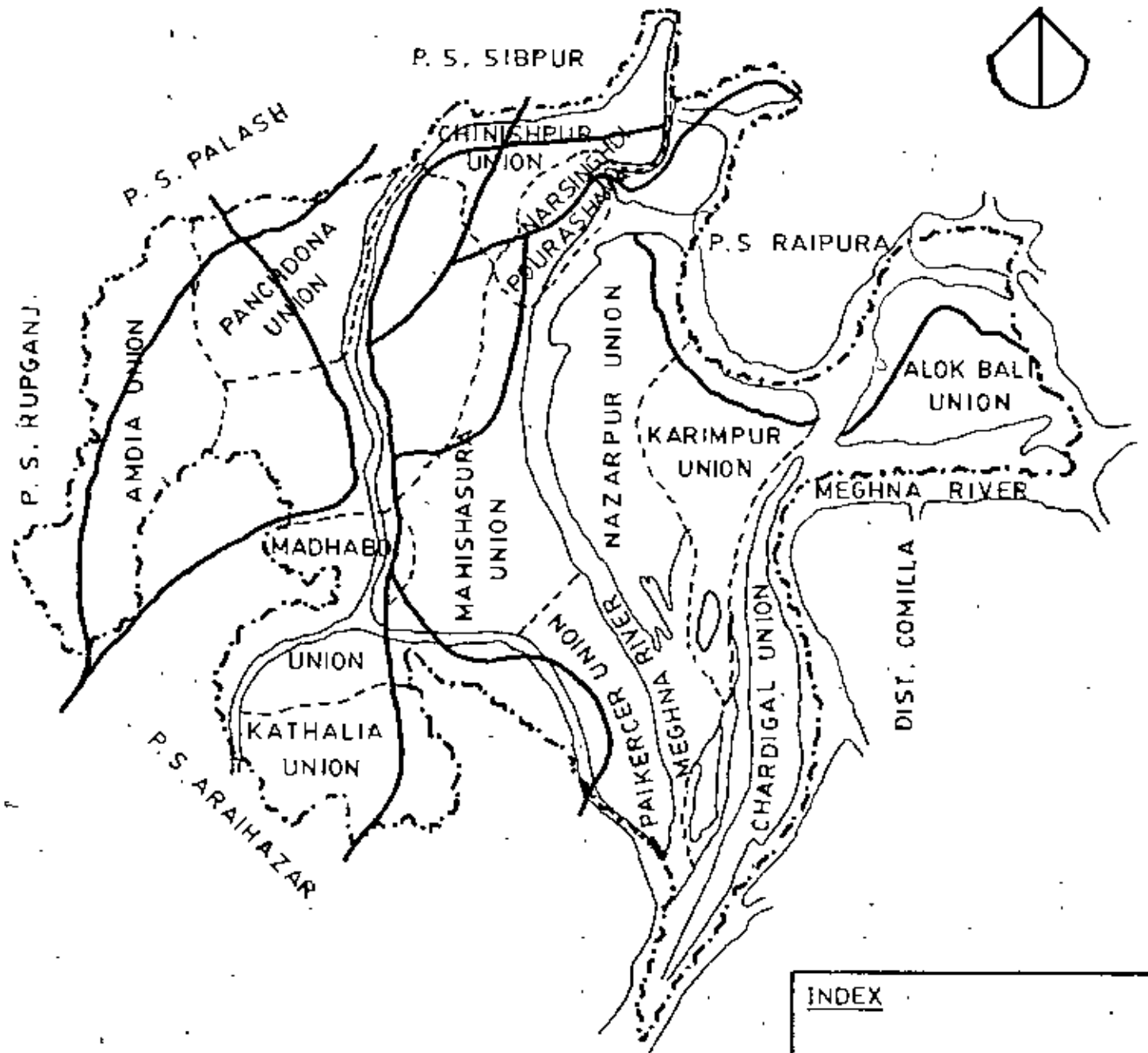
Name of the Unions	(in miles)		
	Metals Road	Kutcha Road	Rail-line
Narshingdi Pourashova	6	2	5
Chinlehpur	3	10	10
Madhabdi	4	8	-
Kerimpur	0	16	-
Total to Narshingdi Katwali Thana	22	130	15

* Source : Questionnaire survey, 1983.

ROAD MAP

NARSINGDI THANA

SCALE: 1" = 1 MILE



INDEX	
THANA BOUNDARY =	-----
UNION BOUNDARY =	- - - - -
C & B ROAD =	—————
RIVER & CANAL =	~~~~~

7

In the table 2.2, it is shown that thana headquarter is accessible from the district headquarter by metal roads and railways. But communication within the thana is rather poor. Table 2.2 shows the extent of metal and non-metal (Kutchha) roads and railways in each union as of 1983. As can be seen from the table, nearly 78 percent of the road mileage in Kutchha. In fact predominance of kutchha road is a common phenomena in the whole country, of the total mileage of road maintained by Roads and Highways department and the local institutions in the country, only 8 percent is metal road and the rest is kutchha.

2.5 Electricity:

Table 2.3

Number of Villages electrified and distribution lines(in miles) in the Thana,1983.

Unions	Number of Villages electrified	Electricity distribution lines(in miles)
Narshingdi Pourashava	6	11
Madhabdi	10	10
Chiniskpur	5	6
Karimpur	-	-
Total Narshingdi	50	39

* Data has been used from the Thana circle office and the preliminary report of Bangladesh population census of 1981.

Table 2.3 shows the numbers of villages electrified and distribution lines of electricity in miles in the study area. As can be seen from the table, average number of villages electrified in the there is 50 and the total electrified lines are 39 miles. As of now, electricity does not seem to be a very important element in rural industrial activities in Bangladesh. From the statistics taken from the study area by questionnaire survey, it is found that 96 percent of the enterprises do not use any power. So for rural industrialization, power is not the constraints to develop the rural industries especially for handloom and silk products but for powerloom and calender mill, electricity is essential to support and development of industries.

2.6 Schools, Colleges and Enrolments:

Table 2.4

Number of Schools, Colleges & Enrolment in the 4 Unions

Unions	Primary Schools		Secondary School		Colleges	
	Number	Enrolment	Number	Enrolment	Number	Enrolment
Narshingdi Poursheva	16	1125	4	450	2	1200
Chinishpur	10	750	3	300	-	-
Madhabdi	14	905	2	290	1	850
Karimpur	8	700	1	260	-	-
Total:	150	11703	19	5097	3	2050

Source : Questionnaire survey, 1983.

Table 2.4 gives information on number of primary schools, secondary schools and colleges and also enrolments in the institutions. As can be seen from the table, there are in all 150 primary schools, 19 secondary schools and 3 colleges in the study area.

With respect to size of population, the study thana seem to have a proportionate share of the educational institutions in the country.

2.7 Economic Activities:

↓
Table 2.5

Sources of Income in the Union

Unions	<u>Appropriate share in thana's income (%)</u>		
	<u>Agriculture</u>	<u>Industry</u>	<u>Trade & Miscellaneous activities</u>
Narshingdi Paurashava	30	55	15
Chinishpur	60	30	10
Madhabdi	40	58	2
Karimpur	90	3	7

Source: Questionnaire survey, 1983.

Table 2.5 gives an approximate distribution of the share of three major sectors, namely agriculture, industry and trade and miscellaneous activities in income of the thana.

As can be seen from the table, share of agricultural income of the thana varies between 30 to 90 percent and the average is 55 percent; share of industry varies between 3 to 50 percent; while the trade varies between 2 to 15 percent.

2.8 Major agricultural crops:

The acreage of major agricultural crops have been shown in the Table 2.6. As would be expected, rice is by far the most important agricultural crop in the thana. Jute, rape and mustard seed and wheat are also important agricultural products. Sugarcane is produced mainly in the few areas.

Some of the agricultural products mentioned above are also used as raw materials in rural industrial enterprises. In certain cases, availability of such raw materials have facilitated growth of certain rural industrial activities in certain areas:

Table 2.6

Acreage of Major agricultural crops in the study area

Unions	(Area in Acres)				
	Rice	Jute	Rape & Mustard seed	Sugarcane	Wheat
Narshingdi	2188	266	300	29	28
Pourashova	2200	260	225	35	27
Chinispur	2150	315	198	39	19
Karimpur	2500	150	190	10	10
Totals:	32825	4000	2950	400	290

Source: Questionnaire survey, 1983.

This section contains informations on a number of Miscellaneous issues, namely, existence of registered factories BRDB-KSS (Bangladesh Rural Development Board Krishi Samabaya Sanity) and major sales of goods i.e. cloths, dairy goods etc. of the thana to out side areas.

It will be noticed that Narshingdi has 2565 registered factories and 38775 employment in the factory (15 persons/factory). But the result of Questionnaire survey of 1983 shows that the number of worker of non-registered factory (i.e. handloom, dairy, poultry and othe product) is about 7 persons.

CHAPTER - III

3.0 ROLE OF RURAL INDUSTRIES) FOR EMPLOYMENT GENERATION

3.1 Introduction:

The role of BSCIC's project plays an important function for the expansion of rural industries in the country. The rural economic sectors are dependent on land and farming. Several factors promote the development of non-farm activities in rural areas. First, agriculture needs supporting services for supply of inputs and marketing of products. Many of the Agricultural products have to be processed into usable forms for consumers, which may be performed in rural areas. At a subsistence level, these activities may be done by farm households themselves as subsidiary occupations, but with the growth of agriculture and advancement of technology in the processing activities specialization may follow. Second, with increased population pressure on limited land, expansion of employment in agriculture will be increasingly difficult, so that non-farm activities may come to occupy an important position as a source of employment and income in rural areas. Third, in Moslem societies farming is not a suitable occupation for women, as religious convention restrict them working outside, when women want to participate in economic activities for subsistence pressure or other reasons, they may take up non-farm activities that could be performed within the boundary of the resistance. But in rural areas, maximum women

would participate to farm activities during post harvesting period. Maximum of them is the family labour and a few percent is the hired worker. These working group of women are little educated or fully illiterate. So that, they are not counted in the economy. Finally, to avoid the drudgery of farm work some people may shift to non-farm activities with less manual work, provided they have the necessary capital and skill.

3.2 Occupational Structure:

3.2.1 Participation in economic activities:

The labour force participation rate (Table 3.1) in the study area has been found to be 35 percent of total population; 55.1 percent are male and 8.7 percent are female among them. The 1974 population census found the participation rate to be 26.1 percent of the total population; 40.9 percent are male and 2.2 percent are female.

Table 3.1

Participation of labour in economic activities (Percent)

Characteristic	Entire population			Active age group (age 10 and above)		
	Male	Female	Total	Male	Female	Total
Engaged in product fivn work	55.1	8.7	35.0	75.2	10.0	44.4
Student	15.2	5.3	10.2	15.6	4.6	12.6
Housewife	-	50.1	24.7	-	76.4	33.7
Not available for work	28.0	20.9	26.9	7.8	8.4	8.1
Fully un-employed	1.7	5.0	3.2	1.4	1.0	1.2
Total :	100.00	100.0	100.0	100.0	100.0	100.0

Source: Questionnaire survey, 1983.

The participation rate in the working age group (age 10 and above⁻¹) has been found to be 44.4 percent among them 75.2 percent are male and 10.0 percent female. The comparable figures from the population census are 38.7 percent, 72.6 percent are male and 3.3 percent are female among them. These pieces of information suggest that the population census may have under estimated the participation rates and that the extent of under estimation is higher in case of females.

3.2.2 The incidence of multiple occupations:

It is hypothesized that in rural areas people may be engaged in a number of occupations simultaneously.

This is because-

- i) In subsistence economy, the level of specialization is low, and so a person may perform several jobs to eke out a living for the family.
- ii) Farming, the primary activity in rural areas is basically seasonal in nature and so people engaged in farming also do non-farm jobs during off-peak periods;
- iii) Most of the occupations are self employment types which allow a number of jobs to be performed simultaneously; and

-1 Number of persons of age 10 and above taking part in economic activities divided by total number of persons of age 10 and above.

iv) Land is not only a means of production, its ownership also confirms status in rural society; hence people engaged in non-agricultural activities try to hold land and perform agriculture as a secondary occupation.

It has been found in the survey that about 78 percent of the workers have only one occupation, 21 percent have a second occupation and only 1 percent a third occupation as well. Thus, the incidence of multiple occupation is found to be rather low.

3.2.3 Rural Occupations:

The importance of various occupations in the study areas can be seen from the table 3.2. As expected, agriculture is the major occupation for rural households. But non-farm activities have been found more significant in rural areas than is usually thought to be.

Table 3.2

Rural Occupational Structure

Occupations	As percentage	Primary involvement	Secondary involvement
1. Cultivation	40.6	30.2	10.5
2. Agricultural wage labour	23.9	10.5	5.4
3. Fishing	1.0	0.6	0.4
4. Cottage Industry	24.3	24.5	4.1
5. Trade, business and shop-keeper	14.9	10.3	2.6
6. Other (construction, transport etc.)	19.8	15.9	1.5
Total :	124.5	100.0	24.5

Source: Questionnaire Survey, 1983.

About 65 percent of the workers are engaged in agriculture either on a full time or part-time basis; 41 percent as cultivators to their own farms or as share cropper and 23.9 percent as agricultural labourers. For 11 percent of the cultivators and 5.4 percent of agricultural labourers agriculture is a secondary occupation. Agriculture is the primary occupation for only 48.7 percent of the workers; 30 percent as cultivators and 19 percent as agricultural wage labourers.

About 60 percent of the workers have been reported involvement in non-agricultural occupation, for 50 percent of these being primary occupations. Among the different non-agricultural occupations, cottage industry has been found to be the major one.

The above evidence indicates that rural industries have hold an important position as an occupation in rural areas. Many more people are involved in rural industries than in usually believed.

3.3 Rural Industrial Employment :

The phase-I survey found that about 217 thousand persons employed in industrial units in 11 thanas under study in 1978. Three of the Thanas viz. Marshingdi, Shezuphati, and Muradnagar, which had a high concentration of industries contributed about 54 percent to the total industrial employment in the study area, while their share of the population

was only 35 percent. On the otherhand, Barlekha, and Narail with about 20 percent of population had only 12.3 percent of the works.

Howe important are industrial activities as source of employment for the rural population. To answer this question labour force data for the thanes are required. In the absence of such data it was estimated by applying the labour force participation rate of respective sub-divisions on the population figures of each thane. The results are reported in table 3.8. It will be noted that a considerable regional variation exists in the proportion of rural labour force employed in rural industries. It is as high as 55 percent in Narshingdi and 44 percent in Swaropkati and as low as 13-20 percent in Mymensingh Pourashava, Pabna Kotwali, Narail and Kgunia. About 25 percent of the total labour force of the areas under study has been found to be employed in industries.

Though a large number of industrial activities have been encountered in the survey areas of 20 major product types account for about 87 percent of the rural industrial employment.

To get an idea of the extent of within year fluctuation in production, we have noted monthly output figures of rural industrial enterprises for the period February, 1979 to January, 1980.

Co-efficient of variation has also been estimated for per enterprise monthly output figure for individual products. Activities in which the variation has been observed to be the

relatively high include bricks, Jute bailing, Sugarcane-gur, juice gur and boat making.

Table 3.3 gives the value of output per enterprise for the overall sector for the aforesaid 12 months. As can be seen from the Table, September to January is the peak period of industrial activity, Feb-May the lean period, which June-Aug. the period of moderate activity. The co-efficient of variation for these monthly output figures has been estimated to be 21.7.

Table 2.3

Value of monthly output per enterprises, Feb/79-Jan/80

Months	Value of output per enterprises(Tk)
February	3516.61
March	3606.01
April	3219.17
May	2997.95
June	4478.69
July	4657.66
August	4413.12
September	4859.08
October	5809.80
November	5096.18
December	6116.24
January	5667.15

Source: RISP Final Report, 1981.

3.4. Size, type and duration of employment:

3.4.1 Size of Employment:

The average size of employment per enterprise has been found to be 7 to 9 persons. The average size of employment in an enterprise has not been found to vary significantly with the location of the enterprises. The distribution of workers according to the size of employment for rural enterprises is represented in table 3.4. The average size of employment is 4.27 percent for enterprises located in rural areas.

The average size of the workers in rural enterprises have been increased due to development of this sector. Now-a-days the rural enterprises is running at a profit. Among the workers size is employing 4-6 persons have been found to be 49.7 percent which covered nearly half of the rural employment size. The size of employment however, varies significantly among different sectors and among different product types within a sector.

Table 3.4

Distribution of enterprises according to size of employment

Size of employment	Percentage of rural enterprises
1-3 persons	12.9
4-6 "	49.7
7-9 "	29.6
10-12 "	10.1
13 and above	1.7
Average size of employment	4.27

Source: Questionnaire survey, 1983.

3.4.2 Type of workers

The importance of different types of worker may throw some light on the nature of production organization in rural industries. One major indicator of the presence of capitalist organization of production is the use of hired labour.

The result of the surveys are shown in table 3.5. It will be noted from the table that 70 percent of the workers are family labourers, 69 percent is the unpaid family workers and 31 percent hired labours. Thus in rural industries the predominance of family workers is found.

Table 3.5

Composition of different types of workers

Types of workers	Percentage of male	Percentage of female	Both sexes
Family workers	40.1	30.2	70.3
Proprietors	10.2	-	10.2
Unpaid family workers	20.9	48.4	69.3
Hired workers	20.1	10.6	30.7
Hired relatives	0.9	1.9	2.8
Non-hired relatives	7.0	6.9	13.9
Apprentices	0.8	-	0.8
All workers	100.00	100.00	100.00

Source: Questionnaire survey, 1983.

3.4.3 Duration of employment:

As rural industries are basically informal types a priori, one would expect a large proportion of labourers working part-time in industries as they may devote a part-time of their time to other non-industrial family occupations. This section will test the above hypothesis with the data collected from the sample during the phase-II survey.

Part-time: During the census each proprietors were asked to report the number of full-time and part-time workers employed in the enterprise. The proprietors' own perception of the extent of full-time employment as obtained in Table 3.6.

Table 3.6

Proprietor's own perception of the nature of employment in rural industries

Type of workers	Nature of employment	
	Full time	Part time
Family	79.3	20.7
Hired	86.0	14.0
Male	89.0	11.0
Female	76.0	24.0
All workers	81.5	18.5

Source RISP Final Report, 1981.

On the basis of the table 3.6 it has been estimated from the data generated that only 27 percent of the workers were employed on part-time basis.

3.5 Employment linkage between industries and other rural occupations:

The phase-I survey by RISP found that industry is the main source of income only for about 63 percent of the proprietors; and for 29 percent of them agriculture is the main source of income. This is an indication of the existence of a high employment linkage between agriculture and industry which is expected, because in Bangladesh agriculture is a highly seasonal activity and usual employment predominates in the agricultural labour market. In order, therefore to understand the overall unemployment situation for rural industrial workers, and the extent of employment linkages it is necessary to study the allocation of time to various rural occupations for workers engaged in rural industries.

The findings has been obtained from the information collected from a few villages for selected cottage industries are reported in Table A.3.7 and A.3.8 below. The following main features may particularly be noted from the tables:

1. For male workers the rate of under-employment is low both in view of the average number of days worked a year and the average number of hours worked in a week. But the rate of under employment is high among female workers' particularly with reference to the number of hours worked in industries a day. This may be expected in view of the fact

that women have to devote a part of their time for domestic duties, but not included in this measurement.

ii) There is a high employment linkage between industry and other rural occupations, particularly for the male workers. In a few cottage industries males devote the major part of their time to other rural occupations leaving industrial activities to be performed mainly by the females. Only in handloom, both male and female workers are relatively fully employed.

3.6 Wage Rates

The duration of employment only gives a partial picture of the economic condition of workers employed in rural industries. The level of earnings of a worker is determined by both the number of days of employment and the wage rate. Thus, a worker may remain fully employed on the basis of the time criterion but the wage rate may be so low that he does not earn a subsistence living even when fully employed. When a worker is found working in such a poorly paying job, he cannot but have limited alternative job opportunities.

A part from the level of earnings of a worker, the wage rate can be taken as an indicator of the skill requirement in a particular job in which he is employed. It may also be taken as an indicator of the productivity of labour.

The average wage rate per hour for different types of workers, and enterprises can be seen from Table A.3.9 and A.3.10. The

hourly wage rate has been found to be Tk. 1.32 for all type of workers. Tk. 1.40 for workers in enterprises located in urban areas and Tk.1.28 in enterprises located in rural areas. The daily wage rate for rural enterprises is estimated at Tk.9.47, which is about the same as the daily wage of unskilled agricultural labourers prevailing in 1977-78.

A considerable variation has been found in the wages paid to various categories of hired workers (Table A. 3.9). The child and female workers are considerably under paid compared to adult and male workers. A child worker would receive about 55 percent lower wage compared to an adult worker and a female worker about 57% lower compared to a male worker. For a comparison of agricultural and industrial wages in rural areas, one should consider only adult male workers, as females and children rarely work as casual agricultural labourers. In the industries under study, an adult male worker has been found to receive Tk. 1.51 per hour, or Tk.12.08 per day. On this basis, the wage rate in industries is estimated to be about 30 percent higher than the wage rate prevailing in agriculture.

The above picture, however, can not be generalised for different product types. It will be noted from Table A.3.10 that about 40 percent of the workers in enterprises located in rural areas received less than Tk.1/- per hour. In a product type, in which enterprises are located mainly in rural areas,

the average wage rate per hour has been found to be less than Taka one.

3.7 Place of rural industry in the national economy:

According to the population census figures, industrial employment (both large-scale, small-scale and cottage) in Bangladesh in 1974 was approximately 46 thousand or about 4.6 percent of the economically active population of the country. Among them, 68 percent were in the rural areas and 32 percent in the urban areas. Since most of the rural enterprises and a significant proportion of the urban ones belong to small-scale and cottage category, the above figures suggest that employment in small-scale and cottage industries constituted approximately 3.5 percent of the economically active population of the country.

Officially estimated that sectoral breakdown of GDP show that the contribution of manufacturing sector for GDP in 1977-78 at current prices was 9179 million taka or approximately 8.3 percent of the GDP, among them 55 percent came from large scale-sectors and 45 percent from the small and cottage sectors⁻¹.

The importance of rural industrial activities in the study areas have been discussed in chapter-V of this study. As shown there (Table A.3.11) about 25 percent of the labour force in the survey areas are involved in rural industrial activities.

⁻¹ Bangladesh Bureau of statistics, Govt. of Bangladesh, 1979 statistical year book of Bangladesh, Dhaka, 1980, p. 132-142.

In connection with the case study on income, expenditure and employment eleven villages from the study areas were re-surveyed to collect information on general characteristics of household members including their occupation, and in this case also it has been observed that nearly a quarter of the labour force are employed in rural industrial activities⁻¹.

For the country as a whole, the proportion of the labour force employed in rural industries may be less than 25 per cent since some of the areas, particularly Marshingdi and Swarupkati have very high concentration of rural industrial activities.

⁻¹ Study on the socio-economic characteristics of three villages in Barisal conducted by the centre for social studies, University of Dhaka, 1980 p. 7 to 12.

CHAPTER - IV

4.0 INPUTS FRAMEWORK: PROBLEMS AND POLICIES

4.1 Introduction:

This study has may be expected to find that rural industries of Bangladesh is facing various problems; such as:

1. Shortage of capital
2. Inadequate supply of raw materials
3. Lack of entrepreneurship
4. Antiquated technology
5. Lack of marketing facilities
6. Lack of adequate promotional and extension programmes
7. Lack of knowledge about demand for products and
8. Inadequacy of infrastructural facilities.

It is not the case that these problems have been discovered for the first time but indeed most of these problems were identified to be major bottlenecks in the small and cottage industries sector nearly 3 decades ago during the formulation of 5 (Five) year plan (1955-60) of Pakistan. And one finds that the second 5 year plan (1960-65) of Bangladesh has almost situationally repeated the list as has been done in all the preceding 5 year plans back to the first 5 years plan of Pakistan. If the problems which were identified as major nearly three decades ago still remain so, then one can legitimately say without going into other details that very little progress

has been achieved in the sector. The SFYP of Bangladesh states that " Small & Cottage Industry development remained not only stagnant but also below the 1969-70 level as far as its contribution to the GDP is concerned". It may be noted moreover that about 40 percent of the rural labour force of the country is currently unemployed.

And yet one will find that successive plans starting from the first 5 year plans of Pakistan have recognised that small and cottage industries have a very important role to play in the development of the country, particularly in terms of generating employment and income earning opportunities in the rural areas.

Since Liberation, the share of public investment allocated to the sector has shown no significant improvement. The BSCIC has also continued to remain largely concerned with small-scale industries, mainly in 20 industrial estates. And yet, after 20 years, only 355 industrial units are in operation out of a possible 3,343 not a very improving result⁻¹. The recently created Handloom Board and Sericulture Board are yet to develop into effective institutional arrangement. It is therefore clear that there must be something very wrong in the whole approach to development, otherwise rural industrialization, recognised to have high employment and income generating potential.

-1 Source : BSCIC.

4.2 Rural Industrialization: A Conceptualization:

Industrialization conventionally understood necessarily implies urbanization and modernization. Industries may develop in certain areas where infrastructural facilities such as power supply, transport etc. either already exist or are created to facilitate movement of goods, services and people.

Rural industrialization is a relatively new concept and its nature and characteristics should be properly understood if it is to be successfully promoted. We should conceptualize the process as follows:

These will start out as small and cottage type manufacturing units in rural areas where people who will own these activities and those who will work in them live and where raw materials are also produced. This means that urbanization is not an immediate concern, the rural areas will retain their basic rural characteristics⁻².

It will be necessary to develop transport facilities, to help movement of inputs and outputs. Electricity may not be necessary in many cases for quite sometime to come. Indeed, transport facilities may be developed and electricity provided at appropriate later stages in order to facilitate progress beyond a certain stage, and in that even there can be substantial local contribution towards the cost.

-2 : Source : BIOS.

The ownership and management of these activities will lie with large numbers of people who will be operating from their own homes in rural areas. Workers will also be able to work in these activities without having to move out of their homes. Thus, rural industrialization has to be conceptualized in terms of development taking place at local spaces where people normally live and work. Its primary purpose is to open up employment and income earning opportunities to the rural people in their own environment so that they may improve their conditions of life and do not have to move out of their homes or to have to adjust to fundamentally different life styles.

When employment generation is a basic aim, labour intensity is obviously a basic argument in the choice of rural industrial activities to be promoted. But value added can not be neglected as it is the basis of surplus generation and growth and hence, of sustain employment generation(creation). Therefore, along with labour intensity, productivity must find adequate weight in the process of promotion of rural industries.

Rural industrialization should be distinguished from the growth centre approach in which certain centres in the country sides are selected where certain infrastructural facilities are available or can be easily created so that non-farm activities can develop. Rural industrialization should be seen as an integral part of rural development; and village, even para-based community development approach should be more appropriate rather than the growth centre approach.

In this approach, industries to be set up will be ultimately determined by the villagers themselves on the basis of their felt-needs, considerations relating to self-reliance, and available facilities. In this context, it will be necessary to create a social, economic and technological environment in the villages so that people can undertake activities of their choice.

It will be necessary to distinguish between existing and potential industries. Existing industries will need assistance to solve problems that they are facing. But in the case of potential industries what is necessary is to create conditions through promotional drive and making necessary facilities available in terms of credit, extension etc. so that such industries are established.

There may, be however, other cases where production may be undertaken, for catering markets outside the immediate vicinity and perhaps to urban and foreign markets, where rural industries may develop on the basis of sub-contracting relationship with large industries.

4.2.1 Political Commitment:

In the light of the experience that hitherto the small and cottage industries sector of Bangladesh has remained grossly neglected in terms of allocation of resources and creation of appropriate environment even though the sector has always been recognised to have a very important role to play in the

process of development, it must be emphasised that an essential prerequisite for implementing a rural industrialization programme within the framework of the above conceptualization which entails not only economic but also far-reaching social and political perspectives of development is a deep political will and commitment.

In this context, it should be noted that inspite of the fact, that a renewed government concern has been expressed in the Second-Five-Year Plan for promotion of the sector, the allocation of resources to the sector has remained as meagre as ever nor has a commensurate attempt been made to conceptualise the sector in right perspective and to propose appropriate policies and institutions.

4.3 Policies:

4.3.1 Supply of entrepreneurship:

For most traditional cottage industries the proprietor is not an entrepreneur any more than a farmer is; the proprietor is a part of the traditional present society. In many cases industrial activities are carried out along with agriculture which may be the major source of income or may serve as the cushion to fall back on the case of need, so that the industrial activities essentially remain an extension of agriculture has

Source : BSCIC.

a household economy. Very few proprietors with true entrepreneurial characteristics have been found in the industries recorded in the survey.

Artisan in family tradition oriented industries are generally Hindus, and their occupations are usually caste based which include. Shoe making and repairing, pottery, blacksmithing, carpentry, oil pressing, jewellery and dairy industry⁻¹. Handloom, machine industry and fish drying are hereditary occupations in many cases for both Muslims and Hindus. Indeed upto partition(1947), the overwhelming majority of the proprietors of industrial activities both rural and urban areas were Hindu because they had trade and business or caste-based tradition or they had capital through land owning. But many of these artisans and entrepreneurs have since left the country. Muslims have since been coming forward into industrial activities; but it takes perhaps decades and generations for the tradition of dynamic entrepreneurship to develop. While people may be trained in the art and science of owning and managing industrial undertakings, the entrepreneurship is gone to the favour of through entrepreneurial family tradition.

In this context, it appears that formal generalized entrepreneurship training programmes may not be of much avail. Training programmes should instead be designed on trade basis blending various aspects such as managerial, product design and

Source: Side various studies on rural industries of East Pakistan & Bangladesh. Vol. 1 & 2 P.132-155 and 12-37.

quality, marketing and technical and run on workshop lines. Entrepreneurship training may be conceptualised in a hierarchical order for diffusion of existing skills, imparting of knowledge and skills acquired from abroad and developed through research and development, and the training place should be chosen which will be as near as possible to people participated in the entrepreneurship training.

When a few products are selected, it will be possible to identify places of their concentration in different parts of the country. But entrepreneurship training for people in the same trade but scattered in different places and also for intensive attention to various trades; a different approach may be followed. A few areas, say, one Upazila in each district, may be selected in the first instance. The selection of those Upazila may be based on availability of detailed information such as those covered by the present research project. Training programmes on particular trades may be then organised in those Upazilas and where possible union levels. The programmes may be extended to other areas later on. Regarding trainers the skilled persons both male and female should be identified from rural areas who are skilled in particular trades and such persons then may be used as hard-core trainers initially to provide training in existing skills.

4.3.1(i) Supply of Capital:

Capital may be fixed or dynamic. Regarding fixed capital vary from Tk.150 to around Tk.100,000/- worth of fixed assets. There

are only few products which have the capital ranging from Tk. 50,000/- to Tk. 100,000/- and there are primary urban-based activities. The large majority of the products which are widely produced in rural areas, the capital requirement varies from a few hundred to a few thousand Taka.

Again, it has been found that the initial capital usually comes from personal savings of the proprietors from agriculture and other sources of income. Similarly expansion capital has also mostly come from reinvestment of profits or savings of the proprietors from other sources of income.

One of the serious problems facing the rural industrial proprietors, as has been indicated by them, is lack of credit facilities for working capital.

Table 4.1

Source of initial capital

Source	Amount	Percentage
a. Cash from:		
i. Inheritance	207	42.68
ii. Dowry	22	4.54
iii. Personal savings from ag.	76	15.67
iv. Personal savings from other sources	111	22.89
b. Selling land from:		
i. Inheritance	1	0.21
ii. Dowry	4	0.82
iii. Personal savings from ag.	5	1.03
c. Selling other assets from:		
i. Inheritance	5	1.03
ii. Dowry	2	0.41
iii. Personal savings from ag.	1	0.21
d. Partner's contribution	0	-
e. Loans	79	16.10
f. Others	2	0.41
Total:	485	100.00

Source: Questionnaire survey, 1983.

It has been seen from the table 4.1 that the sources of initial capital collected from various sources but the inheritance sources would play the major role.

Table 4.2

Capital at the starting period of the enterprise

Amount	Number	Percentage
Tk. 1 - 10,000/-	105	46.67
Tk. 10001 - 20,000/-	22	9.78
Tk. 20001 - 30,000/-	37	16.44
Tk. 30001 - 40,000/-	10	4.44
Tk. 40001 - 50,000/-	20	8.89
Tk. 50001 -	31	13.78
Total:	225	100.00

Source : Questionnaire survey 1983.

It has been seen in the table 4.2 that the working capital available with rural industrial proprietors at the end of 1983 which was varied from nothing to Tk. 1-10,000/- for 105 entrepreneurs and Tk. 20,000/- to Tk. 30,000/- of about 37 entrepreneurs. Only the more urban-based products had relatively larger working capital. In most cases therefore, the available working capital was perhaps what they had to make do with rather than that they required for properly running their enterprises.

In most cases, not only that the credit should be available in small amounts but also the procedure of securing the credit

should be simplified and collateral requirements should be made flexible enough that for those who have nothing to offer as security should also be able to secure the credit.

As of now, there are some credit programmes for small-scale industries in the portfolios of Shilpa Bank and Shilpa Rin Shangeetha; various commercial Banks also provide credits to such industries. Again, even in the cases of small-scale industries, it is the urban-based investors or those operating in the industrial estates who tend to benefit most. Those who are located in the rural areas can not generally take advantages of the programmes because of their lack of familiarity with the procedure of securing loans, or their credit worthiness is yet to be ascertained by the credit institutions. So, if the rural industrialization programmes will become successful it should introduce the local machinery rather than the imported machineries. Any incentive for rural industries should be designed for small and especially cottage type industries with reference to specified product type as well as areas.

4.3.1(2) Raw materials:

Most of the traditional rural industries of Bangladesh are based on locally produced raw materials, with the notable exception of handloom and Blacksmithy. Handlooms are modern type industries based on metals, chemicals and oils are dependent on imports as Bangladesh has to import most of its textile fibres, metals and chemicals.

In so far as locally produced raw materials are concerned, most of them are seasonal and in order for the rural industrial proprietors to take advantage of favourable prices available in seasons it is necessary that they have enough liquidity at the appropriate time. But unfortunately, as has been noted earlier, the rural industrial proprietors suffer from lack of working capital; and there are no institutional credit programmes to assist them in this regard. Appropriately designed credit programme can solve this problem and can purchase proper raw materials and the enterprises can run through profitable organisation.

On other important problem relating to the locally produced raw materials, particularly if raw materials are to be procured in bulk in seasons, is lack of storing facilities with the rural industries. In this context, a very helpful step will be create storing facilities in rural areas on the basis of area-and product-specific requirements.

In so far as rural industries dependent on imported materials or import based materials are concerned, problems, related to both availability of foreign exchange and distribution of imported materials. Rural industries are not organised forces and have little impact on the allocative process of resources including foreign exchange. They also generally do not themselves import their requirement materials; importers are usually a different set of people or Government agencies like the TCB. It is well known that the distribution of yarn is subject to rent practices

and black marketing, as a result handloom is chronically constrained by shortage of yarn and dyes.

In this context, for both improvement of allocation of foreign exchange for import of selected raw materials for rural industries and their internal distribution, the basic question relates to simplifying bureaucratic procedures and eliminating corruption. But these are issues which have to be tackled at appropriate political and administrative levels. In the meantime it may be helpful to promote development of co-operatives and trade associations in rural industries so that their collective efforts might improve the situation in their favour.

4.3.1(3) Appropriate technology:

In view of mass employment in rural areas of Bangladesh the question of appropriate technology assumes a special significance. Appropriate technology is defined by different people, but consistency with factor endowments and correspondence with the level of development are clearly its basic characteristics. While the level of technology is a determinant of the level of development. That in appropriate technology is a dynamic concept and technology has to be constantly adjusted upward as development proceeds⁻¹.

Appropriate technology can be developed either indigenously or through adoption of technology transferred from another country.

In this context, it is clear that research and development efforts have to play an important role. While social science

research may find out needs, technological research has to play the key role in relation to the development of appropriate technology. Appropriate arrangement should also be made for diffusion of technology.

The present study has revealed that most of the rural industries rely mainly on very simple, traditional technology or manual skills. Virtually no innovative development relating to production process or product design has been found to be taking place in any industry⁻¹.

But it should be possible in many cases to improve traditional techniques through research and development which will improve efficiency and generate scope of growth for these activities. And while this is pursued, it will also be necessary to regulate introduction of modern techniques so that the traditional techniques are not displaced outright, and there may exist both policy interest and felt needs for improvement of the traditional techniques. Currently there is little research and development going on in the country for development of appropriate technology. A priority list of products may be prepared for the purpose chapter V will be helpful in this regard.

-1 : The information is collected from the study of field survey.

CHAPTER - V :

5.0 SOCIO-ECONOMIC CHARACTERISTICS OF THE STUDY AREA

5.1 Introduction:

A study of the socio-economic characteristics are necessary to understand the importance and the prospect of the expansion of industries in rural areas. Several factors promote to develop non-farm activities in rural areas. These are:

- a. Agriculture needs supporting services for supply of inputs and marketing of products.
- b. With increased population pressure on limited land, expansion of employment in agriculture will be increasingly difficult, so that non farm activities may come to occupy an important position as a source of employment and income in rural areas.
- c. In Muslim society, farming is not suitable occupation for women, as religious conventions restrict their working outside as a result of non-farm activities increase.
- d. Finally, to avoid the Drudgery of farmwork, some people may shift to non-farm activities with less manual work, provided they have the necessary capital and skill.

An analysis of the above factors for rural socio-economic characteristics may shed some light on the above factors in shaping various non-farm activities currently found in the rural areas.

The data for this chapter is derived from the final report of RISP project and questionnaire survey of 1983 done by the researcher.

The sources of secondary data has been taken from the final report of Rural Industries study project(RISP) by the Bangladesh Institute of Development Studies(BIDS) in 1981. The said study project collected the sample from eleven thanas in Bangladesh, namely-Kaunia, Shaibgonj, Pabna, Narail, Suarupkati, Barlekha, Murednagar, Chandnish, Narsingdi, Shearpur and Nymansingh Poursava.

The sources of primary data has been collected from the informations of the study areas, Narsingdi. For details, data has to be shown in Chapter- II.

5.2 Sex and occupation:

Sex is the most important determinant in the rural industries production sector. It may be noted from the table A.4.1 that about 55 percent of males and about 9 percent of females have been found to be engaged in production activities. About 57 percent of the economically active males have reported agriculture as the primary occupation, 35 percent is cultivating family farms and minding cattle(mostly of the age group upto 9) and 21 percent working as agricultural wage labour. About 17 percent is employed in rural industries, 13 percent in trade, business and shop-keeping and about 10 percent in services. Of the female workers, about 10 percent is engaged in

agriculture, about 59 percent in rural industries, of the 49 percent in family industries, and about 25 percent in miscellaneous jobs (mostly of the age group upto 9).

Incidence of multiple occupation is negligible among females. Only 1.7 percent of the female workers have reported multiple occupations.

Of all the people engaged in rural industries, 67 percent are males and 33 percent are females. In all other occupations dominance of males is much more prominent.

Of those working in rural industries, the males are mostly either proprietors or employed as wage labourers while most of the females work as unpaid family labourers.

It has been then found, that among all the rural occupations female participation is prominent in rural industries and that they work industries organized on family basis within the homestead. This may be due to social and religious restrictions about movement outside the home. Thus, as long as this is so women employment may be expanded through rural industrialization of those activities could organised on a family basis. But, under present arrangement, their work although very useful towards increasing family income usually remain unrecognised and they do not usually get credit for their work in any tangible form.

5.3 Age and Occupation

Age is also found to influence significantly not only the labour-force participation rates but also the structure of

occupation. In Bangladesh 10 is usually taken as the lower limit of the working age. The present survey has found children starting work even earlier. About 13 percent of both male and female children in the age group 5-9 have been found to be employed constituting 3.6 percent and 22 percent of all male and female workers respectively. The labour-force participation rate has also been found to be high in the old age-group 58 percent of the male and 3.7 percent of the females in the age group 65 and over.

The occupational structure for the children is different than for the adults and old people. The following other features emerge from the age distribution of workers (Table-A. 5.2) :

- a. Cultivation of family farm is a more important occupation among people of older ages;
- b. Agriculture, industrial wage labour, sheep-keeping, trade and business are predominantly done by adults;
- c. Cattle tending is mostly the occupation of males in the age group 5 to 15 years, and
- d. The low productive miscellaneous jobs are done mostly by the children upto 9 years of age and by old females over 55 years of age.

5.4 Educational level and occupation:

Education provides knowledge and skill and hence perhaps the most important determinant of the occupational choice. It has

been found that of all rural workers 71 percent have no formal education, 69 percent among males and 88 percent among females. At the other end of the spectrum, only about six percent have more than 10 years of schooling, 6.2 percent among males and 3.5 percent among females (Table A. 5.3).

The occupational structure in different educational levels can be seen from the Table A. 4.3. The level of education seems to have a significant influence on agricultural wage labour, trade and business and services. One can note from the table that the job of agricultural wage labour is inversely related to the level of education. On the otherhand, of those have been being engaged in services and trade and business, higher proportion come from higher educational background. About 53 percent of males and 100 percent of females having more than 10 years of schooling have been found to be in services. The proportion of cultivators are the higher in the group having 5 to 9 years of schooling, but a very small proportion of people who complete secondary education remain in agriculture. But the educational status of the entrepreneur is different from the workers (Table 5.4).

The educational status of the entrepreneur in rural industries sector can be seen from the Table 5.4. The level of education is concentrated at the secondary stage of the entrepreneur which constitute about 47 percent and it contains about half

of the educational level and the primary education quality is about 27 percent. Most of the people are from the labour sector of various industries. After the retirement they have

Table 5.4

Educationl Status of the Entrepreneur

Name of the education	Number	Percentage
Illiterato	26	11.56
Primary	60	26.66
Secondary	106	47.11
Higher(Graduato, Masters etc)	18	8.00
Technical(Skilled)	11	4.88
Other(special training)	4	1.78
Total number#	225	100.00 percent

Source: Questionnaire survey, 1983.

started the entrepreneurship. And the maximum age group represented to 40-49 age group, which constitute about 31 percent. The table 5.5 of the data is represented the following and about 27 percent of the entrepreneur is from the 50-59 years age group. Maximum entrepreneur is from the aged group and retired persons from various large and small scale industries.

Table 5.5Age of the entrepreneur

Age Group	Number	Percent
< 30	30	13.33
30-39	56	24.90
40-49	69	30.67
50-59	60	26.67
107	10	4.44
Total:	225	100.00 percent

Source: Questionnaire survey, 1983.

5.5 Landholding and Occupation:

The pattern of land ownership is important in the rural society which has influence to rural industrialization. The pattern of distribution of land ownership in the survey areas can be seen from the table A.5.6. About 54 percent of the households own less than 0.5 acres, who can be taken as effectively landless. Another 30 percent own 0.5 to 2.0 acres, and only 1.7 percent own more than 10 acres. The result is similar to that found by the land occupancy survey of 1977.

The land distribution is, however, highly skewed. The top 1.7 percent own about 22 percent of the total land and the top

10 percent have more than 50 percent. On the otherhand, two thirds of the households at the bottom own only about 13 percent of the land.

As the information on landownership is available at the household level, the occupation of only the head of the household could be related with the landownership status. The distribution of household heads by occupation and landownership position has been shown in Table A.9.7. Here landownership is defined in terms of the size of cultivated land owned by the members of the household.

The following features can be noted from the table:

- i. Very few of the landless are engaged in farming. Their major occupations are agricultural wage labour, rural industry (24 percent) and trade, business and shopkeeping (21 percent).
- ii. The people owning upto 0.5 acres of cultivated land are engaged in farming more as a secondary occupation (32 percent) than as a primary one (25 percent). For them other major occupations are agricultural wage labour (29 percent) rural industry (22.5 percent) and trade and business (12 percent). In fact most of the agricultural wage labourers come from the landless and near landless groups.

- iii. One interesting point is that the industrial households are more concentrated in lower landownership categories; a larger proportion (about 75 percent) of rural industrial households are landless or near landless (holding less than 1 acre of land)⁻¹ compared to all rural households (59 percent)⁻².
- iv. Shopkeeping, trade and business are carried out mostly by the land poor or the land rich. The landless and near landless are engaged in them mostly as primary occupation, while the large landowners mainly as secondary occupation.
- v. Although a larger proportion of the landless and near landless are engaged in non-farm activities, the involvement of larger land owning groups in these activities is also significant.
- vi. The incidence of multiple occupation is higher for the landowners than the landless, but among the landowners it has a negative relationship with the size of landholding. (Table A.5.8).

-1. This finding have been taken from "Kural Industries Study project(Phase-1)" - Report, BIOS, May 1979, p. 69.

-2. Land occupancy survey, 1977, p. 73-84.

CHAPTER - VI

6.0 EVALUATION OF BSCIC'S PROJECT

6.1 Introduction:

One of the argument usually put forward in favour of small scale and cottage industries is their supposedly low requirement of cost, capital, technology (handmade or semi-mechanised), productivity, small entrepreneurship, small financing status, marketing facilities and adequate employment generation by limited resources. These mentioned factors are compared to their urban based large-scale industries. Bangladesh Small & Cottage Industries Corporation (BSCIC) has several programme on the promotion and establishment of small scale industries in rural and semi-urban areas of Bangladesh. And to fill-up the aim of the programme, BSCIC has been taken several surveys and make reports on the problem and validity of the promotion of rural industrial sector. For this purpose BIDS (Bangladesh Institute of Development Studies) has been conducted survey and write a report on the name as RISP. (Rural Industries Study Project). In this chapter, the above mentioned factors have been evaluated on the basis of RISP report to compare with the study result (Statistics) from the study area by the researcher. In this chapter, an evaluation have been shown on the above factors in the rural industries sector. The purpose is to

establish the rural industries and make a proper planning to create an employment generation policy to provide employment to the agricultural surplus labour and the disguised unemployed labour. This will help to create the development of rural society i.e. rural development programme and the pressure of high mobility towards the urban society, will possible to reduce. In this chapter the above mentioned factors have been described with compare to BSCIC's project to the light of knowledge of study area(Narsingdi) by questionnaire survey statistics.

6.2 Capital and Technology used in rural industries:

On the most important assumption in favour of small-scale and cottage industries is their supposedly low requirement of capital compared to their urban based large-scale counterparts. It is important to have a quantitative knowledge of how low is this requirement and which industries are particularly favourable in this respect. There are several important implications of this information:

- i. It will reveal the levels of technology use in different parts of the rural industrial sector.
- ii. It will help to estimate capital requirement for setting-up enterprises in this sector.
- iii. Finally, by identifying areas of low capital requirement and high output value.

In order to ensure best possible use of scarce capital, it is important to know not only the amount of capital in use but

also the composition of capital assets. This is because, some assets are more scarce than others and one needs to identify industries which make the most economical use of the scarcest type of assets. Mode of acquisition of capital assets and their place of origin are some of the other important considerations.

The following description of the structure of capital assets in the rural industries of Bangladesh is expected to throw some light on these issues. First, a description of capital requirement will be provided and these issues relating to technology will be discussed.

6.3 Capital Requirements:

6.3.1 Fixed Asset 1

Four broad categories of fixed assets are considered:

i) building (ii), machinery, (iii) Tools and (iv) equipment, and miscellaneous items. It has sought to measure the value of capital stock in terms of their replacement cost in current prices. No rigorous method of measuring replacement cost could however be applied due to limitations of data. Instead, to approximate the true replacement cost by the value an asset will currently fetch in the market if sold in its present condition, have been tried. This information has been gathered from the respondents themselves.

Per enterprise requirement of different types of capital assets at the level of product type classification is shown in Table 6.1.

Table - 6.1

Value of Fixed capital per enterprise
at the end of 1979 (Value in Taka)

Product type	No. of	Buildings	Machinery	Tools & equip- ments	Misc- allo- ments	Total
Dairy Product	15	6954	-	1029	2151	10,133
Cane and Bamboo handicrafts	12	409	-	35	13	532
Jute handi- crafts	11	1633	-	2	13	1,648
Cloth printing	8	5242	500	770	460	6,972

Source: Questionnaire survey, 1983.

58051

As can be seen from the table, there are wide variations in the requirement of capital among various products. At one end of the spectrum are products like cane and bamboo handicrafts which can do with as little as just over Tk. 532 worth of fixed assets and at the other end are activities like dairy products where the value of fixed assets is around Tk. 10,033. It is possible to identify certain factors which are systematically related to such variation first and the most important factor is location of industries. Most of the products at the upper end of the capital requirement spectrum also happen to be primary urban-based activities. It will be noted that the value of both machinery and building of these products are normally higher than in the case of other products. It means that the more mechanised activities are concentrated mainly in the urban areas. Secondly among the predominantly rural-based activities high fixed capital cost is almost invariably associated with a very high proportion of building cost.

6.3.2 Working Capital:

Working capital is defined here to include stocks of raw materials, fuels and output, and trade accounts receivables. Only a brief account of working capital requirement will be presented here outlining the broad orders of magnitude. A detailed analysis is ruled out by the nature of data at our disposal. The information utilised here is based on observation at a point in time (end of survey year).

The industries (at the level of product type classification) have been listed in Table A.6.2 in ascending order of working capital available with them. It should be noted that these figures do not tell much about the working capital requirement of industries. Indeed a large proportion of the enterprises have mentioned credit for working capital as a major need. Hence, the figures for working capital shown in the table may be more appropriately interpreted as what they have to make do with and not what they may require for properly running their enterprise.

Predominantly rural based activities are shown in the said Table. But if one isolates the rural based activities one can discern more or less the same pattern as was found in the fixed assets. Traditional handicrafts have very little working capital. Artisans e.g. black smiths, carpenters etc. have somewhat more; but the largest amount used is in the processing activities. Among the processing activities, however, there is a significant difference between cotton textiles on the one hand and processing of food, tobacco and leather on the other; the former has relatively much lower working capital.

Among the processing activities which were found to have relatively high fixed capital cost, two are now found not to have corresponding high working capital—these are fish drying and oil making.

The amount of working capital of 225 enterprises have been shown in the table 6.3. From the table, it has been said that out of 225 entrepreneurs, 105 of them had only Tk.10000/- and it covers about 47 percent of the whole enterprises.

Table 6.3

Amount of capital at the starting period of the enterprise

Capital amount		Number	Percentage
100/-	10,000/-	105	46.67
10001/-	20,000/-	22	9.78
20001/-	30,000/-	37	16.44
30001/-	40,000/-	10	4.44
40001/-	50,000/-	20	8.89
50001/-	>	31	13.78
Total:		N- 225	100.00

Source : Questionnaire survey, 1983

From the above table the following points can be counted:

- i. Rural enterprise size is small
- ii. Employment of non farm activities size is small
- iii. Working capital is very small if it will compare to modern/mechanised industry.

- iv. Capital shortage is a constraint to the development of rural industries.
- v. Among the various types of industries the sike industries need small amount of capital.

6.3.3 Technology:

Level and nature of technology in rural industries basically refer to the degree of mechanisation and the proportion in which labour is combined with machines to produce the final output. Capital cost excluding building reported in Table 6.3 shows the use and origin of machinery in rural industries at the level of industry type classification. First column shows for each industry the percentage of enterprises which do not use any machinery at all. Not surprisingly use of machinery is not found to be very wide spread. There is only one industry in which every enterprise used some kind of machinery, whereas, there are four industries (dairy products, canned dried fruits and vegetables, cane and bamboo, mat cover and cane and bamboo furniture) in which all the enterprises work without any machinery at all. They depend solely on small tools and equipment. In fact in 20 out of 438 industries, more than 70% of enterprises do not use any machines. Most of the industries which use machines in any substantial degree are predominantly urban-based. There are only a few categories of rural based activities with substantial use of a machinery. These are oil and gur making, pottery and textiles (both cotton handloom and silk).

Column 5 of Table 6.3 shows that nearly one-fourth of all machinery in rural industries were purchased second hand. Some of the industries which are particularly dependent on used machinery are hosiery and Knitting, structural clay products, Leather and wooden furniture and fixture. Such relatively heavy dependence on used machinery is partly a reflection of limited finance capital of small-scale entrepreneur.

It is also to be noted that most of the traditional cottage industry activities rely almost entirely on indigenous technology in so far as they use locally manufactured machines. On the other hand, most of the activities that are more approximately classified as modern small scale industries rather than traditional cottage industries, i.e. general engineering and repairing, printing and paper, tailoring etc. are heavily dependent on foreign technology and most of their machinery have to be imported from abroad. Such heavy dependence on foreign machinery in a situation of acute foreign exchange scarcity and escalating price of capital goods in the international market partly explains why our rural industries sector is still so overwhelmingly dominated by traditional products and why the pace of modernisation is so deplorably low⁻¹.

-1: Another reason for lack of modernisation is perhaps the limited availability of electricity to run the machines. It has been noted earlier that the predominantly urban based activities are the most heavy users of machinery. This is because of cheap electricity is available only in a few urban and semi urban areas.

Use of machinery by itself, however, is not an adequate representation of the technology of production. Capital intensity of production, defined as the proportion in which capital assets are combined with labour, is an important consideration which has implications for both productivity and employment potential. Table 6.4 shows the type of technology used in the rural industries.

Table 6.4

Technology used in the rural industries

Type of technology	Number	Percentage
Modern mechanised technology	1	0.40
Semi " " "	8	3.23
Semi Power" "	18	7.26
Traditional technology	36	14.51
Handuse	162	74.60
Total:	N-225	100.00

Source: Questionnaire survey 1983.

As can be seen from the table about 74.60 percent use the hand-use technology in the rural industrial sector and the amount of modern mechanised technology users are very poor. A large number of percentage in the handuse traditional type of technology practice indicates the slowness of constraint to modernization. But if the handuse technology is produced in the country, and the products of goods have the proper market value, then the rural

industrial sector will provide to create adequate job. But if the programme of rural industrialization will become successful, the use of technology will be modernised.

6.4. Inputs, value added and productivity

It has been noted in this chapter (under the head 6.8) that a large majority of the rural industries are highly labour intensive and that they provide employment largely to the landless and near handloom and women, the most disadvantaged groups in the society. These may be considered as favourable points for promoting rural industries. The main objectives are (i) to study the input-output relationship through Leontieff's fixed-coefficient production function which focuses on backward linkage with other sectors and is generally used in planning exercises (ii) to generate an idea about the efficiency in the allocation of primary inputs (labour and capital) (iii) to calculate productivity of labour and capital to measure efficiency in their utilization and (iv) to estimate the amount of profit generated by those activities and the pattern of their utilization.

6.4.1 Input structure

Information on the type and quality of inputs used by different industries is useful for planning purposes. It helps (a) plan expansion of various industries in such a way that bottleneck in one industry may not impede growth in other industry and (b) project import requirement or import substitution in the

case of imported inputs. Such information also indicate potential of an industry to generate growth through backward linkages.

Detail input output information was generated. Over February 1979 January, 1980 through twice weekly (for output) and monthly (for raw material consumption) visits to the sample enterprises. Information on monthly raw materials consumption and output was also collected at the beginning and the end of the survey. The information from various sources have been cross-checked for consistency. Rather serious inconsistencies were found in the case of some enterprises which were engaged both in production and service activities. In certain enterprises simultaneously engaged in production and service activities, products serviced were valued by market prices rather than by service charges, while the raw material used for such production was not reported. In certain other cases service-output was currently valued by service charges, while the amount of raw materials supplied was incorrectly included into raw material consumption. In most cases these errors can be corrected by using the input-output coefficients as found in production activities. Where no basis is found to correct these errors, information obtained from one-shot survey at the end of the period has been used.

The input-output coefficients have been estimated for 64 products which account for 98.5% of the employment and 99 percent

of the enterprise enumerated by the census (phase-I survey⁻¹). It may be recalled that the sampling proportion is not the same for all products. So to get an estimate of the input composition for the rural industries sector as a whole, the estimates from the samples have to be blown up by the sampling proportions for each product before they are added together for all products. In a number of industries the sample size is very small, and a considerable difference has been found in the sampling proportions of enterprises and of employment.

The input structure for the rural industries sector as a whole has been presented in Table A.6.9. The gross value of production in industries for the eleven things under study is estimated at Tk. 2743 million, of which the value of intermediate consumption is Tk. 2015 million. One can note from the Table A.6.5 that the major portion of raw materials for rural industries comes from the agricultural sector which amply demonstrates their agro-based nature. The findings thus indicate that industries in rural areas have been developed mainly to support agriculture and rural economy.

-1 : RISP final report, Chapter-7 p. 127-131.

Imported raw materials comes to about 44.3 percent products in which these raw materials account for more than 50 percent.

The use of power in rural industrial production has been found to be very low. Fuel accounts for about 2.9 percent of the total intermediate consumption. About 56 percent of it is non commercial fuel like firewoods rice husks, sugarcane waste, charcoal etc. coal and petroleum products which are imported items accounts for only 0.52 percent of the total value of intermediate consumption. Electric power is used in a few industries, and it accounts for only 0.77 percent of the intermediate inputs.

Rural industries may promote the growth of other sectors through production linkages. There may be backward linkages from the rural industry sector in form of demand from this sector for output of other sectors, and there may also be forward linkages where the output of this sector may serve as inputs to other sectors. It may be useful to estimate the linkages provided by rural industries as many development theorists propose to give priority in investment allocation to industries with high linkage effects as they can help to generate growth in other sectors alongwith them much better than industries with low linkage effects.

The extent of backward linkages may be estimated by the proportion of intermediate consumption in the gross value of output

as raw materials and fuels, generally come from other sectors. Looking from this angle, the rural industrial sector provides a very high linkage effects as it has been found that intermediate consumption account for about 74 percent of the gross value of production.

The importance of rural industries in providing backward linkages to agriculture in the study area can also be noted from table 5.6, which shows the consumption of the major agricultural raw materials as proportion of the production of these raw materials.

Table 6.6

Rural Industries consumption of Major Agricultural products as percentage of Other Production

Name of the Production	Estimated value of consumption by industries (in Billion(Tk))	Estimate Value of production study area in 1979-80 (In million Tk)	Consumption Percentage of total production.
Paddy	624.2	3244.2	19.2
Wheat	85.2	64.4	132.3
Sugarcane	14.2	62.1	22.9
Rape and Mustard	27.1	83.2	32.6
Jute	87.5	42.5	205.9

Source: Questionnaire survey, 1983.

Information on production of these crops for 1979-80 has been collected from thana agricultural offices.

The importance of forward production linkages may be measured by the proportion of intermediate products and capital goods in the gross value of production of rural industries. Estimates obtained from the survey in this respect is presented in Table 6.7. It can be noted that rural industries produce a large number of intermediate and capital goods used in both rural and urban areas.

Table 6.7

Importance of intermediate and capital goods
in rural industry products

Inter Items	Value of Production (in thousand Tk)	As percentage of total pro- duction of rural indus- tries
<u>Intermediate goods</u>	<u>364900</u>	<u>13.30</u>
Baled Jute	95094	3.47
Processed tobacco	127021	4.63
Timber	83761	3.05
Bamboo Chatol	5007	0.18
Roeled yarn	10313	0.38
Coir rope & cardage	12218	0.45
Jute rop	2641	0.09
Processed leather	8954	0.33
Nylon rope	905	0.33
Plastic products	4042	0.03
Lac	1182	0.15
Paper bag & boxes	1049	0.04
Poultry containers		0.05
<u>Capital Goods:</u>	<u>55643</u>	<u>2.03</u>
Wooden agriculture tools	18623	0.68
Wooden non agricultural tools	4745	0.17
Boats	6655	0.24
Bamboo baskets	3347	0.12
Fishing equipments	3408	0.12
Fishing net	4948	0.18
Metal agricultural tools	8567	0.31
Metal non agricultural tools	5350	0.20
<u>Total intermediate & capital goods:</u>	<u>420543</u>	<u>15.33</u>

Source: RISP Final Report, 1981.

6.4.3 Value added:

The value added by rural industries in the survey areas has been estimated at Tk. 728 million in the reference period February 1979 to January 1980. This is about Tk. 253 per head of population in the areas under study, which is substantially higher than shown by official statistics for the country as a whole. The estimated per capita gross domestic product of Bangladesh in 1978-79 is about Tk. 1691⁻¹. If the same per capita GDP is assumed for the study areas, it appears that the industries account for about 15 percent of the GDP in these areas. But according to official statistics, the small scale industries of Bangladesh in 1978-79 accounted for only 3.5 percent of the GDP, but the estimated value added by industries in the areas comes about 17.7 percent of the officially reported total value added by small-scale industries in the country as a whole. It may be argued that rural industries are highly concentrated in some of the study areas, and the average per capita income in these areas may also be higher compared to the national average. As repairing of manufactured goods has been included in the present study, part of the discrepancy may also arise due to differential coverage.

The value added per enterprise is sometimes used as a measure of the size of firms.

-1 : Bangladesh Bureau of statistics, quarterly economic indicators Statistical Divisions, Planning Commission, April 1980, p. 22-83

products according to average size of value added per enterprise are enlisted in Table 6.8. It will be noted that enterprises in a large number of products are run on a very small scale. As many as 15 products, the value added per enterprise is less than Tk. 250 per month, and in another 10 it is less than Tk. 1000. Enterprises in most of these products are located entirely in villages and are run on family-basis with a large proportion of female workers, and the proprietors come mainly from the landless and near landless groups.

Table 6.8

List of products according to the size of value added per enterprise

Average monthly value added	Products
250	Juice gur, basketware, chertain making cane and bamboo handicrafts, cane and bamboo finishing equipment, shatal pati, fishing net etc.
250 to <1000/-	Oil making, dhenki products, gur making boat making cane and bamboo furniture, wood knitting, and paper making, pottery etc..
1000 to <2500/-	Dairy products, fish drying, hand saw timbers, leather processing, footwear, carpentry book binding, rickshaw, Metal fitting sheet etc.
2500 to <5000/-	Bakery, tobacco crushing, hosiery, job printing motor vehicle repairing, welding etc.
5000 and above	Jute bading, grain milling, saw milling, metal handtools, metal furniture, coop making, plastic products, brick making.

Source: RISP Final Report, 1981.

6.4.4 Productivity:

Productivity can be measured in two ways (i) productivity in relation to a particular input, or partial productivity and (ii) productivity in relation to all inputs together or total productivity.

6.4.4(i) Labour productivity:

Two measures of labour productivity have been used (i) Value added per labour hour. Since a significant proportion of workers are employed in rural industries on a part-time basis, and since there is considerable inter-industry variation in the extent of part-time employment, the secondary measure is more appropriate for inter-industry comparison of labour productivity.

Different product types according to the size of labour productivity per hour are listed in the Table 6.9. The average labour productivity per hour for the sector as a whole has been found to be Tk. 1.86.

Labour productivity indicates economy in the use of labour. But this economy may be achieved either by improving the skill of workers or by using more capital per worker. Because of limitations of data the question of skill could not be evaluated.

Table 6.2

List of products according to the size of labour productivity

Labour productivity per hour (Tk)	Products
Upto 1.0 Tk.	Basketary, bamboo, handicrafts, cane and bamboo furniture, fishing equipment pottery etc.
1.01 to upto 1.25 Tk.	Dhanki products, Juice gur, shital pati, mat making bamboo chatal, etc.
1.20 to 2.00 Tk.	Oil making, handloom products, Jute handicrafts, bricks and tiles etc.
2.01 to 3.00 Tk.	Dairy products, sugar cane gur, carpentry boat making, silk weaving, tailoring, wool knitting, footwear making etc.
3.01 to 5.00 Tk.	Fish drying, bakery, tobacco processing handsaw timber, bedding materials, cloths printing, and metal hand tools. etc.
Over 5.00 Tk.	Jute bailing, grain milling, saw milling, hosiery, leather processing, plastic products etc.

Source: RISP final Report, 1981.

but the impact of capital intensity on labour productivity has been estimated by regressing labour productivity on capital intensity (capital/labour ratio). The estimated regression equations are as follows:

$$\text{Log } Y_1 = 5.10 + .432 \text{ Log } K_1 \quad R^2 = 0.82$$

(.025)

$$\text{Log } Y_2 = 0.92 + .340 \text{ Log } K_2 \quad R^2 = 0.84$$

(.019)

Where, Y_1 = value added per worker per year (Taka)

K_1 = amount of capital invested per worker (Taka)

K_2 = amount of capital invested per labour hour (Taka)

The results indicate that more than 80 percent of the variation in labour productivity is explained by different in capital intensity.

The equation with labour productivity per hour as the dependent variable has a slightly higher R^2 , the coefficient of capital intensity in this equation shows that one percent increase in capital-labour ratio would increase labour productivity by 0.34 percent.

6.4.4(ii) Capital productivity:

The value added per Taka of capital invested has been estimated at Tk.2.03 indicating a very high average rate of return on capital in the rural industrial sector. Like labour productivity an extensive variation has also been noted in the capital productivity among various product types in this sector. Products are listed in the Table 5.10 according to level of capital productivity. In the last group of products labour productivity is extremely high because they have very little fixed assets, and use very small amount of working capital.

The finding indicates that products which are more labour intensive also generate more output per unit of capital than products which are labour intensive. The correlation coefficient between labour intensity and capital productivity for the cross section of products has been found to be 0.84 which shows a very high positive correlation between these two variables.

Table 6.10

Product type according to level of Capital Productivity

Value added per Tk. of capital invested	Products
Upto Tk.100	Jute bailing, tobacco processing, saw milling hoolery, plastic products, leather processing soap making, job printing.
Tk. 1.00 to Tk.1.50	Bakery products, grain milling, kirk weaving metal handtools, agar wood and star, motor vehicles repairing.
Tk.1.50 to Tk.2.00	Hand-saw timber, bedding materials, handloom than clothes, tailoring, sheet metal fittings metal furniture, lac, book binding, pottery, electrical goods, repairing.
Tk.2.00 to Tk.5.00	Dairy products, fish drying, oil making, sugarcane gur, bidi making, boat making, handloom lungi and sari, gamcha and nepkin, jute handicrafts, cloth printing, wood knitting, jewellery, outches, and bege musical instrument welding, rickshaw and bicycle repairing watch repairing, footwear repairing.
Tk.5.00 to 10.00	Dhenki products, juico gur carpentry, bamboo handicrafts, blacksmithy, footwear making, paper bag making bricks & tiles.
Over Tk. 10.00	Shital pati, hogle mat, basketary, bamboo Chatgi, cane and bamboo furniture, fishing equipment, reeling yarn, fishing nets jute rope and cordage, coir rope, cordage coir mats, lime making.

Source: RISP final report, 1981.

6.4.4(111) Total Productivity Ratios

It may be noted from the list of product types according to the size of labour and capital productivity that, in general products with a high value of labour productivity have a low value of capital productivity and vice-versa. The rank correlation coefficient between labour and capital productivity among the cross-section of products have been found to be -0.81 . This means that products which economise labour do so by using relatively more capital. This has also been indicated by the regression equation between labour productivity and capital intensity presented above. Thus a comparative study of the efficiency in resource use among various products can not be made in relation to either labour productivity or capital productivity alone.

Total productivity expresses value added as a proportion of the weighted sum of labour and capital, the weights being respectively the scarcity prices of these inputs.

6.5 Entrepreneurship applied:

The importance of the entrepreneur as a causal factor in economic development is widely recognised. It is also generally acknowledged that entrepreneurial supply is a function not only of economic inducements but also of a number of sociological, psychological and other non-economic variables.

To studying the rural entrepreneurial functions in Bangladesh under three main headings is essential, namely:

- a. Initiation
- b. Management and
- c. Innovation

6.5.1 Initiative :

Table 5.11 gives distribution of the enterprises by founder type. As an evident from the Table 64.8 percent of the enterprises were found^{ed} by the present proprietors themselves and in 35.2 percent of the cases they were acquired through inheritance of other means.

Table 6.11

Distribution of enterprises by founder type

Founder	Number	Percentage
Proprietor himself	781	64.8
Ancestors	149	12.4
Parents	247	20.5
Others	28	2.3

Source: RISP final Report 1981.

From Table 6.13, one can comment that about 77.34 percent of the enterprises is the founder of the entrepreneur himself and the remaining others' participation is poor. The most important thing from the table is:

- i. Maximum founder of the industries is the entrepreneur himself.
- ii. Family tradition is not the main source of create entrepreneurship.
- iii. Profit/running enterprises influence to create the entrepreneurship.
- iv. The entrepreneur not only establish new enterprises but also ventured into activities that were not their family tradition.
- v. If the situation of entrepreneurship pattern within a decade is analysed to compare the Table 6.11 and 6.12 the following results are found:
 1. New entrepreneurship has been created in one decade.
 2. Lacking:
 - Capital/loan
 - raw material and marketing
 - proper skillness of labour
 - infrastructure building.

Table 6.12

Founder of the enterprise

Name of the entrepreneur	Number	Percentage
Entrepreneur himself	174	77.34
Parents	28	12.44
Ancutor	5	2.22
Others	18	8.00
Total	225	100.00

Source: Questionnaire survey, 1983.

6.5.2 Management

Management structure of an enterprise partly depends on its organisational set-up. In certain types of organisations decision making is concentrated in one person, in others it is broader based. Thus, in individually owned enterprises management is the prerogative of the individual owner. In a family enterprise the undertaking is jointly owned and managed by members of the family.

Table 6.13 below, gives distribution of rural industrial enterprises by form of organisation. As is evident most of these enterprises are based on individual ownership and only a few are organised as partnership firm, joint-stock company or cooperatives.

Table 6.13

Percentage distribution of enterprises by organisation

<u>Organisation form</u>	<u>Percentage of enterprises</u>
Individual ownership	84.7
Family enterprises	14.0
Partnership	1.0
Joint stock company	0.2
Cooperative	0.1
Total :	100.00

Source: RISP final report, 1981.

Table 6.14

Legal status of the enterprises

Name	Number	Percentage
Individual	65	28.89
Family	160	71.11
Partnership	0	0.00
Joint stock company	0	0.00
Co-operatives	0	0.00
Total:	225	100.00

Source: Questionnaire survey, 1983.

Table 6.14 gives the legal status of the rural enterprises. From the table about 29 percent of the enterprises have the individual ownership. And the large of amount i.e. 71 percent have the family ownership. This pattern says that the rural industries sector is dependant on family labour. Because maximum industries consists of seasonal basic production. And lack of capital influence to build the industries familywise. The members of the family together establish the enterprises to minimise the cost of establishment and production.

Maximum entrepreneur today afraid the partnership outside the family or joint-stock company or cooperatives. Because in the part, this system failed to the management side of the enterprises in rural areas.

6.5.3 Innovation

With respect to the performance of the last entrepreneurial function, namely, innovation the picture seems least encouraging. Thus, it has been observed that 98.3 percent of the proprietors do not carry out any innovation whatsoever, 0.8 percent reported that they had brought about product improvement while 0.9 percent stated that they had introduced either a new material (Table 6.15). Even in those cases where some innovation has been claimed, detailed questioning revealed that the improvements carried out were only marginal in nature. Because in rural Bangladesh, rural industry sector there is lack of highly technical and special educated which can be created new innovation by adopting research in proper way.

Table 6.15

Distribution of enterprises by nature of innovation undertaken

Nature of innovation	Number of enterprises	Percentage
No innovation	221	98.3
Product improvement	2	0.8
New product/process or use of new raw materials	2	0.9
Total:	225	100.00

Source: Questionnaire survey, 1983.

6.6 Financing Status:

It is commonly believed that lack of adequate finance is an overriding constraint to the growth and expansion of rural non-farm activities. While a large body of literature⁻¹, may be cited in support of the statement, contrary evidence is also available; the general observation being that there is no shortage of capital for rural industries⁻². The problem is identified to be rather limited availability of viable projects.

However, the balance of evidence is largely in favour of the view that lack of adequate finance is a perennial problem confronting the small enterprises. It is observed by many writers⁻³ that a general paucity of capital, defective landing policies and dualistic features of the capital market of the less developed countries are the main reasons for the financial problems of such enterprises.

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- 1 : J.J. Bernal, Industrial Entrepreneurship in Madras State, India, Bombay, Asia Publishing House, 1960, Small-Scale Employment and production in Developing Countries, Evidence from Ghana, Praeger publications, New York, 1977, P. 57-75.
 2. M. Harper, "The employment of Finance in small Business" Journal of Development Studies, Vol.11,4 July,1975,p.12-75.
 3. C.F.K. Marsden, "Progressive Technologies for Developing Countries" International Labour Review, 1976.p.120-135.

6.6.1 Entrepreneurs' perception about the financial constraints:

On the question of problems faced in starting enterprises, majority of the respondents identified lack of adequate funds for acquiring fixed assets and for meeting working capital needs as a major constraint irrespective of their locational characteristics and occupational origin.

Problem faced by the entrepreneur is shown in the Table 6.16. It is seen from this table that about 67 percent have been facing capital problem and about 16 percent have been facing marketing problem, the survey reflects that finance and capital is the major constraint to the development of rural industrial sector.

About 3 percent entrepreneurs expressed their view that they would face the raw material problem in the past time during 1972-75. The cause of Scarcity of raw material was due to political unrest of 1971 and after liberation it is hampered by the licence holders though they were not any time as entrepreneur.

The result of the survey areas have been showed that only 16 percent told that they would always face marketing problem. But actually about 50 percent of rural industrial product group have been facing the said problem. But those informal disadvantaged group is influenced by the Middle

man who dominates the market of products. In the Sika handicrafts product 100 percent of the entrepreneurs expressed their view to the problem of marketing system. They discussed their dis-satisfaction to Bangladesh small and cottage industries corporation (BSCIC). Because the extension service of BSCIC promised to give assurance the product group to buy their product directly and supply them the essential raw material. But after that BSCIC gave the permission of middle men to supply the products to BSCIC and as a result, the middlemen system, who caught and dominated the marketing system of Sika handicraft products.

Therefore, BSCIC should improve the marketing system to provide and assured the producer by giving marketing facilities as buying goods from them directly.

Table 6.16

Problem faced in starting the business

Problems	Number	Percentage
Capital	150	66.67
Marketing	35	15.56
Raw material	7	3.11
Other	11	4.88
No	22	9.77
Total:	225	100.00

Source: Questionnaire survey, 1983.

Table 6.17

Assistance received from private lenders

	Number	Percentage
Yes	8	3.55
No	217	96.45
Total	225	100.00

Source : Questionnaire survey, 1983.

Table 6.17 shows that at the starting period only 3.55 percent received the assistance from the private lenders and the rest 96.45 percent did not get financial assistance from any private money lenders from the survey. It has been found that through the entrepreneur did not borrow cash from private lender they get raw material through middleman. Here the role of middlemen. Here the role of middlemen is an most influencing factor in the rural industrial sector, particularly in the supply of raw materials.

Table 6.19

Sources of initial money as loans of entrepreneur

Source of loan	Percentage
<u>Institutional Sources:</u>	
a. Commercial Bank	2.03
b. Shilpa Bank	-
c. BSCIC	89.62
d. Other Govt. agency	-
i) Handloom board	5.07
ii) Sericulture board	-
e. Co-operatives	-

(Table 6.19 continued)

Source of Loan	Percentage
<u>No institutional Sources:</u>	
a. Local money lenders	2.79
b. Wealthy people other than money lenders	-
c. Friends/relatives	0.49
Total:	100.00

Source: Questionnaire survey, 1983.

Table 5.19 shows that, about 90 percent of the entrepreneurs received loans or financial help from Bangladesh small and cottage Industries Corporation (BSCIC). Because they expressed that the terms and condition of loans given by BSCIC is soft than other sources and the rate of interest is lower than other Banks or organization.

In the study area many entrepreneurs have been waiting to receive loans from BSCIC which is authorized in distribute by different Commercial Banks. About 5 percent would get loan from handloom board. But only the handloom industry product group would get this loan and BSCIC provided loan to all small and Cottage Industries Sector. The Table shows that only 3 percent would take loan from local money lenders. The interest rate of local money lender is very high. So the entrepreneurs would receive loan from them for seasonal

basis, when the institutional loan is not available. But the influence of local money lenders were more powerful in the past time because there were scarcity of institutional loan in the country. The Commercial Banks served a little portion i.e. 2 percent of rural industrial products and they would recover about 100 percent of the loan distributed for industrial purpose.

In the study area, there were lack of joint stock business entrepreneurship. Maximum rural entrepreneur did not like this system of business. They prefer individual entrepreneurship. Table 6.19 shows that only 0.49 percent entrepreneurs took loan from friends or relatives directly or indirectly.

6.6.2 Initial and current capital requirement:

The first requirement for capital facing the entrepreneurs is initial or start-up capital. The average initial capital invested per enterprises in various industries set-up during the last four years prior to 1979 is summarized in Table A.6.19.

The table reveals that there are wide variation in the average initial capital requirement among industries. The average initial capital invested per enterprise varied between a modest amount of Tk. 90 for bedding materials and Tk.200,000 for jute baling. While the average initial requirement per enterprise is found to be Tk.12,598 for all rural industries, this tends to

decline considerably when certain industries, e.g. jute bailing, tobacco manufacturing, metal products, chemical products, plastic products are excluded from the sample.

The amount of current fixed and working capital invested per enterprise in fifteen major rural industries are summarised in the Table A.6.20. The average current capital investment per enterprise is found to vary widely among various industries ranging between a modest amount of Tk. 677 for basket product industry to Tk.24,502 for tobacco manufacturing. As in the case of initial capital, the inter-industry variation in the current capital investment per enterprise may be explained by difference in the nature of technology used, degree of mechanization scale of production, degree of capacity utilization, locational characteristics etc.

6.7 Marketing facilities

In a private enterprise economy marketing is very important among the factors which influence production, it determines the availability and cost of inputs and successful selling of product, and hence, influences the efficiency of operation of an enterprise. The problem of marketing is more acute for rural industries compared to both urban and agrobased industries. Unlike agricultural activities, rural industries have to depend on the market for most of its raw materials and products. Marketing is often mentioned as a leading constraint on the development of rural industries, it is argued that because of smallness in the

scale of operation, poor financial position, competition from imported goods and large industry products and the poor transportation facilities in rural areas, these industries are often at the receiving end of unequal exchange in buying raw materials and selling products.

In this chapter the following are the major issues highlighted in the analysis:

- a. Import content of raw materials;
- b. Sources and availability of raw materials,
- c. Agent and organisation of marketing
- d. Exports
- e. Variations in input and output prices; and
- f. Competition

6.7.1 Import content of raw material:

In a country like Bangladesh, imports are constrained by scarcity of foreign exchange. Hence in the case of these countries, the availability and cost of raw materials in industrial activities depend to a large extent on the import content of the raw materials. In examining procurement of inputs and other issues in the context of marketing in the rural industries sector of Bangladesh it will be useful, therefore, to look first into the import content of raw materials in these activities.

The figures in Table A.6.21 reflect the present distribution of product types within the rural industry sector. If the product composition changes, these proportions may also change depending on the differences in the import content of raw materials among product types. Hence, it is important to look at the importance of raw materials at the product level.

6.7.2 Sources and availability of raw materials:

Table A.6.22 gives the distribution of sample enterprises by major supplier of raw materials.

As can be seen from the Table, only a small proportion of rural industrial producers themselves produce a major part of their raw materials. Even in the case of industries whose main raw materials are agricultural, the incidence of production and processing of raw material by the same household is not widespread.

Table 6.23

Source of raw material for the enterprise

Source	Number	Percentage
Directly from the producer	18	5.73
Directly from the agent	48	15.29
Through middlemen	120	38.22
Through wholesaler	42	13.38
Through Retailer	61	19.43
Through Cooperatives	1	0.32
Through Govt. agency	23	7.32
Through creditor	0	0.00
Through foreign supplier	0	0.00
Through others	1	0.32
TOTAL:	225	100.00

Source: Questionnaire survey, 1983.

Again from the Table 6.23, one can comment that:

1. Middlemen supplies about 38.27 percent of raw material.
2. Retailer supply about 19.43 percent of raw material.
3. And the agent supply about 15.29 percent of raw material.

6.7.3 Agents and organisation of marketing:

In this chapter, which is mentioned in the sub-head 6.5 where the financial status has been described, the middlemen's rule or Mahajan system is negligible but in the Table 6.23, it has been shown that the role of middlemen is very important in the rural industry sector. And the small entrepreneurs are dependent on the middlemen within the rural industry sector the marketing practices are found to vary widely between product types and also between locations. Broadly, one can classify the various rural industrial activities into two major groups according to their marketing norms (1) those which cater mainly to local needs i.e. products which are consumed mainly within the local area and (2) those whose products have major markets outside the immediate locality or Upazila.

6.7.4 Export of Rural Industry Products:

Table A.6.24 gives the value of exports of the major rural industry export items for the years 1975-76 to 1979-80. As can be seen from the table, the main rural industry export item is tanned and semi-tanned leather. In value terms, exports of this item constituted between 8-12 percent of the country's yearly exports during those five years. Export of other rural industry

products, however, has been negligible; total value of exports of such items never exceeded Tk. 1 crore or 1 percent of the total value of exports in the year.

Rural industry products are exported mainly by three types of exports (i) manufacturer exporter (ii) co-operative, societies and marketing organisations such as Karika, Heads, Aurang etc. and (iii) merchant traders.

6.7.5 Market Structure and competition:

It was noted earlier that market for rural industry products vary in its spread between product types and also between locations. It was also observed that locational distribution of rural industrial activities is fairly skewed. This suggests that in the case of the activities which depend mainly on local market the structure of the product market will vary between locations even for the same product. In certain areas, an individual product may have substantial control over the market, while in others, competition among the producer of the same product may be quite intense.

However, from an overall point of view, one can mention that the market for rural industry products is, by and large a competitive one. Concentration of market power in those activities is observed to be fairly low.

6.8 Employment generation:

One simple set of statistics say that by the year 2005 A.D.

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our population will be between 12.7 and 14.1 crore, depending on our success of population control measures. Whatever be the population in that year we have, out of present population of 9.3 crore about 45 percent young people under the 14 age group about 13 percent between 10-14 years and 32 percent under 10 years. In 1983 we had about 80 lakh unemployed, of which 4.7 lakh are graduates and about 35 lakh educated between SSC and graduation levels. Women do not occur in this crowd. Between 1983 and 2005 A.D. on average 10 lakh people will enter the labour force every year⁻¹.

On the light of above problem setting, the pattern of employment is that agricultural sector still continues to employ the largest number of people 73.4. The non-agricultural sector employs only 26.6 percent. Again 78.5 percent of employment is in the rural areas.

The above scenario makes it a necessity for the government as well as for the non-governing elites to divert resources to the rural sector for employment generation, and hence income.

Employment can be generated on (a) on-farm and (b) off-farm.

On-farm activities include direct labour input on land for agricultural production, other inputs for higher productivity; and related activity providing services to productivity in the agricultural sector. This package of activities deal with crop

-1 : Muhammad Sarajuddin, "Employment generation in the rural Sector, imperatives and strategies" presented to Rotary Club meeting, March 14, 1983, Dhaka.

production as also processing of product such as crop production, input supply, irrigation and infrastructure development.

Beside these, there are large amount of seasonal and disguised unemployed labour in the rural sector. And to meet the purpose of providing them employment, the validity of the crafts should be studied. As the household or rural industry sector consists of educated unemployed, skilled persons and traders having experience in the product business, these persons more often/can take care of their own interest especially the educated employed. The strategy for generating employment through small industry for this client group will be through an appropriate package of services to the clients, if possible, from under the same roof. The BSCIC is now working on such a model through the District Industries centres(DIC), One for each district with a group of generalist extension officers and subject matter specialists.

Table 6.25 shows the employment size of the rural industries in study areas that about 54.27 percent of the industries have the workers size of 1-3 labourers, and 31.11 percent industries have the 4-6 labours. But at present time the size of workers' have different figures(Table 6.25).

Table 6.25

Number of workers at the starting level			
Size		Number	Percentage
1-3	Persons	122	54.22
4-6	"	70	31.11
7-9	"	27	12.00
10-12	"	4	1.78
13-15	"	0	0.00
167	"	2	0.89

Source : Questionnaire survey, 1983.

Table 6.26 shows that the employment size have change from the size of 1-3 persons of 54.22 percent to 20 percent and the size of 4-6 persons 31.11 percent to 35.56 percent and the size of 7-9 persons from 12.04 percent to 32 percent. This category has shifted or increased about 3 times which follow the development of rural industrial sector and possible to provide the gainful employment to the rural unemployed labours.

The result of the comparative study between table 6.25 and Table 6.26 shows the followings change to employment size and the causes of change and the development trends of rural industries programme in the study area.

- 1) The number of hired worker i.e. the size of labour in rural industries increased three times than the previous years.

- ii) The rural enterprises have been running with profit.
- iii) Due to running with profit the organization also influenced to increase the income of rural industrial and labourer.
- iv) The investment size in the rural enterprises has been increased four to five times, compared to past years.
- v) Table 6.26 shows that the difference of labour size of 7-9 persons from Table 6.25 is 12 percent to 32 percent because in the rural handloom industries, the entrepreneur improved their technology using both in handloom, which is needed adequate skilled labour.
- vi) The size of family labour is reduced due to improve the commercial value of rural industries sector.
- vii) From the experience of previous years, the entrepreneur expressed that their product quality was traditional and they would supply their product in the local market only. But now-a-days the demands of their products increased tremendously and have the market demand in the country on the one hand and out side the country on the other hand.
- viii) The quality of the products improved because supply of inputs of capital and use of modern technology.
- ix) The rural industrial sector improved due to have the cheap labour force in the rural areas.

- x) How-a-days the institutional loan is available and in soft condition for withdrawal which is the positive factor for the promotion of rural industries.

Table 6.26

Present number of employees working in the enterprise

Size	Number	Percent
1-3 persons	45	20.00
4-6 "	80	35.56
7-9 "	72	32.00
10-12 "	21	9.33
13-15 "	4	1.78
16-7 "	3	1.33
Total:	225	100.00

Source: Questionnaire survey, 1983.

The programme of BSCIC Model can be helpful to create gainful employment generation. BSCIC categorises industrial activity into (i) Rudimentary income generating activities for the landless, nearlandless and marginal farmers having primary skills and using simple tools and implements (ii) traditional crafts from the craftsmen families using, again traditional technology and simple tools and implements, and (iii) modern

industrial activity for the educated middle class and lower upper class entrepreneurs. This categorization is based on imperatives varying from socio-economic stability to economic growth in GNP terms⁻¹.

The BSEC Model draws heavily on extension services in a package and effectiveness of extension services is largely dependent on expertise capability, which is yet to be built up, supply of inputs especially investment and working capital which is scarce now, raw materials for existing enterprises, close co-ordination and understanding between financing institutions and BSEC. Thus to fulfill the above proposal the rural unemployed labour can be possible to provide proper employment generation in the rural industries.

6.9 Analysis of Financial Viability:

In this section an attempt is made to assess the financial viability of rural industries. In the process we have made an analysis of the costs and benefits of the industries under the study.

For the analysis of cost, various costs relevant to project analysis are expenditures on goods and services actually used by the project during both the investment and operating stages

-1: Muhammad Sirajuddin 1982 Strategies for rural non-farm employment" workshop on poverty forecast Rural Development and small farmer credit, BARD, Camillo-22-27 March, 1982.

Relevant benefits are the goods and services actually produced by the project. A private investor would count as costs only actual purchases for which he must spend cash, and as benefits, the sales of goods and services for which he will receive cash or a promise of cash.

For the analysis of cost, the following costs are usually taken into account for measurement. Many of the important prices capital costs, the cost of foreign exchange, labour costs, output prices, transport costs, electricity charge can be estimated.

For the measurement of benefit the market value of all the finished goods from these industries will be analyzed in taka/ per unit. The problem of marketing facilities of rural industrial goods compared to urban industries and agricultural sector is more acute. Proper marketing facilities of goods is often mentioned as a leading constraint on the development of rural industries. This sector has been facing the following problems:

- i. Small scale of operation
- ii. Poor financial position
- iii. Competition from imported goods and large industries products and
- iv. The poor transportation facilities in rural areas, thus marketing problem.

These industries are often at the receiving end of unequal exchange in buying raw-materials and sales of products.

Table 6.27 gives the total value of sales of products, last year(1982-83) of various rural industries in the study area. As can be seen from the table, only 31 percent of the enterprises constitute of a value of product ranging from Tk.20,001 to Tk. 40,000 and about 20 percent of Tk. 1 to 20,000 category. This situation reflects a small capital size of rural enterprises.

Table 6.27

Total value of sales of products in the previous year '1982-83)

Tk.	Group	Number	Percentage
1	to 20,000	45	20.00
20,000	to 40,000	70	31.11
40,001	to 60,000	50	22.22
60,001	to 80,000	10	4.45
80,001	and above	50	22.22
Total:		N-225	100.00

Source: Questionnaire survey, 1983.

Again Table 6.28 shows the nature of the industries and indicates whether it is running at a loss or profit. From the table it is clear that 35 industries among the total sample size of 225 industries have been running at a loss and the rest which is the majority comprising of 190 industries have been generating profit. As can be seen from the table about 84.44 percent have been generating profit and the rest about 16 percent are facing loss. Among the industries which are running at a loss, a maximum of these are dairy farming industries. From the investigation it is observed that the majority of the entrepreneurs of dairy farm industries have expressed their view that within two or three years their industries will make a satisfactory profit. Since the gestation period of dairy farm is longer than other industries under study, it is obvious that it will take some time to generate profit.

Table 6.28

Profit or loss from the enterprise in the previous year (1982-83)

Group	Number	Percentage
Loss	35	15.56
Profit	190	84.44
Total	N = 225	100.00

Source: Questionnaire survey, 1983

It can be further derived from table 5.29 that only 42.1 percent of the profit making industries are in the range of Tk.1 to Tk. 5,000 because the maximum of these belong to the group of small scale enterprises.

Table 6.29

Relationship of size of industry with financial
Viability (profit and Loss)

Group	Profit		Loss	
	Number	Percentage	No.	Percentage
Tk. 1 to 5,000	80	42.10	22	62.86
Tk. 5001 to 10,000	46	24.22	8	22.86
Tk. 10,000 to 15,000	16	8.42	2	5.71
Tk. 15,001 and above	48	25.56	3	8.22
Total:	N=190	100.00	N= 35	100.00

Source : Questionnaire survey, 1983.

About 25 percent of the industries obtained a profit of Tk. 15,001 and above. These are the handloom industries and powerloom industries. As can be seen from the table, about 62.86 percent of the industries generated a loss to taka 1 to Tk. 5,000 among the industries which are running at a loss. Again, maximum industries have been running at loss of few taka because most of them are in the category of new business e.g. dairy and poultry farms. From the analysis of the above table, the following conclusions can be made:

1. Maximum number of rural industries are profit-making enterprises.
2. The amount of profit is small because the capital investment is small and use of inputs is inadequate.
3. Rural industries do not require large amount of capital investment compared to large scale industries.

4. Marketing Facility is one of the most critical factor for the promotion and development of rural industries.
5. The scale of profit in rural industries is small. Only 25 percent of the industries have generated profit ranging from Tk.15,000 and above.
6. About 63 percent of the industries which are running at a loss belong to the investment category of Tk.1 to 5,000.
7. The data from the tables show that it will be possible to run rural industries at a profit if marketing facilities are improved.

Table 6.30

Cost of Various Items in Handloom Industries

Items	Amount Taka	Percentage
1. Handloom	53,79,184.62	40.24
2. Machines	11,57,647.58	8.66
3. Parts of Mills	97,584.61	0.73
4. Land	12,85,978.03	9.62
5. Housing	5,52,008.28	4.13
6. Raw material	17,75,237.85	13.28
7. Transportation	6,683.88	0.05
8. Family labour	14,83,820.80	11.10
9. Hired labour	9,74,509.34	7.29
10. Interest paid	6,56,356.77	4.91
Total:	1,33,69,091.76	100.00

Source: Questionnaire survey, 1983.

Table 6.30 shows the cost of handloom industries. As can be seen from the table the handloom's costs cover about 40 percent which is the maximum among 10 variables, and raw material covers only 13 percent with family labour occupying the third position.

Table 6.31

Cost of various items in dairy farm

Items	Amount Taka	Percentage
1. Machines	73,883.40	1.90
2. Parts of Mills	-	41 -
3. Land	16,13,769.00	41.50
4. Housing	2,57,814.18	6.63
5. Raw material	15,81,104.76	40.66
6. Transportation	-	-
7. Family labour	20,220.72	0.52
8. Hired labour	1,41,545.04	3.64
9. Interest paid	13,221.40	3.40
Total :	38,88,600.00	100.00

Source : Questionnaire survey, 1983.

Table 6.32

Cost of various items in Sika Industries

Items	Amount Taka	Percentage
1. Machines	39,745.02	1.73
2. Parts of mills	-	-
3. Land	11,487.00	0.50
4. Housing	92,150.98	2.27
5. Raw material	14,40,469.80	62.70
6. Transportation	28,717.50	1.25
7. Family labour	4,41,100.80	19.20
8. Hired labour	2,20,550.40	9.60
9. Interest paid	63,178.50	2.75
Total:	22,97,400.00	100.00

Source : Questionnaire survey, 1983.

Table 6.31 shows the cost of various items in dairy farm industries, where raw material is the higher among them, which constitute about 41 percent and land constitute the highest about 42 percent.

In table 6.32, cost of various items of Sika Industries have been shown. As can be seen from the table raw material cost is the highest, which constitute about 61 percent of the total.

The analysis of the above tables 6.30, 6.31, 6.32 indicate that the cost of various factors of the industries under discussion, differ to a large extent. Among them raw material, capital, land and labour is the dominant. Of these three types of industries, Handloom and Sika industries generate no loss but the dairy farm industries run at a loss particularly during their starting year. But after few years this type of industry will overcome this unfavourable situation.

From the above discussion it is clear that, compared to the net return or profit, the investment or the cost of production in rural industries is not very high.

If we want to derive maximum benefit out of investment in rural industries then proper measurement of production cost and benefit should be done; the raw material and the cheap labour force should be used efficiently, marketing of raw materials, use of advance and traditional technology, marketing of products, skill of labour etc. should be improved properly.

CHAPTER - VII :

7.0 DEMAND FOR RURAL INDUSTRIAL PRODUCT:

7.1 Introduction:

For the expansion of rural industries, especially the cottage and small scale industries, a major constraint may be the limited prospect for the expansion of demand for their products. It is argued that these products are consumed largely by the people within low income groups, who for obvious economic reasons look for low-priced goods even if they are also of low quality. As the level of income increases, people tend to substitute these products with better quality goods which are largely manufactured by relatively more capital-intensive small-scale or large scale industries located mainly in urban areas. In order to study the prospect of rural industries it is, therefore, necessary to test if rural industrial products are mainly inferior goods with negative or very low-income elasticity of demand. The acceptance of the hypothesis would mean that even if steps are taken to increase the supply, the prospects of the rural industries sector would be seriously restricted by limited demand for its products.

A related issue on which demand analysis can throw important light and which has important policy implications, is the factor intensity of an observed consumption pattern. A widely accepted hypothesis in this respect is that the poor consume relatively labour intensive goods, while the goods in the consumption basket of the rich are relatively capital

intensivo. The validity of the hypothesis implies that a redistribution of income would result in higher employment and less demand for goods using the scarce factor, capital. A number of consumer demand studies are available for Bangladesh, but unfortunately they could not be used for the present purpose because the results are available for aggregated commodity groups from which it is not possible to estimate the nature of demand for rural industrial products. Hence a separate survey was undertaken in four carefully selected unions within the study areas to focus on the issues mentioned above. In order to maximise the variance, the unions were purposively selected on the basis of BSCIC's highest number of loomys and the accessibility, concentration of industries, consumption linkage with urban areas. A census was conducted in these unions on the basis of hundred percent survey of the enterprises of various categories. The total sample size was 225 households. The findings from these surveys are presented here.

7.2 The pattern of income distribution:

Total consumption expenditure has been taken as the measure of income mainly because income particularly that from subsistence agriculture is difficult to estimate accurately. The demand for various goods by a household has been related to per capita income (expenditure) of the household because it is a better measure of economic position of household. In estimating per capita income the number of household members has

been used instead of standardised consumer unit, because this procedure is universally followed in national income accounting and in estimating measures of income distribution.

The distribution of population regarding to per capita income in the study areas can be seen from the Table A.7.1. The annual average per capita income is estimated at Tk. 1497- (about US \$ 100) for the unions under study compared to the national average of Taka 1989 estimated by the official statistics for the year 1978-79. About 45 percent of the households have a per capita income of upto Tk.1200 and about 67 percent have an income of upto Tk.1600. The distribution of income is not found to be very unequal.

Table 7.1

The pattern of income distribution

Per capita income group	Households		Average per capita income
	No	Percentage	
Upto Tk.800/-	38	15.78	549
Tk. 80-Tk.1200/-	65	28.90	1000
Tk. 120-Tk.1600/-	50	22.22	1403
Tk. 160-Tk.2000/-	28	12.44	1761
Tk. 200-Tk.2400/-	17	7.55	2200
Tk. 240-Tk.3200/-	10	4.44	2000
Tk. 320-Tk.4000/-	7	3.11	3600
Tk. 400-Tk and above	10	4.44	4810
All households	225	100%	1490

Source: Questionnaire survey, 1983.

Table 7.2
Subsidiary Income

Name of Sources	Number	Percentage
Service	87	38.67
Business	81	36.00
Other (agriculture and other activities)	57	25.33

Source: Questionnaire survey, 1983.

Though the sources of income is counted from as the subsistence agricultural sector but now-a-days the trend has been shifted towards other activities such as business, services and others. Among the income sources service is in the leading position which accounts about 38.67 percent and the other sources is not very unequal.

7.3 Description of expenditure pattern:

The households have been classified into four quartile groups according to income criteria. For detail analysis of expenditure pattern, the data which was collected (primary data) is not enough, so the secondary sources of data has been taken fill-up the gap. The results are reported in table appendix (11). For better comprehension of the results, RISP have also studied the pattern of demand for these products for the bottom 25 percent of the households, who may be called 'poor' and compared it with the

pattern of demand for the upper 25 percent of households who, for convenience may be designated 'non-poor'. The result can be seen from Table A.7.3.

i. The rural consumption basket is mostly occupied by products which are either processed or manufactured by rural industries. Even if rice is excluded, the rural industry products account for about 21 percent of the budget compared to only about 6 percent by competing products which are produced in cities or abroad.

ii. The upper income baskets devote a larger proportion of their income to non-food rural industry products than the poor. The absolute level of income of the poor is so low that after meeting their basic food needs they have very little left to buy industrial goods. For example, the share of rice in the budget is 72 percent for the poor compared to 53 percent for the upper quartile, while the share of clothing is only about 9 percent for the poor compared to about 14 percent for the non-poor. Thus if the economic condition of the poor improves the demand for rural industrial products will substantially increase.

iii. The substitution of rural industry products by other manufactures does not seem to be a serious problem. The absolute per capita expenditure on most of the rural industry products rises with increase in the level of income. In fact, the biggest share of most of the products increases with the rise of income. It will be noted from the table A.7.4 that, among various cottage

industry products, only dhenki rice and certain pottery items may be called inferior goods as income increases people tend to substitute these products with competing products produced by small-scale and large-scale industries. On the otherhand, as income increases, the rural people tend to devote a relatively larger proportion of the income to handloom cloths compared to mill-made cloths.

7.4 Expenditure elasticities and Marginal propensity to consume

In the previous section, budget shares of various rural industrial products have been shown, and the responsiveness of the demand for these products to change in income indicated. A more thorough statistical analysis of the nature of demand for these products can be done through estimation of expenditure elasticities and marginal propensities to consume. The former measures the percentage change in the demand for a particular commodity in response to a change in total expenditure, and the latter measures the proportion of incremental income devoted to a particular commodity.

Expenditure elasticities are derived from regression equations with expenditures on a particular commodity as the dependent variable and the total expenditure as the independent variable. As already mentioned, a better measure of the economic standing of a household is per capita income rather than household income. Here the per capita expenditure of the household is used as the explanatory variable. The expenditure on basic consumer goods

like food and clothing also depend on the number, household members; hence, for these commodities the expenditure is measured in per capita terms. But the expenditures on consumer durables or capital goods may be independent of the size of the household, so for these items the household expenditure has been taken as the dependent variable. There may be some other factors which may affect the expenditure on a particular item. Three other variables which may be assumed to have an independent effect on the demand for a particular commodity, irrespective of the level of income, are:

- i. the educational status of the household
- ii. urban linkage and
- iii. the occupational position of the household.

To dissociate the probable independent effects of these factors from the income-consumption relationship, they have been incorporated in the regression equations as dummy explanatory variables.

The following three alternative functional forms were tried for various rural industry products, and in the case of majority of them the semi-log function has been given a better fit to the data than the others;

$$c = f(y) \quad \text{--- (1)}$$

$$c = f(\log y) \quad \text{--- (2)}$$

$$c = f\left(\frac{1}{y}\right) \quad \text{--- (3)}$$

Here, the elasticities and marginal propensities to consume are estimated from the estimated results of the following regression equation.

$$c_{ij} = b_0 + b_1 D_{1j} + b_2 D_{2j} + b_3 D_{3j} + b_4 D_{4j} + \gamma_j + b_5 S_j + U_{ij} \quad \text{-----(4)}$$

Where C_i is the percapita expenditure on the i th commodity for the j th household, Y_j is the percapita total expenditure for the j th household, S_j is the size of the households and D_1, D_2 and D_3 are dummy variables which take values as follows:

$D_1 = 1$ for households with atleast one member in service or having more than five acres of land, and 0 for other households (dummy for occupational position).

$D_2 = 1$ for households having at least one member with more than high school level education and 0 for other households (dummy for educational level).

$D_3 = 1$ for households receiving remittance from either town or abroad, and 0 for other cases (dummy for urban linkage).

The expenditure elasticity E_i , and the marginal propensity to consume, MPC_i for the i th product from this functional form is given by:

$$E_i = \frac{b_4 i}{C_i} \quad \text{-----(5)}$$

$$\text{and } MPC_i = \frac{b_4 i}{Y} \quad \text{-----(6)}$$

where b_{4i} is the regression coefficient on per capita expenditure for the i th commodity.

C_i is the mean expenditure on commodity and Y is the mean per capita expenditure. The estimated values of expenditure elasticities and marginal propensities to consume for various rural industrial products are given in the (Table A. 7.5). The results do not support the hypothesis that the rural industry products are inferior. No commodity has been found to have a negative expenditure elasticity of demand. With the exception of a few products, notable chenki rice, pottery goods, and handloom gamcha, the expenditure elasticity of demand has been found to be fairly high and in majority of the cases it is more than one, indicating an elastic demand. It can also be noted that most of the handloom products in which about a half of the rural industrial workers are employed have a very high expenditure elasticity of demand.

But the rural people devote only a small proportion of the incremental income to non-food rural industrial products. For most of the products, the associated marginal propensity to consume has been found to be less than one percent. Only for products produced by handlooms (10.0 percent) and by carpentry (3.1 percent), the MPC has been found to be fairly high.

7.5 The factor intensity of rural consumption patterns

The direct labour and capital requirements per unit of consumption expenditure at a given income level can be calculated using

the average propensities to consume for individual commodities, and the observed labour output and capital output ratio of the process of production of that commodity. The factor intensities of the observed consumption patterns can be useful in assessing the impact of increases in income or changes in income on the demand for labour and hence on employment generation.

Unfortunately, there is a lack of information on the factor intensities of each product in the consumption basket of the rural people. Therefore the analysis is confined to the rural industrial products. The labour and capital requirements per unit of expenditure on rural industrial products for different income groups have been estimated as follows:

$$L_j = ({}_i C_{ij} L_i) / {}_j C_{ij}$$

$$K_j = ({}_i C_{ij} K_i) / {}_i C_{ij}$$

where L_j and K_j = labour and capital requirements/unit of consumption expenditure for the j th income group.

C_{ij} = Expenditure on commodity.

i = percentage of total consumption expenditure for j th income group.

$L_i K_i$ = are the labour-output and capital output ratios for the i th product.

The estimated of labour and capital requirements per take of expenditure on rural industrial products are given in (Table 7.6)

It will be noted that, among the bottom three quartile of the rural population, there is very little difference in the labour and capital requirements, per unit of consumption. The difference in factor requirements associated with consumption baskets of the bottom 75 percent of the households and the top 25 percent is, however, significant. The average labour requirement implied by a taka of expenditure is lower and capital requirement is higher for the rich compared to the poor. This supports the hypothesis of the expected increase in capital intensity associated with consumption baskets as income rise above a certain level. The average capital-labour ratio of the observed consumption patterns of the upper 25 percent of the households is about 36 percent higher compared to that of the bottom 75 percent.

Table 7.6

Average factor requirements per taka of consumption expenditure by income groups

Income groups	Labour (hours)	Capital (Taka)	Capital/Labour Ratio
Bottom 75%	0.49	0.52	1.06
Lowest quartile	0.49	0.52	1.08
2nd quartile	0.48	0.53	1.10
3rd quartile	0.49	0.51	1.04
Top 25%	0.41	0.59	1.44

Source: Questionnaire survey, 1983.

CHAPTER - VIII :

8.0 CONCLUSION: POLICIES AND RECOMMENDATIONS

8.1 CONCLUSION

With widespread unemployment and poverty, Bangladesh is a typical least developed country; the annual percapita income is just cover US \$ 110 and unemployment is estimated at a staggering 42 percent of the labour force. The possibility of employment expansion in the modern industrial sector is also limited. This sector currently employs less than 2 percent of the civilian labour force. About 85 percent of the people live in the rural areas in Bangladesh. So, to provide employment for the unemployed mass rural industries can play an vital role. The subject of rural industries is one of the most important one for planners. This study attempted to analyze and evaluate the rural industries programme and its impact on employment generation. It is quite apparent now that the goal of development and priorities of rural industries activities should emerge from a combination of plans and programmes of different nation building programmes and strategies, especially by various rural development agencies. The result of this comparing the sectoral plans would be geographic location and planned development of viable rural industrial centres and their subsidiary service centres. These rural production units which could geographically be located would provide gainful employment to the agricultural unemployed labourer in rural areas. The present study area, the Narsingdi Ketwaii thana is one

of the densely concentrated rural industrial areas in Bangladesh. Its location and link with the capital city and other industrial areas has made it one of the viable industrial zones in the country.

Though about 85 percent of the people live in the rural areas in Bangladesh and among them about 68 percent of the active people aged 11 to 50 years participate in the economy also live in the rural areas (Chapter-III). But there is lack of proper planning of this sector. Some studies have been conducted by BIDS and DSCIC for the promotion of rural industries programme. On the basis of information collected by questionnaire survey and secondary sources from BIDS, DSCIC and other organization, the present study concentrates on 3 major aspect namely:

1. Economic aspects
2. Social aspects and
3. Geographical aspects.

On the basis of the information taken from Naraindi Katali Thana by field survey and other secondary sources, the study analysis the nature, characteristics and impact of rural industries in GDP and GNP, and evaluates its role with the formulation of the following hypothesis.

- h1. The aim of the study is to evaluate the rural industries programmes in general in Bangladesh.
- h2. To evaluate the performance and effectiveness of rural industries in employment generation.

- h3. To study the setting of rural industrial enterprises with a view to ascertain their potential for growth to fill-up the lacuna in the knowledge base regarding rural industries.
- h4. To analyze the nature of income to small farmers and landless labourers and their socio-economic and occupational characteristics in rural Bangladesh.
- h5. To analyze the demand and market value of rural industrial products.
- h6. Finally, the aim of the study is to provide recommendations to formulate policies of Institution building conducive to promote the rural industries, as a result to increase the employment generation.

The above hypotheses were tested on the basis of primary and secondary sources of informations. The field study and investigation was carried on as accurately as possible but like all academic research has its limitations. Since the study is based on small area i.e. one thana only, it is not possible to generalize for the whole sector but nevertheless it gives valuable policy framework and scope for further investigation.

The result of the study shows the following:

1. About 42 percent of the labour force is estimate to be unemployed(Chapter-I).

- ii. The infrastructure of the study area is suitable for the expansion of rural industries(Chapter-II).
- iii. About 50 percent of the workers are involved in non-agricultural occupations, out of them 43 percent are engaged in non-agriculture as their primary occupations. Among the different non-agricultural occupations, cottage industry has been found to be the major one(Chapter-III)
- iv. Of all the people engaged in rural industries, 67 percent are males and 33 percent are females. In all occupations dominance of males is much more prominent(Chapter- IV)
- v. About 51 percent of the households own less than 0.5 acres of land who can be termed effectively as landless (Chapter-V).
- vi. Rural enterprise size is small i.e. about 47 percent of the enterprises have only Tk. 10,000 as average capital (Chapter-VI).
- vii. About 45 percent of the households have a per capita income of upto Tk. 1200 (Chapter-VI).

8.2 Policies and Recommendations:

It may be pointed out from observations that appropriate steps should be taken for achieving the goals of viable policy measure in favour of rural industrial development planning to create gainful employment in this sector:

1. From the study it is found that about 67 percent of the entrepreneurs are faced with capital problem, therefore, adequate financial assistance should be provided at proper time for specific areas of activity.
2. From the observation, it is found that large number of seasonal and surplus unemployed workers move in the rural areas (because agriculture is the seasonal occupation) that is why training should be arranged for them to acquire skill and technical knowledge on different rural industrial activities.
3. DSCIC can take an area development and development plans will be drawn separately for each district on the basis of availability of raw materials, skills and growth potentials.
4. In the study area it has been found that one calandring mill would serve hundreds of handloom and power loom industries i.e. in promoting industries, priority will be assigned to establishment of linkage/subcontracting industries which will operate as skillory to big industries.
5. From the research it is found that about 75 percent of the entrepreneurs are using the manual or semi-mechanized technology. Thus, they should be given facilities to supplies of improved tools and equipments.
6. Many entrepreneurs have expressed concern of the shortage of raw material i.e. they should be given assurance of the supply of raw materials both domestic and foreign.

7. BSCIC should assist in the marketing of small and cottage industries products by disseminating market information and provide direct link between artisans on the one side and the different marketing organizations, both in the country and abroad on the other side.
8. BSCIC should increase co-operation with respective Banks to recover loans by managing its extension services.
9. BSCIC will coordinate with other organizations in preparing schemes for small and cottage industries, so that it will help to make proper plan to distribute the loans.
10. BSCIC should identify the management and technical problems of the existing industries and improve through its extension service and administration system.
11. The local bodies, such as Union Parishad, Upazila development committee etc. may be responsible for the following:
 - i. Provide assistance in arranging accommodation for training and production centres.
 - ii. Help to select the trainees by using certain criteria, e.g. training, skill level etc.
 - iii. Supervise and assist to maintenance of projects after completion.
12. Types of crafts and industries to be taken up for development immediately on the basis of availability skills, raw materials and local demands.

The subject matter of this study is very interesting but resource and time do not permit any detailed study for the whole of the country, as it is to be used for research purpose only. The author has tried to carry on the field study and investigation as accurately as possible but every study has its limitations. Since the study is based on small area, i.e. one theme only, it is not possible to draw conclusions for the whole sector in the country. But nevertheless, it can give authentic policy framework for further research and investigation to policy makers and researchers.

Table A.3.8

• Employment linkage between industry and other rural occupations (average number of hours worked in week)

Cottage Industry in which the worker is engaged:	Male worker		Female worker			
	Industrial occupation	All occu- pation	Industry as % of all occu- pations	Indus- trial occupa- tion	All occu- pation	Indus- try as a % of all occu- pation
Dhanki Products	13.3	40.6	32.8	16.6	17.6	94.1
Jute products	1.9	41.3	4.6	21.1	22.5	93.6
Chatai products	0.2	39.1	23.4	16.5	17.5	94.1
Shital Pati	10.4	44.5	41.4	-	-	-
Pottory	27.6	46.4	59.5	40.7	40.7	100.00
Ghamcha	36.5	41.4	08.3	31.1	31.1	100.00
Lungi & Sari	30.7	44.2	87.4	32.5	33.1	38.3

Sources: RISP Final report, 1981.

Note: Based on six weekly surveys on allocation of time to different occupations by family workers for households engaged in these activities.

Table A.3.9

Hourly Wage Rate for different types of Labour

Types of workers	Sex		
	Male	Female	Both Sexes
Child	0.69	0.48	0.63
Adult workers	1.51	0.64	1.44
Muslim	1.41	0.57	1.30
Non-Muslim	1.46	0.80	1.41
Total:	1.42	0.60	1.32

Questionnaire survey, 1983.

Table A.3.10:

Distribution of workers according to hourly Wage Rate

Wage Rate	Rural Enterprise	Urban enterprises
Less than Tk.0.50	15.1	8.7
Tk.0.5 to Tk.0.99	25.1	24.3
Tk.1.0 to Tk.1.49	29.6	31.7
Tk.1.5 to Tk.1.99	17.1	18.3
Tk.2.0 and above		
Average wage rate	1.28	1.40
Per hour Average wage rate per day ¹	9.47	11.49

Source: RISP final report, 1981.

Table A. 3.11

Dispersion of Rural Industrial Employment

Thana	Population of the Thana as % of total population of the survey areas	Industrial Employment		Estimated labour-force in Thana (in 000)	% of labour source employed in industrial activities
		Number of workers	As % of workers in all thanas		
Barlekha	6.6	10,282	4.7	57.2	18.0
Chandanich	3.3	13,644	6.3	46.7	29.2
Muradnagar	13.9	32,634	15.0	145.7	22.4
Kunia	5.2	7,678	3.5	42.0	18.3
Mymensingh Pouroshava	3.5	5,004	2.6	28.4	19.7
Narail	0.3	9,001	4.1	67.3	13.4
Narsingdi	12.1	57,117	26.3	105.0	54.5
Pabna Kotwali	13.1	15,139	7.0	110.5	13.7
Shabpur	11.6	16,637	7.7	102.8	16.2
Shibganj	13.6	21,600	10.0	104.9	20.6
Swarupkoti	7.2	27,629	12.7	62.0	14.0
All survey Thanas	199.0	217,024	100.0	973.3	24.9

Source : RISP Final Report, 1981.

Chapter - V

Table A.5.1

Occupational Structure by Sex

Name of the Activities	% of working males engaged in the occupation N=3757			% of working females engaged in the occupation N= 573		
	Primary invol- ment	secondary involve- ment	Both	Primary invol- ment	Secondary involv- ment	Both
a. Agriculture	56.7	15.9	72.6	10.1	0.7	10.8
i) Cultivation	35.4	11.7	47.1	6.5	0.7	7.2
ii) Wage labour	20.7	7.8	24.5	3.2	-	3.2
iii) Fishing	0.6	0.4	1.0	0.4	-	0.4
b. Non-agriculture	39.9	7.6	47.5	65.1	0.8	65.9
i) Cottage Industry	16.9	2.4	19.3	58.5	-	58.5
ii) Trade business	12.7	3.9	16.6	1.7	0.2	1.9
iii) Construction	1.6	0.8	2.4	-	-	-
iv) Transport	2.1	0.1	2.2	0.2	-	0.2
v) Other service	6.6	0.4	7.0	4.7	0.6	5.3
c. Miscellaneous jobs	3.4	0.5	5.9	24.8	0.2	25.0
All occupation	100.0	24.0	124.0	100.0	1.7	101.7

Source : RISP final report, 1981.

Table A. 5.2

Age and primary occupation both sexes

Occupations	Upto 9 years	10-16 years	17-24 years	25-54 years	55-64 years	69 and above
1. Cultivating family farm	1.5	12.9	25.5	29.4	44.3	47.9
2. Cattle minding	22.4	25.1	2.0	0.2	2.2	0.7
3. Agricultural wage labour	3.1	22.5	21.9	19.8	10.3	4.8
4. Fishing	0.8	1.0	0.8	0.2	1.5	-
5. Working in family industry	7.7	18.6	18.9	18.8	17.2	13.2
6. Industrial wage labour	2.4	5.8	5.7	5.7	1.5	2.8
7. Trade, business and Shop Keeping	1.2	7.8	12.3	13.2	11.4	12.5
8. Construction	0.4	0.6	1.7	1.5	2.2	1.4
9. Transport	-	1.1	3.3	2.2	0.4	-
10. Service	1.2	1.3	6.7	8.2	5.1	6.3
11. Miscellaneous jobs	58.3	3.4	1.2	2.8	4.0	10.4
12. No. of working population	254.0	708.0	757.0	2194.0	273.0	144.0
Females	5.9	16.3	17.5	50.7	6.3	3.3
B. Percentage of all workers						
C. Percentage of population age group	13.3	28.3	46.9	55.1	48.5	35.8

Source : Q RISP Final Report, 1981.

Table- A. 5.3

Education & Primary Occupation, both Sexes

Sl.No.	Occupations	Schooling			
		No formal education	1 to 4 year	5-0 years	10 and over
1.	Cultivating family farm	22.6	32.0	42.2	17.6
2.	Cattle minding	7.6	1.5	0.6	-
3.	Agricultural wage	23.3	10.7	7.1	-
4.	Fishing	0.7	-	-	-
5.	Working in family industry	18.6	19.6	12.7	3.5
6.	Industrial wage labour	5.5	5.0	4.0	3.5
7.	Trade business and shopkeeping	8.7	19.3	16.0	21.1
8.	Construction	1.5	1.2	1.4	-
9.	Transportation	1.6	3.0	3.3	-
10.	Service	1.7	4.5	10.9	53.1
11.	Miscellaneous jobs	8.0	3.3	1.7	-
	A. Number of workers	3093	337	684	256
	B. Percentage of total workers	71.4	7.8	14.9	5.9

Sources: RISP final report, 1981.

Table A.5.6

The pattern of land ownership and distribution of landholding

Groups of Owners/ Cultivators	Land Owners		Land Owned		Cultivators		Land Cultivated	
	No.	%	No.	%	No.	%	No.	%
No land	86	3.60	0.00	-	-	-	-	-
Less than 0.5 acres	1070	47.60	149.87	4.9	306.0	24.1	30.88	3.30
0.5- 1.0 acres	312	13.6	231.73	7.7	308.0	24.3	242.93	9.50
1.0- 2.0 "	365	16.2	504.01	16.6	266.0	21.0	404.54	15.90
2.0- 3.0 "	159	7.1	383.72	12.7	154.0	12.1	398.24	15.60
3.0- 5.0 "	136	6.1	531.34	17.5	141.0	11.1	570.62	22.40
5.0-10.0 "	84	3.7	539.47	17.8	68.0	5.4	470.73	18.50
Over 10.0 "	39	1.7	687.13	22.7	25.0	2.0	375.66	14.80
Total:	2247	100	3028	100	1268	100	2546.55	100.00

Source : RISP final report 1981.

Table A. 5.7

Occupational distribution of different land ownership group Primary occupation (% of workers in the group)

Occupation	Landless	Upto 0.5	0.5 to 2.0 acres	2.0 to 5.0 acres	Over 5.0 acres	All household heads
1. Cultivation	3.0	24.5	60.3	75.0	70.6	33.7
2. Cattle tending	0.2	-	0.5	-	1.3	0.2
3. Agricultural wage labour	36.0	28.5	6.7	0.9	1.3	21.2
4. Fishing	0.5	0.3	1.7	0.5	-	0.3
5. Rural industry proprietor	14.5	18.5	10.9	8.2	8.0	13.1
6. Industrial wage labour	5.8	4.0	1.7	-	-	3.8
7. Trade, business & shop keeping	18.8	11.3	11.3	6.8	12.0	13.8
8. Construction	2.9	2.2	1.0	1.4	-	1.9
9. Transport	2.9	1.3	1.7	0.5	-	1.9
10. Services	8.6	6.5	5.2	5.9	6.7	6.9
11. Miscellaneous	6.4	2.4	0.5	0.9	-	3.2
12. Working in the group as percentage of all workers	<u>38.6</u>	<u>18.1</u>	<u>29.0</u>	<u>10.7</u>	<u>3.6</u>	<u>100.00</u>

Source: RISP final report, 1981.

Table A.5.8

Land ownership and secondary occupation

Occupation	Landless	Upto 0.5 acres	0.5 to 2.0 acres	2.0 to 5.0 acres	5.0 acres & above	All workers
Cultivation	4.0	32.0	24.7	14.1	17.3	16.6
Agricultural wage labour	4.5	8.6	4.9	-	1.3	4.8
Fishing	0.8	0.3	0.7	-	2.3	0.4
Rural industry	2.3	3.2	3.2	2.3	-	2.6
Industrial wage labour	0.3	0.3	0.4	-	-	0.2
Trade & business	3.1	2.1	6.9	13.2	13.3	5.5
Construction	1.6	-	3.4	0.5	-	0.8
Services	0.4	0.3	0.8	1.4	2.7	0.7
Transport	0.3	-	0.2	0.5	-	0.2
Miscellaneous	1.0	0.8	5.0	-	-	0.7
Total employment	18.4	47.6	42.0	52.0	34.7	32.6

Source : Questionnaire survey, 1983.

Chapter - VI

Table 6.18

Average initial capital (in Taka) per enterprise by industry category (the figures relate to the sample enterprises established during the last four years preceding 1979)

Identity of industry	Average initial capital (in Taka)	Standard deviation
Jute baling	200,000	0.00
Tobacco manufacturing	47,857	35413.00
Grain crushing	39,833	107731.30
Nylon and plastic products	30,000	0.00
Miscellaneous metal products	28,000	16062.40
Miscellaneous chemical products	24,333	23797.80
Sawmill/Handloom timber	14,666	9237.60
Motor vehicle repairing and general Engineering	11,500	9224.90
Bakery products	11,375	10980.10
General tailoring	8,461	14899.50
Miscellaneous industry	7,750	10235.10
Structural clay	7,750	3535.50
Leather processing & products	6,431	7726.10
Indigenous drugs	6,000	0.00
Handloom products	5,445	4553.10
Wooden furniture and fixture	5,400	6505.40
Hosiery	3,000	0.00
Pottery	2,866	2730.10
Vegetable oil	2,025	1233.91
Miscellaneous textile	2231	1658.10
Electrical goods repairing	2000	1414.20

Contd-----

Table A.6.18(contd)

Identity of industry	Average initial capital (in Taka)	Standard deviation
Blacksmithy	2000	0.00
Gur making	1775	3987.40
Basketary	1575	2015.30
Miscellaneous repairing	1510	3006.10
Sheet metal products	900	0.00
Cane and bamboo mat cover	736	1725.40
Jute products	534	1400.70
Wooden transport equipment & tools	500	0.00
Fishing net	371	544.40
Silk products	350	70.70
Dairy products	325	106.10
Reeling and dyeing yarn	210	268.70
Coir products	152	162.00
Cane & bamboo furniture products	100	50.00
Bedding materials	90	00.00
All Industries	12598	43293.40

Source : RISP Final report, 1981

Note: Industries are arranged in descending order of average initial capital per enterprise.

Table A.6.20

Average current capital investment (in Taka)
per enterprise in major rural industries

Major industries	Building	Machinery	Other fixed assets (e)	Total fixed Assets
Handloom products	3242	3723	486	7451
Coir products	472	-	80	552
Gur making	51	2	2189	2242
Grain milling	7274	5358	693	13325
Cane and bamboo mat cover	897	-	21	918
Wooden furniture	3547	-	638	4185
Wooden transport equipment & tools	1629	-	409	2038
Miscellaneous textiles	5242	500	1230	6972
Tobacco manufacturing	9418	4273	1229	14920
Basketry	627	-	42	669
Vegetable oil	483	236	1910	2719
Pottery	1576	337	555	2468
Dairy products	6953	-	3180	10133
Silk products	9750	2912	363	13025
Blacksmithy	886	182	505	1573
Average current capital for all industries	4589	4948	1867	11404

Table A.6.20(contd)

Major	Raw materials	Other inventories(b)	Total working capital(c)	Total capital
Handloom products	288	445	733	8184
Coir products	34	110	144	696
Gur making	318	129	441	2683
Grain milling	46	126	172	13497
Cane & bamboo mat cover	37	10	47	965
Wooden furniture and fixture	1785	347	2132	6317
Wooden transport equipment & tools	21	-	21	2059
Miscellaneous textiles	359	2466	2825	9797
Tobacco manufacturing	4958	4624	9582	24502
Basketary	2	6	8	977
Vegetable oil	92	106	198	2917
Pottery	407	161	568	3036
Dairy products	94	232	326	10459
Silk products	1097	5749	6841	19666
Blacksmithy	135	82	217	1790
Average current capital for all industries	1495	3221	4717	16121

Source : RISP final report, 1981.

Notes: (a) Include tools and equipment & miscellaneous items of fixed assets such as furniture and other office equipment, vehicles and so on.

(b) Include inventories of fuel and stocks of finished and semi-finished output.

(c) Excludes such components as cash in bank and cash in hands, but includes payments due from the customers.

Table A.6.21

List of Imported/Rich-in-import content raw materials used in rural industries sector in the survey areas

Items	Value of raw materials consumed(000 Taka)	As percent of total cost of Intermediate Inputs
1. Cotton yarn	605836	30.07
2. Wheat	85226	4.23
3. Basic metal	31126	1.54
4. Dye and chemicals	78721	3.91
5. Flour	27556	1.37
6. Synthetic yarn & cloth	11066	0.55
7. Metal products	10348	0.51
8. Cotton cloth	7589	0.38
9. Soyabean	6634	0.33
10. Petroleum products	6601	0.33
11. Dalda	6600	0.33
12. Plastic materials	5054	0.25
13. Milk powder	5419	0.27
14. Coal	1371	0.07
15. Botten	809	0.04
16. Rubber	698	0.03
17. Wood	313	0.02
Total:	8,91,967	44.27

Source : RISP final Report, 1981.

Table A.6.22

Percentage distribution of enterprises by
major supplier of raw materials

Supplier	All enterprises
Self	2.4
Producers	25.4
Middleman	6.7
Whole salers	21.0
Retailors	35.1
Co-operatives	0.6
Govt. agencies	0.7
Mahajans	2.9
Others	0.2

Source : RISP final report, 1981.

Chapter - VII

Table A.7.3

The Budget share of Rural Industry products for the 'poor' and the 'non poor' Rural households

Products	Share of the product in the total expenditure of the group (in percentage)		
	Bottom 75% of households	Top 25% of the households	All Households
1. Dairy products	0.58	0.68	0.63
2. Dried fish	1.11	1.27	1.19
3. Mustered oil	2.94	3.25	3.07
4. Bakery products	0.76	0.82	0.79
5. Dhenki rice & Rice products	31.43	13.18	23.40
6. Mill rice and rice products	40.74	40.14	40.46
7. Sugercane gur	0.79	1.11	0.93
8. Juice gur	0.35	0.39	0.37
9. Biri	1.19	0.94	1.08
10. Tobacco	0.65	0.56	0.61
11. Food(1+.....10)	80.54	62.34	72.53
12. Food excluding rice (11-6-7)	8.37	5.02	8.67
13. Wooden furniture	0.35	1.20	0.65
14. Wooden fixture	0.39	1.02	0.61
15. Wooden ag.implements and costs	0.39	0.46	0.41
16. All carpentry (13+14+15)	1.13	2.68	1.67

Contd---P

Table A.7.3(contd)

1	2	3	4	
17.	Bamboo chatol	0.35	0.46	0.39
18.	Cane & bamboo furniture	0.02	0.12	0.09
19.	Fishing equipment	0.06	0.09	0.07
20.	Shital pati	0.17	0.32	0.22
21.	Other mats	0.12	0.17	0.14
22.	Wood cane & Bamboo products (16+21)	1.85	3.84	2.54
23.	Bedding materials	1.02	1.64	1.29
24.	Hosiery goods	0.58	0.52	0.56
25.	Lungi, sari by handloom	3.95	8.27	5.86
26.	Than cloth cloth handloom	0.38	0.36	0.37
27.	Gencha	0.38	0.36	0.37
28.	Tailoring services	0.41	0.65	0.52
29.	Rural industry (clothing (23+... 28)	6.36	11.48	8.63
30.	Than cloth by handloom	0.02	0.04	0.03
31.	Jute rope	0.15	0.09	0.13
32.	Coire rope	0.02	0.01	0.02
33.	Fishing nets	0.13	0.18	0.14
34.	Textiles (29---+32)	6.66	11.76	8.92
35.	Pottery utensils	0.20	0.13	0.17
36.	Blacksmithy agricultural tools	0.33	0.42	0.36

Contd--P

Table A.7.3(contd)

1	3	4	5
37. Blacksmithy agricultural foods	0.33	0.42	0.36
38. Bricks and tiles	0.25	0.47	0.30
39. Misc. rural industry products	0.86	1.07	0.92
40. All rural industry (products(1+-----+38))	89.91	79.01	84.91
41. Rural industry products exclu- ding rice(39-6-7)	17.74	25.69	21.05
42. Edible oil	00.44	0.60	0.51
43. Sugar	0.79	1.11	0.90
44. Cigarettes	0.80	0.64	0.73
45. Mill made Sari & Lungi	0.44	0.76	0.56
46. Synthetic Sari	0.39	0.84	0.59
47. Old readimate clothing	0.52	0.30	0.42
48. Metal utensils	0.83	1.30	0.41
49. Competing non-rural industry products(41+-----+47)	4.21	5.63	4.77

Source : RISP final report of 1981.

Notes: The total budget share of the products listed in this table is less than 100 because some other products like fish meat etc. are excluded.

The following main features may be noted from the table.

Table A.7.4

The share of Cottage, Small-Scale and Large Scale industries in the demand for substitutable commodities for the 'poor' and non-'poor' rural households.

Products	Bottom 75% of Households		Top 25% of households	
	Per capita expenditure (Taka)	Share of the industry (In %)	Per capita expenditure (Tk)	Share of the industry (In %)
<u>Rice:</u>	785.00	100.00	1477.98	100.00
Cottage	341.81	43.50	365.27	24.70
Small-Scale	443.14	56.50	1112.71	75.30
<u>Gur & Sugar:</u>	24.76	100.00	76.41	100.00
Cottage	16.17	55.30	45.62	59.70
Large Scale	8.59	34.70	30.79	40.30
<u>Oil</u>	36.85	100.00	106.82	100.00
Cottage	32.06	86.90	90.05	84.40
Small scale & Large Scale Industry	4.79	13.10	16.77	15.60
<u>Beverages</u>	28.77	100.00	59.08	100.00
Cottage	12.94	45.00	25.95	44.00
Small & Large scale	15.83	55.00	33.13	56.00
<u>Clothing:</u>				
Cottage	105.06	100.00	426.14	100.00
Small & large scale	42.05	40.00	122.36	28.70
<u>Utensils</u>	11.21	100.00	41.54	100.00
Cottage	2.21	19.70	3.47	8.40
Small & large scale	9.00	80.20	38.07	91.60

Source: RISP final report of 1981.

DEPARTMENT OF URBAN AND REGIONAL PLANNING

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

Research Title " AN EVALUATION OF RURAL INDUSTRIES PROGRAMME
AND ITS IMPACT ON EMPLOYMENT GENERATION"

Name of Interviewer: ----- Date -----

Signature of Interviewer: -----

A. GENERAL INFORMATION OF THE HOUSEHOLD:

- 1.01 Name of the household :
- 1.02 Union Parishad :
- 1.03 Thana :
- 1.04 Age :
- 1.05 Sex : M F
- 1.06 Are you a migrant : Yes No

If yes, (a) place from where migrated.

- (i) From another village/town _____
- (ii) From another union _____
- (iii) From another Thana (specify) _____
- (iv) From another District _____
- (b) Year of migration _____
- (c) Reason for migration (i) -----
- (ii) -----
- (iii) -----

1.07 Religion

1.08 Education (i) Primary (ii) Secondary (iii) Higher
(iv) Technical.

1.09 Do you have any training in Polytechnic, Trade School or any other formal training institutions ?

Yes No

If yes (a) Field of Training -----
(b) Number of months/Years -----

1.10 Did you work as apprentice before ?

Yes No

If yes (a) In what type of industry -----
(b) For how many years -----

1.11 Did you work as a regular employee in any other enterprise?

Yes No

If yes, Industry type Position No. of years

(i) -----

(ii) -----

(iii) -----

1.12a) What is your approximately yearly income ? -----

b) How many persons are economically dependent on your income?

Adult Children

Old aged

a) Other sources of income

8. OCCUPATIONAL STATUS:

2.01 Specify the main occupation of entrepreneur's

Father Grand
Father

2.02 Who is the founder of this enterprise ?

Other Ancestor
relations

Parents Yourself

2.03 Prior to setting up/taking over this enterprise, what were your main sources of income ?

- (i) -----
- (ii) -----
- (iii) -----

2.04 What were the major problem you encountered when you first started business ?

- (i) -----
- (ii) -----
- (iii) -----

2.05 What is the legal status of your enterprise ?

Individual Family
Partnership Joint-stock company
Co-operatives

2.06 Influence for selection of present location for enterprises:

- (i) Residence in neighbourhood
- (ii) Availability of land
- (iii) Availability of raw material
- (iv) Market facility
- (v) Others (specify)

2.07 (a) Number of workers -----

(b) Output -----

Name of the product	Average monthly production
---------------------	----------------------------

- (i) -----
- (ii) -----
- (iii) -----

C. FINANCE :

3.1 How much initial capital did you have to start the enterprise ? Tk -----

3.02 What were the sources of this initial capital ?

(a) Sources : Amount(Tk)-

(a) Cash from:

(i) Inheritance

(ii) Doury

(iii) Personal savings from agriculture

(iv) Personal savings from other sources

(b) (i) Inheritance

(ii) Doury

(iii) Personal savings from agriculture

(c) Selling other assets from :

(i) Inheritance

(ii) Doury

(iii) Personal savings from agriculture

(d) Partner's contribution

(e) Loan

(f) Others(Specify):

D. MARKETING

4.01(a) Are any of the raw materials used in this enterprise import item ?

Yes No

If yes percentage of total raw material requirement do they constitute _____

(b) From where do you generally buy the raw materials ?

(i) Directly from producer In % of total requirement

(ii) Middlemen _____

(iii) Directly from the agent _____

(iv) Whole seller _____

(v) Retailer _____

(vi) Co-operatives _____

(vii) Govt. agency _____

(viii) Creditor _____

(ix) Foreign supplier _____

(x) Other (specify) _____

4.02(a) To whom do you generally sell your products:

In % of total products:

(I) Directly to consumers

(a) Local market _____

(b) Others _____

(ii) Manufacturing Firms _____

(iii) Through middlemen _____

(iv) Whole sellers _____

(v) Retailers _____

(vi) Creditors _____

(vii) Others (Specify) _____

(c) Do you ever sell your product to supplier of raw materials ?

Yes No

4.03 What type of technology do you use in your industry ?

- (i) Modern Mechanised technology
- (ii) Semi-mechanised technology
- (iii) Semi-power technology
- (iv) Traditional technology
- (v) Hand use technology

E. ASSISTANCE

5.01 Are you or your enterprise a member of a co-operative
yes, registered co-operatives

Yes, unregistered co-operative

If yes, what services do you get from your
co-operative ?

Raw material supply

Sale of products

Credit

Lending of equipment

Advice and assistance

Others (specify)

5.02 Have you ever received assistance from any other private
organisation ?

Yes No

If yes, fill out the following:

Name of the organisation	Services received
(1)	(1)
(2)	(2)

5.03 Do you know of any Govt. agency set-up to assist your type
of industry?

Yes No

If yes (a) Name of the agency

(i) BSCIC

(ii) Handloom board

(iii) Sericulture board

(iv) Handicrafts marketing corp

(v) Export promotion bureau

F. EMPLOYMENT:

- 6.01 (a) How many employees did you have at the initial time ?
 (b) At present what is the number of employees in your enterprise ?

Sex	(1)	Skilled	(2)	Unskilled	Wage Rate
Male(M)					
Female(F)					

6.02a) Who is the manager of the enterprise ?

Entrepreneur himself Hired non relation
 Hired relation Non-hired relation (specify)

b) If the manager is not the entrepreneur himself, then fill out the following:

Academic qualification: _____

Length of training from formal _____

Institutions _____

Monthly salary Take _____

6.03a) Are you planning to :

- (i) reduce to size of your business
 (ii) keep the business and start a new one
 (iii) close this business and start a new one
 (iv) None of the above

b) If yes to (i) or (ii) or (iii) state reasons _____

c) If yes to (ii) or (iii) name the new line of business :

6.04 a) What was the total value of sales of your products ?

Last year _____ Tk _____

b) How much profit did you make last year Tk _____

6.05 What was the per unit product cost and benefit of various products ?

	1	2	3	4
A. <u>RETURNS PER UNIT</u>				
1. Production (nds/piece)				
2. Income owner (if Taka)				
3. Income of Share holder				
B. <u>COSTS (TAKA)</u>				
1. Hand loom				
2. Machineries				
3. Parts of mills				
4. Land				
5. Housing				
6. Raw material				
7. Transportation				
8. Family labour				
9. Hired labour				
10. Interest paid				
C. <u>INCOME BEFORE INTEREST PAYMENT</u>				
1. <u>Owner producer:</u>				
(a) Cash cost basis				
(b) Total cost basis				
2. <u>Share-holder:</u>				
(a) Cash cost basis				
(b) Total cost basis				

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